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**Narrative as a knowledge translation tool for facilitating impact: Translating physical activity  
knowledge to disabled people and health professionals**

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**Abstract**

**Objective:** Theoretically informed by narrative inquiry, this paper examines the utility of stories as a possible tool for disseminating synthesized physical activity knowledge to adults with spinal cord injury (SCI) and health care professionals (HCPs) working with this population. It is the first research to systematically examine the use of narratives as a knowledge translation tool. **Methods:** Forty-three participants (15 adults with SCI; 13 peer mentors with SCI; and 15 HCPs) individually listened to an evidence-based story set in a rehabilitation hospital about the process of becoming physically active following SCI. Individual telephone interviews were conducted to examine participants' perceptions of the story. Qualitative data were analyzed using a thematic analysis. **Results:** Five themes were inductively identified: 1) Effective communication; 2) Narrative authenticity; 3) Credible messengers; 4) Narrative format; and (5) Narrative as a form of action. Together, the themes reveal the story had utility, various attributes that help explain why this is case, how the utility might be maximized, what the stories could do on and for people, and how the narratives might be used to support behavior change. **Conclusions:** The article advances knowledge by revealing the value of narrative as a means for disseminating evidence-based information to people with SCI and HCPs. It also reveals that stories can be used to facilitate dialogue, teach, remind, reassure and reinvigorate people. This paper is a resource for enabling knowledge to be more effectively shared to different audiences and applying what we know in practice to help people live meaningful lives.

**Keywords:** disability; narrative; physical activity; knowledge translation

In order to promote better health and well-being amongst various groups of people, there has been a burgeoning interest in physical activity as a form of ‘medicine’ (Sallis, 2009). One group that has recently been focused on by researchers is people with spinal cord injury (SCI). An emerging body of research-based knowledge is now available that suggests physical activity promotes physical (Wolfe et al., 2010) and psychological health (Smith, 2013; Smith & Sparkes, 2012) and quality of life (Martin Ginis, Jetha, Mack, & Hetz, 2010; Tomasone, Wesch, Martin Ginis & Noreau, 2013) among people with SCI. Knowledge is also available on how much physical activity a person with SCI should do and for how long to increase physical fitness (Martin Ginis et al., 2011). Despite the availability of research-based knowledge, people with SCI are one of the most physically inactive segments of society (Martin Ginis et al., 2010), in part due to various psychological, social, material, and environmental barriers to being active (Rimmer et al., 2004; Smith & Sparkes, 2012). However, one key reason people with SCI have attributed to not engaging in physical activity relates to a lack of awareness and information on how to overcome barriers, what different activities to do, where to be active, how much activity to do, and how to stay motivated (Rimmer et al., 2004; Williams, Smith & Papathomas, 2014). This lack of awareness and information raises various questions.

One set of questions raised revolves around a crucial component of the dynamic and inherently social process of knowledge translation (KT) – *knowledge dissemination*. For example, how might knowledge on SCI and physical activity be effectively disseminated, to whom, by which messengers, in what format, and with what possible effect? (Grimshaw et al., 2012; Lavis et al., 2003). Such questions are important when one considers that, as part of the KT process, disseminating research-based knowledge in accessible, credible, and meaningful ways has become a pressing concern over the last decade or more in health contexts (Grimshaw et al., 2012). These concerns have begun to be reflected in policy initiatives (Lavis et al., 2006), grant applications (Graham & Tetroe, 2007), and efforts to boost research impact among end users (e.g., Martin Ginis et al., 2012). Alongside this, as Kehn and Kroll (2009) suggested, disabled people are rarely featured

as a target in health promotion and, as part of any move to reverse this, the careful dissemination of knowledge needs to be taken seriously.

How though might we disseminate research-based knowledge and engage with this crucial component of the KT process? One possibility, for reasons that follow, is through the application of narrative inquiry. Narrative inquiry refers to a psycho-social approach that focuses on stories. Whilst there are contrasting perspectives on narrative within the human sciences (Smith & Sparkes, 2006), what binds many together is the belief that human beings are meaning makers who, in order to interpret, show, and direct life, configure and constitute their experience using narratives that their social and cultural world have passed down (Brockmeier, 2012). From this, narrative is theorized as holding several functions that, in turn, provide a series of good reasons for turning to stories to facilitate knowledge dissemination and help enable KT.

