



Moving forward with grounded theory in sport and exercise psychology

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ABSTRACT

Objective: This paper is a commentary on the use of grounded theory methodology in sport and exercise psychology (see Holt & Tamminen, 2010; Weed, 2009, 2010). The purpose is to suggest ways in which researchers can plan grounded theory studies in a manner that demonstrates understanding of research philosophies, methodologies, and methods.

Method: One guiding principle for making research decisions is *methodological coherence*. An 'armchair walk-through' of a decision making heuristic for planning methodologically coherent grounded theory studies is provided. Issues addressed concern ontology and epistemology, research questions, selection of grounded theory variant, participants, sample size, planning for the interaction of data collection and analysis, data collection methods, data analysis methods, and the final product.

Conclusion: Ways to move forward with the sophisticated use of grounded theory are suggested, which include issues relating to training, supervision, and the acknowledgement of past mistakes.

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Sport and exercise psychology researchers should engage in the practice of reviewing, evaluating, and critiquing previous research to advance science (Bruner, Erikson, Wilson, & Côté, 2009). In this spirit we have recently been engaged in a lively and productive debate with Professor Mike Weed on the use of grounded theory methodology in sport and exercise psychology research. The debate was stimulated by a review of grounded theory studies in sport and exercise psychology (Weed, 2009). Our response (Holt & Tamminen, 2010) criticized elements of the search strategy used and some of the conclusions forwarded, but reinforced several points raised in the original paper. The subsequent commentary (Weed, 2010) further clarified the points of agreement, provided counter-arguments for the criticisms raised, and expanded the discussion of philosophical issues. We have chosen not to 'bicker' about minor points of disagreement and rather take this opportunity to 'look forward' by providing some suggestions for planning grounded theory studies based on the conclusions put forward in the debate so far.

The idea for the current paper was sparked by the amendment Weed (2010) made to the conclusion to his original (2009) article. In the '2010' article he argued that "authors must accept responsibility for ensuring that they *demonstrate that they fully understand the methods and methodologies that they employ, as well as the ontological and epistemological assumptions that underpin them*" (p. 12, his emphasis). An important question remains; namely, *how*

can researchers demonstrate their understanding of the issues Weed identified? Although we suggested six pointers for creating 'optimal conditions' for grounded theory studies (Holt & Tamminen, 2010), none of the three papers in this series to date have adequately explained how to *plan* high quality grounded theory studies. Therefore, the purpose of this paper is to suggest ways in which researchers can plan grounded theory studies in a manner that demonstrates understanding of research philosophies, methodologies, and methods. A guiding principle for helping researchers plan their studies is *methodological coherence*.

Methodological coherence as a principle for planning grounded theory research

Qualitative studies should have methodological coherence, which will help ensure "congruence between your epistemological and ontological viewpoint, your theoretical position/perspective, your research question, and so on" (Mayan, 2009, p. 13). Morse (1999) introduced the idea of methodological coherence using a heuristic of an 'armchair walk-through' which is the process of thinking through the methodological trajectory of a research project. By adapting the work of Mayan and Morse we have created a heuristic model that may help researchers in their decision making around the use of grounded theory and ensure the methodological coherence of a study (Table 1). This heuristic is intended to draw together Weed's (2009, 2010) comments on philosophical issues as well as our own (Holt & Tamminen, 2010) focus on methodological issues associated with grounded theory. We have

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Table 1
A heuristic for planning methodologically coherent grounded theory studies.

Research decisions	Issues to consider when making decisions	Suggested readings
Ontology, epistemology	Select appropriate philosophical perspective.	Sparkes (1992) Weed (2009) Weed (2010)
Research question	Usually focus on examining some form of social process in context with the goal of created a grounded theory. Grounded theory is useful for areas/issues where adequate theories do not exist. Questions can be developed from literature and personal/professional experiences.	Refer to original grounded theory methodological texts.
Selection of grounded theory variant	Consider version of grounded theory that will be used. Variant selected should be consistent with philosophical perspective and enable researcher to answer the specific research question.	Bryant and Charmaz (2007)
Participants	Identify appropriate population and settings to be sampled. Use theoretical sampling.	Refer to original grounded theory methodological texts. Morse (1995)
Sample size	Use principal of data saturation. Make estimates based on previous similar studies.	
Planning for interaction of data collection and analysis	Engage in analysis as soon as first data are collected. Identify concepts and categories that require further data saturation.	Bruce (2007)
Data collection methods	Consider interviews, observations, documentary analysis (specific decisions will be based on variant of grounded theory selected).	Refer to original grounded theory methodological texts.
Data analysis methods	Many. Consider coding techniques and other theory-generating techniques (specific decisions will be based on variant of grounded theory selected).	Refer to original grounded theory methodological texts.
Final product	Anticipate what type of theory will be created (e.g., substantive or more formal). Diagram possible 'final' theories. Consider how to evaluate final theory (use of specific valuation techniques will be based on variant of grounded theory selected).	Refer to original grounded theory methodological texts.

(Adapted from Mayan, 2009, p. 14).

also tried to write this paper in a manner that will be particularly useful for helping students and neophyte grounded theorists plan high quality studies.

Two caveats must be highlighted before discussing the heuristic provided in Table 1. First, although Table 1 is presented in a linear manner, it should become clear in the following discussion that decisions about methodological congruence are made in a more cyclical iterative way. Second, the heuristic should not be applied in prescriptive or formulaic ways. We do not advocate for the rigid imposition of this heuristic on all grounded theory studies for the fear it could constrain researchers' creativity. Rather, the heuristic is intended as a *guide* to help researchers make important research decisions as they plan their grounded theory studies.

It is important that researchers grasp the *epistemological and ontological* underpinnings of their research, but as Weed (2009, 2010) noted, this has seldom been demonstrated in the sport and exercise psychology grounded theory literature. At a basic level, ontology deals with questions regarding the nature of reality (e.g. is there a singular objective reality or is reality a subjective interpretation?) and epistemology deals with issues regarding how knowledge is created (e.g., whether a phenomenon can be directly observed and known, or whether a phenomenon can only be indirectly understood). Although we are not experts in the philosophy of science, there are at least three reasons why researchers should be aware of the philosophical underpinnings of their grounded theory work. First, different variants of grounded theory have been associated with different philosophical underpinnings. We should note that this is something of a minefield and there are debates about the philosophical underpinnings of different versions of grounded theory. For example, the Strauss and Corbin approach has been criticized for being post-positivistic (Charmaz, 2005) but the originators of the approach claim it is based in symbolic interactionism and pragmatism (see Corbin & Strauss, 2008). Nonetheless, it would be wise for researchers to select a variant of grounded theory that is consistent and congruent with their philosophical stance to ensure that the 'starting point' for their research is coherent.

Second, a researcher's philosophical preferences may shape the types of issues she or he wishes to research, which will influence some later research decisions and the manner in which the final

grounded theory is created and presented. For example, a researcher operating from a constructivist approach may seek to construct a grounded theory that helps explain shared elements of participants' subjective perceptions of reality (e.g., shared aspects of breast cancer survivors' experiences in a dragon boat program; Sabiston, McDonough, & Crocker, 2007). Alternatively, a researcher operating from a critical perspective may seek to create a grounded theory that focuses more on identifying disparities for underserved populations with a view to creating change (we are not aware of a published study in sport and exercise psychology, but an example could be creating a grounded theory which specifies applied approaches for providing sport psychology services to marginalized athletes with a view to provoking change).

Third, philosophical underpinnings are vital as they have implications for how readers might judge the work in an informed manner (see Sparkes & Smith, 2009, for a discussion of how philosophical perspectives influence judgments made about the quality of qualitative research generally). It is therefore important that researchers be aware of and make clear their philosophical stance in order for their research to be evaluated appropriately.

The next part of Table 1 refers to the *research question*, which is "the specific query to be addressed by this research that sets the parameters of the project and suggests the methods to be used for data gathering and analysis" (Strauss & Corbin, 1998, p. 35). In all research the research question dictates the method. Questions suited to the use of grounded theory usually focus on some kind of social process and how it operates within particular contextual conditions. Questions can be generated from the research literature or from personal and professional experience. By formulating the question the researcher can determine if grounded theory is well-suited to study the issue at hand. Grounded theory is a particularly useful approach when there is not a pre-existing theory available to explain a certain process, or if the theories that are available were not developed with particular populations, or if existing theories are incomplete. A theory may also be needed in a more practical sense to help explain how people experience a particular phenomenon (Creswell, 2007).

Selecting the *grounded theory variant* is a decision that has vital consequences for the later selection of various methods. As noted above, different variants of grounded theory have been associated

with different philosophical underpinnings. Therefore, the selection of the grounded theory variant should be congruent with the researcher's philosophical approach. Although the approaches of Glaser, Strauss (and Corbin), and Charmaz dominate the literature, there are numerous variants of grounded theory. Bryant and Charmaz (2007) suggested the term grounded theory actually refers to a 'family' of methodologies and that understanding the variants of the methodologies "allows novices to make informed choices and to articulate rationales informing their choices" (p. 11). Indeed, Bryant and Charmaz's *Handbook of Grounded Theory* has 27 chapters from 34 contributors who, according to the editors, have all "studied, applied, taught, and/or written about GTM [Grounded Theory Methodology]" (p. 11). Students and neophyte grounded theorists may still wonder "well which version do I chose?" As mentioned above, this decision can be influenced by one's philosophical perspective, but it is also important to clarify that one version of grounded theory is not necessarily better than another. Researchers just need to be able to defend and explain their decision and the concept of methodological coherence should be central to such explanations (e.g., a suitable answer could be "I selected this variant of grounded theory because it was consistent with my philosophical stance, just as my later decisions were consistent with both my philosophical stance and my methodological selection.").