According to Frank (2010), narrative allows us to make sense of the complexities of life experience and shape what becomes the experience. Narratives also often shape human conduct. Rather than imitating or being simply representative of thought, emotion or behavior, narratives perform. That is, as actors (Frank, 2010) or forms of action (Brockmeier, 2012), narratives can do things on, for, and in people, guiding what individuals pay attention to and affecting what we think, how we behave, and what we imagine as possible. Thus, stories can open possible worlds, be powerful motivators of change and spark action, and prepare others for decisions that lie ahead (Andrews, 2014; Brockmeier, 2009). Narrative can also function to communicate complex knowledge in ways that are highly accessible to different audiences, not just academics (Scott et al., 2012). In other words, narrative can be used as a form of “knowledge tool” – that is, a focused resource that supports the dissemination of knowledge. This may be especially so when narratives are dialogic. As Parsons and Lavery (2012) argue, dialogue is a foundational feature of social life and an important way in which we come to understand one another. For them also, like others (Andrews, 2014; Frank, 2010; Petraglia, 2009), “dialogue possesses features making it unique as a generator of

new knowledge and opportunities for social intervention” (p. 1). As such, the utility of stories as a form of KT needs to be investigated.

Against this backdrop, the purpose of this paper is to examine the utility of narratives as a knowledge tool for disseminating physical activity knowledge to spinal cord injured adults and health care professionals (HCPs) working with this population. Put in KT terms, the study takes two rigorously crafted stories from the knowledge funnel into the action cycle of Graham’s et al.’s (2006) knowledge-to-action framework to examine the knowledge tool’s value, usefulness, and appropriateness for disseminating knowledge effectively and promoting physical activity participation among newly-injured adults. Designed to address gaps in knowledge and the timely challenges outlined above, our central research questions were ‘how do adults with SCI and HCPs, as two key user-groups, perceive an evidence-based story about physical activity and what do these perceptions tell us about disseminating knowledge through stories’? This is the first empirical study to qualitatively examine stories as a possible tool for disseminating synthesized physical activity information.

None of this is to suggest that there is no work that has used narrative-based approaches. For example, health education has incorporated narrative methods to convey information to a number of populations (e.g., Hinyard & Kreuter, 2007); however, the previous use of stories/narratives in the health psychology field have primarily examined the use of narrative methods/theory as a vehicle for promoting health behaviors, primarily screening behaviours (e.g., sexual health screening, Pappas-DeLuca et al., 2008; cancer screening, Larkey & Gonzalez, 2007). Only two studies have examined the use of vignettes in a physical activity promotion context (Foulon & Martin Ginis, 2013; Gray & Harrington, 2011), and only one study has examined the use of vignettes among the SCI population (Foulon & Martin Ginis, 2013). The vignettes in these studies were though monological rather than dialogic, and were more like accounts than narratives. To our knowledge, no published studies have examined the use of narratives as a knowledge tool for disseminating physical activity information to

people with SCI. Moreover, this study takes a crafted knowledge tool (story) that has a foundation in narrative theory and physical activity research evidence, and systematically examines its utility from the perspective of the stakeholders who will ultimately be involved in its dissemination should it be adopted into a clinical practice setting in the future. Given that “the literature on the benefits of stories and the telling of stories is growing, the evidence base remains largely anecdotal” (Scott et al., 2012, p. 162), it is therefore crucial to empirically appraise stories as potential resources for disseminating physical activity knowledge to adults with SCI. This paper addresses this significant knowledge gap.

## **Methodology and Methods**

### *Philosophical Assumptions and Data Collection Methods*

The study design was underpinned by interpretivism, that is, ontological relativism (i.e., reality is multiple, created, and mind-dependent) and epistemological constructionism (i.e., knowledge is constructed and subjective). After gaining university ethical approval for the study, two written stories – which we discuss later - were turned into aural stories. It was felt an aural story would be more engaging for participants than a written format, and an aural story did not require a certain level of reading ability. Consultation with four people with SCI and two HCPs not involved in the study offered support for this decision. Separate versions of the stories for male and female audiences were audio-recorded by a single male and female actor, respectively, and saved as mp3 files. Copies of these audio recordings can be obtained from the first author or found at (name of website – removed for peer review purposes).