Having selected a variant of grounded theory and continuing to design a study it is important to remember that in most versions of the methodology participants are identified via theoretical sampling. Here the researcher anticipates the settings to study and the people to speak with in order to get the 'best' answers to the research question. It is important to remember that the scope of the sample may vary depending on the research question. Some studies may have focused data collection from the beginning. A study of Olympic champions' views of the factors that facilitated their performance would logically require a clearly defined and tight sample of athletes and the researcher may also anticipate that their coaches should be sampled. But even in this case the researcher should have a flexible plan for data collection. For example, it may arise during interviews with coaches that members of their sport organizing committee played important roles ensuring that logistical issues (such as transport, equipment, etc.) flowed smoothly. The athletes themselves may not have been aware of this because it all happened 'behind the scenes' and allowed them to focus on their own preparation. In this case, following the idea of theoretical sampling, the researcher may wish to interview the members of the organizing committee to further 'saturate' the concept of how they provided assistance. The point here is to prepare for theoretical sampling from the start of a study; to plan settings and people to be sampled but to be flexible and prepared to recruit unanticipated participants as the data analysis progresses. As an aside, these variations in the recruitment process can be easily taken care of through amendments to research ethics board approvals (Holt & Tamminen, 2010). An example of how to refocus the sampling of participants and settings using theoretical sampling is provided in Holt, Tamminen, Black, Sehn, and Wall (2008).

Sample size is difficult to establish a priori because it is based on the principle of data saturation. The amount of data required to saturate a narrowly defined issue will be less than the amount of data required to saturate a much broader topic (Morse, 1995). But when writing Dissertation proposals or ethics applications, researchers are usually expected to give at least an indication of the anticipated sample size. From a practical perspective it is useful to explain that final sampling decisions will be made using the principle of data saturation, but to estimate the required sample size based on (high quality) previously published grounded theories that have examined similar issues. The skill here is in judging the similarity of the issues being studied, as well as the quality of the grounded theory.

Planning for interaction of data collection and analysis is important because this process is central to grounded theory methodology (Holt & Tamminen, 2010; Weed, 2009). Such interaction is facilitated through theoretical sampling. Simply put, researchers should plan to engage in data analysis as soon as the first data are collected and this should be an iterative (i.e., repeated) process throughout the study until an adequate level of data saturation is attained. From a practical perspective researchers may need to take a flexible approach to facilitate the interaction of data collection and analysis. This point was briefly addressed in Holt and Tamminen (2010) where it was suggested that data collection and analysis usually takes twice as long as planned. We take this opportunity to provide further details that may help with the planning of grounded theory studies. For example, during a fieldwork trip it may be that a researcher has the opportunity to interview several participants in the space of a few days. In such cases it would be virtually impossible to transcribe and code each interview before commencing the next interview. However, even in these situations it is possible to embrace the principle of interaction of data collection and analysis. The researcher can make notes about important concepts that emerged during interviews, listen to audio-files to further identify concepts, and write memos in the breaks between interviews. Then, more 'formal' analysis can take place between periods of fieldwork. A good strategy would be to plan for periods of fieldwork interspersed with time for data analysis.

We group the next two issues in Table 1 (*data collection methods and data analysis methods*) together because they vary according to the variant of grounded theory being used. There are also some differences in the rigidity by which methods should be applied. For example, Creswell (2007) suggested Strauss and Corbin's version of grounded theory is more prescriptive whereas Charmaz's approach is more flexible. Nonetheless, as Weed (2009) advocated, researchers should avoid a 'pick and mix' approach to selecting methods and rather rely on the 'roadmaps' the particular variant of grounded theory provides to guide a study. Another important point is to recognize that it is often insufficient simply to apply coding techniques and researchers should plan to use more abstract and creative analysis techniques designed to prompt theoretical thinking and lead toward the creation of the grounded theory.

The final step of planning a grounded theory should involve thinking about the final product. Normally the final product will be a grounded theory. The researcher can consider if the study will produce a substantive level theory or a more formal abstract theory that applies across settings and places. One useful strategy is to diagram a possible version of the grounded theory during the proposal/design stage. It is unlikely that a researcher will be able to create the final grounded theory during the planning stages, after all, the point of doing the study is to create the grounded theory. Furthermore, researchers should not be tied to their early conceptualizations of their grounded theory, which are likely to change as the study progresses. Rather, early diagramming is a strategy to help researchers to think theoretically rather than descriptively from the start of a study (Corbin & Holt, 2005). The researcher should also consider how she or he will evaluate the final product. As explained in the Holt and Tamminen (2010) paper, there are different ways of evaluating a grounded theory that tend to vary with the type of grounded theory being used and one's philosophical orientation. This again highlights the value of having methodological congruence throughout the study.

Some concluding thoughts

In looking forward to the next steps in the evolution of grounded theory in sport and exercise psychology we anticipate that a great deal of the responsibility for creating the next generation of

grounded theorists will fall to the hands of their supervisors. Although grounded theory is the most popular and widely used qualitative approach (Bryant & Charmaz, 2007) it originated in other disciplines and remains a relatively new approach in sport and exercise psychology, with the first papers having been published six or seven years ago. When established techniques from other disciplines are introduced to a new field it often creates numerous difficulties, many of which have been documented in this debate. Traditionally, quantitative research has dominated sport and exercise psychology. We suspect there are many senior academics who received excellent training in various quantitative approaches and who were able, in turn, to pass their knowledge on to the next generation of researchers and a cycle of excellence therefore continues. We doubt that too many senior academics were trained by grounded theory methodologists outside the field and it may be difficult for them to pass on the intricacies of different grounded theory approaches to their trainees. This is a scenario Morse (1994) described as ‘the menace of minus mentoring’ when researchers learn methods only from books and end up muddling them.

Although the ‘armchair walk-through’ provided here should be useful, with grounded theory one of the main challenges young researchers face is the need to make numerous research decisions within the process of conducting the study. It would be virtually impossible to plan a grounded theory and not deviate from this plan at all. In this respect there is a lot of ‘on-the-job’ training when learning to use grounded theory. If a supervisor has not experienced these challenges it will be very hard to mentor the trainee through the key decisions. But fortunately help is at hand. First, there is no substitute for reading the *original methodological texts* in addition to reading published grounded theories. Second, researchers can attend some of the numerous international grounded theory workshops and conferences that are regularly held. Finally, it seems to make sense that trainees wishing to conduct a grounded theory should seek supervisors with the necessary experience. Although numerous different sport and exercise psychology researchers have claimed to have used grounded theory (34 different authors according to Weed, 2009), as this debate has revealed, numerous mistakes have been made. Therefore, a key issue in breaking the cycle of ‘the menace of minus mentoring’ and improving the quality of grounded theory studies is to acknowledge that some published studies labelled as grounded theory do not meet the minimal standards associated with the methodology.

To improve mentorship of grounded theory studies researchers must readily acknowledge the mistakes of the past for fear of simply repeating them. This may mean putting egos aside for a moment for the good of the discipline. As the recent debate has revealed, some researchers have made clear mistakes in the way we conduct and publish grounded theory studies (often calling studies grounded theories when really they are not). Other mistakes are not easily discernable from the published manuscripts. For example, in previous grounded theory work conducted by the lead author (Holt & Dunn, 2004), too much attention was paid to the use of coding techniques (i.e., open, axial, and selective coding) and insufficient attention paid to the use of analytic techniques to move beyond description and into the realms of interpretive analysis and theory building. These issues have been discussed elsewhere (Corbin & Holt, 2005). The valuable lesson is that grounded theorists should *think theoretically from the start of a study* rather than trying to create a final model or theory at the end of a study as a product of engaging in various coding and analytic techniques. We have tried to convey this lesson throughout the current commentary and in our previous paper. The point here is that researchers must move beyond the mistakes of the past. In

particular, studies should be designed in a manner that facilitates the use of theoretical sampling in the context of an iterative process of data collection and analysis. The armchair walk-through provided in this paper will help in this regard.

In conclusion, we have suggested that methodological coherence is a useful and important principle to use for planning grounded theory studies. We have previously argued (Holt & Tamminen, 2010) that identifying one’s philosophical perspective would require only a few lines in a published manuscript due to journal page-length restrictions. We stand by that point and have shown that by ensuring a study is methodologically coherent the researcher’s understanding of her or his philosophical perspective will be demonstrated through all the elements of a study. A methodologically congruent study does not guarantee research quality, but it does help a researcher plan a quality study. And, as Mayan (2009) suggested, methodological congruence may increase the chances a study will be published when completed. Hopefully, the current debate on grounded theory will spur researchers to consider new issues and adopt more sophisticated qualitative methodological approaches. Indeed, so far researchers in sport and exercise psychology have only really used the grounded theory variants proposed by Glaser, Strauss (and Corbin), and Charmaz. There are many other variants of grounded theory that could be used (Bryant & Charmaz, 2007) to answer a range of questions that can advance the science of sport and exercise psychology.

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