Participants were recruited using a purposive sampling strategy. To create a sample for assessing the utility of the stories from multiple perspectives, this strategy was specifically informed by maximum variation sampling (Sparkes & Smith, 2014). Three samples were compiled representing (a) adults with SCI, (b) peer mentors with SCI, that is, community-dwelling adults who regularly volunteer to share their experiences with newly-injured spinal cord injured adults, and (c)

HCPs who currently work in inpatient rehabilitation units and had done so for at least three years. The latter two samples were selected because research has identified these two groups as key messengers for disseminating physical activity research and moving knowledge to action among the SCI population (Faulkner et al., 2010; Letts et al., 2011). Their inclusion ensures that the voices of key end-users were engaged and heard, thereby enhancing the potential uptake of the knowledge tool in future practice (Canadian Institutes of Health Research, 2012; Graham & Tetroe, 2007).

To recruit the three samples, people who were registered in existing SCI research databases (names removed for peer review process) or affiliated with SCI organizations, programs, and rehabilitation centers were invited to take part in this study. Recruitment of each participant group continued until data saturation was achieved. Data saturation is an iterative process that involves collecting and transcribing initial data, immediately assessing it, and then continuing to collect and assess data until nothing new is generated (O'Reilly & Parker, 2013). Data saturation is achieved when there are no more emergent patterns in the data; data begins to repeat itself. The result was a recruited sample of 43 people comprising: 15 adults with SCI (nine male, six female), 13 peers with SCI (eight male, five female), and, reflecting the fact that the majority of SCI HCPs are female (c.f., Foulon et al., 2012), 15 female HCPs. The HCPs included physiotherapists, occupational therapists, nurses, and education specialists who worked on a SCI inpatient rehabilitation unit.

After obtaining verbal informed consent from the participant, the audio-recorded story was played over the phone to each person prior to being interviewed. Because of the differences between men's and women's physical activity behaviors, including the different activities men and women prefer and differing reasons given for being active (Rauch et al., 2013), individuals and peers with SCI listened to the audio recording that was matched to their self-identified gender (e.g., participants identifying as male listened to the male version of the story). HCPs were randomized to listen to either the male or female audio recording. None of the participants were informed that the stories were grounded in research evidence, nor did they know before the study began, the purpose of the

study or the research questions guiding it. Following the story, participants were asked for their perceptions about the story. This was done through a semi-structured, one-to-one telephone interview, with each lasting approximately 60 minutes. The reasons this type of interview was used are that it allows researchers to obtain high quality and honest data from people with a variety of backgrounds and contexts, and who are often hard-to-reach (Trier-Bieniek, 2012). An interview guide was used to help facilitate discussion. Questions included in the guide were, “What do you think of the story?” and “How might others respond to the story?” Clarification, elaboration, and detail-orientated probes, that is curiosity driven follow-up questions (Sparkes & Smith, 2014), were used throughout to elicit richer data. For example, when a person volunteered that they thought the story was ‘true to life’ or ‘useful’ the interviewer later probed ‘why is this?’ or ‘what do you mean by this?’ All data were transcribed verbatim.

### *The Narratives*

Full details on how the stories were developed, along with the actual stories, are published elsewhere (name of authors-removed for peer review). In brief, the stories are evidence-based in that the design and development of each was grounded in research we had conducted and synthesized. Our previous qualitative and quantitative research with nearly 700 spinal cord injured people identified people’s activity levels (name of authors-removed for peer review), how much physical activity a person should do and for how long to increase physical fitness (name of authors-removed), and the barriers (name of authors-removed), determinants (name of authors-removed), benefits (name of authors-removed), motivations (Martin Ginis et al., 2012; Perrier et al., 2013), trajectories (name of authors-removed), and gendered dimensions (name of authors-removed) associated with being physically active. Guided by Graham et al.’s (2006) knowledge-to-action framework to maximize research impact, we then synthesized this knowledge and constructed two 3000-word stories from the findings.

Our work also identified that rehabilitation was a key context for sharing physical knowledge

following SCI. As such, the stories were set in an inpatient rehabilitation hospital. Further, past research revealed differences between barriers and facilitators to men's and women's participation in physical activity (Martin Ginis et al., 2010; Stapleton, Martin Ginis, & the SHAPE-SCI Research Group, In Press). To reflect this evidence, two stories were developed; one story was targeted to individuals with SCI who self-identify as female and one for individuals with SCI who self-identify as male.

In addition to research evidence informing the content of each story, narrative theory informed how the stories were developed. For example, for reasons noted in the introduction the stories were assembled to be dialogical. This was partly achieved by constructing three characters that engaged in dialogue with each other. Further, the characters were developed to display the relational nature of human lives. They were drafted likewise to show polyphony, the dialogical capacity of voices to join in a whole, without each sacrificing its distinctiveness (Frank, 2010). Theoretically, not only can the plurality of unmerged character voices enable various readers or listeners to resonate with the story (Frank, 2010), but through these voices different narrative resources can also be offered to people. In so doing, people's narrative resources are increased and, with more resources at their disposal, different ways of being and acting may be opened (Frank, 2010; Parsons & Lavery, 2012). Given this, the stories were designed to include a range of characters who interacted with specific others, both heard and anticipated, and who reflected in their verbal and non-verbal dialogues different experiences, knowledge, emotions, and intentions associated with physical activity. For instance, to promote polyphony, through dialogue that brought together past, present and future thoughts and actions, the characters showed a variety of experiences that ranged from having no intention to be active, to being active, to having little interest in physical activity and believing themselves as not ready for it, to maintaining a physically active lifestyle, to the challenges of relapsing and starting to be regularly active again.

The following is an edited example of one version of the story for individuals identifying as

female (author details removed for peer review; p. 2049).

“So being active is good as we grow older. Experts...have also found that being active decreases the risk for heart disease and diabetes. And my friends are telling me how energized they feel, how rejuvenated they are after exercising. They’ve noticed other benefits too. Not only can they push themselves up steeper ramps, but they feel more confident, and can see a brighter future. I’ve really noticed changes in them. And they tell me they take much less medication, sleep better, and feel they have a real purpose in life”.

With a warm smile, Jennifer cut in, “So exercise is a miracle cure! To be honest, I’m contemplating it. But come on, it’s not easy”.

“You’re right”, added Cathy. “It’s no miracle, but we know there are so many benefits. And, yeah, it can sometimes be hard. It’s easy to put off too, another thing to do later. But it’s no good leaving it too late to exercise, and to think about your body when you’re 65...I’ve put plans in place to keep being active”.

“What type of plans then?” asks Sarah.

### *Data Analysis and Validity*

To identify main patterns in the data without restriction to a pre-existing coding scheme, an inductive thematic analysis as described by Braun and Clarke (2006) was conducted on transcripts using a six-phase procedure. Initially, the first and second authors immersed themselves with the transcripts and then generated initial codes. Next, codes were collapsed into potential themes and all data relevant to each potential theme were gathered. Themes were reviewed against transcripts and the entire data set before these were refined and combined into larger themes. This process led to the emergence of five main themes and the initial naming of these. Following a return to literature on KT, narrative inquiry, and physical activity promotion among adults with SCI, each theme’s title was amended to reflect this literature. This is not to suggest that the themes were arrived at deductively. Whilst names first given to the themes were refined following later readings of the literature, thereby

providing connections with established work rather than re-inventing ideas and adding to confusion around terminology in the KT literature (Graham et al., 2006), the themes were generated inductively. Each was emergent and represented an identified patterned response or meaning within the data set.

In terms of validity, the study was guided by a relativist approach. This means that criteria for judging the quality of qualitative research are not applied in a universal manner but rather are drawn from an ongoing list of characterizing traits (Sparkes & Smith, 2009; 2014). Here, this list included the following criteria: the worthiness of the topic; the significant contribution of the work; rich rigor, that is, developing a sample appropriate for the purpose of the study and generating data that could provide for meaningful and significant claims; and the coherence of the research, which refers to how well the study hangs together in terms of the purpose, methods, and results (Tracy, 2010). As part of a list of characterizing traits for enhancing the quality of our work, the study also used an audit trail (i.e., a colleague independently scrutinized data collection and theoretical matters) and aimed for resonance (e.g., naturalistic generalizations).

## Results

The analysis process resulted in the development of five final themes and seven sub-themes. The main themes were termed, *Effective Communication*, *Narrative Authenticity*, *Credible Messengers*, *Narrative Format* and *Narrative as a Form of Action*.

### Effective Communication

Participants had very positive perceptions of the stories. All three participant groups said that the stories were useful, of value, and appropriate. Each had utility in terms of being a highly effective tool for communicating synthesized information to the right people. Typifying all three samples of participants, one person with SCI commented,

It did a really good job of getting information across, and kept me engaged. It gave me a lot of good information on physical activity, which as the story proved is difficult to do after

your injury. But it pitched the details of how to be active really well too. So I've got confidence in the story. It's really helpful, and a really effective way to get this information across.

In addition to the story being useful for dissemination purposes, the analysis of data revealed four other themes. These offer useful knowledge about why the stories had utility, how the utility might be maximized or improved, and what the stories could do and how they might be used.

### **Narrative Authenticity**

All participants perceived and felt that the stories were authentic. That is to say, they did not just perceive each story to be relevant, accurate, truthful, and credible. There was also a reported felt relevance, accuracy, truthfulness, and credibility that pulled knowledge out of the background and to the fore, transporting people into a story of SCI and physical activity. For example, an adult with SCI who had been injured 20 months before the interview said, "I liked that it was kinda looking back, I guess, to what I was a year and a half ago." Likewise, a peer mentor stated, "The story hits home because it's so true. I felt I was there. It brought me back to what life was like in rehab and the talk about physical activity felt real." Finally, a HCP highlighted that "the story felt like a running picture of what it's like for inpatients, and all the physical activity, sport talk was accurate but it felt real as I see this so often in my job."

Revolving in many instances around a sense of resonance that equally respected difference, there were several attributes or means that helped convince individuals that the stories and information were authentic, and therefore had utility. These are captured in the following four sub-themes of narrative authenticity.

#### *Story plot and content*

The stories were considered authentic and useful partly because each had a plot and content that was not simply engaging. The plot and content of each story also resonated with participants' personal experiences or what they witnessed inside and outside of rehabilitation in terms of what is said about

physical activity and how people speak about health-related behaviours. This narrative resonance, as it might be termed, was vital as it helped participants evaluate the authenticity and usefulness of the story.

The content communicated through the plot and characters that engaged and resonated the most with the three groups concerned both the benefits of physical activity and barriers to being active. All groups suggested that the story plot and content were engaging and resonated at transporting them into past experiences about the challenges of finding, as either a patient or HCP, activities that are interesting and pleasurable. For example, a person with SCI commented, “What was said was so true about how hard it is to go to the gym, get fit in general. I related a lot to that.” Further, from a peer mentor, “You just have to, like [the story said], find something that you’re interested in...I didn’t like basketball as an able-bodied person but I love playing wheelchair basketball. It’s a lot of fun, you just have to find one that suits your needs and you have to do it with enjoyment.” Or, through the eyes of a HCP, the story “was true because I see it nearly everyday. What people said about not wanting to do sport, the barriers they face, but the good side too was all in the story as it is in real life.” Likewise another HCP suggested that “the physical activity information that is contained in [the story] is obviously totally relevant to what you share with your patients on a daily basis... But I like the way that the story itself was set up... it’s a little bit more thought provoking maybe than just listening to me tell them [patients] what do as far as exercise.”

#### *Credible characters*

Credible characters were another important means for achieving authenticity and, in turn, effectively communicating knowledge about SCI and physical activity. As noted in the introduction, the characters were all people with SCI. They were crafted to be polyphonic and relational as well as reflect the research evidence by showing the diversity of physical activity experiences and complexity of behavior change after a SCI. For the participants, having characters that showed this diversity and complexity helped achieve authenticity because, rather than being uni-dimensional

about being active (e.g., being just evangelical), they together, as relational beings, depicted an emotionally realistic picture about how difficult and different the process of initiating and maintaining physical activity following SCI can be. The characters portrayed various experiences that resonated with the participants. For example, an adult with SCI observed that “what makes the stories real, well, there are quite a few things, but the people, how they interact, and talk about physical activity, their experiences of it, and other things you need to emotionally deal with. I saw myself in a few of them and there were differences of course but I recognized them all from my time in rehab and now.” Another person said that “[The characters] were different, they had different opinions, they were at different stages in their rehabilitation so that made it seem realistic.” Additionally, one peer said, “I know that this [story] is technically fiction but it’s true for me... You could have inserted my name there for one of the characters.” Moreover, a HCP that “a lot of patients came to mind as I was thinking of [the story].” Similarly a different HCP commented:

I like that it was realistic..., like the example of [the characters] being thrown into a situation and they become friends. They were saying the one was older than the other guy but really they had this in common...this injury and we see that here a lot of the time, they become friends with who their other inpatient fellows are. I think that was realistic and I liked that... There is a lot of incidental talk that goes between them...they definitely talk and compare notes with each other. Like if someone finds out something about something, they definitely are talking to each other and ask “Hey how come I can’t do this?” or “Is that good for me?” They definitely do talk several times when they’re outside of therapy and compare notes. That was a good example and quite realistic in that way.

As the above comments suggest, characters were considered authentic as they were crafted not as bounded individuals but rather as relational beings who interact and counter-argue in ways that show emotion, difference and complexity; they resonated with participants’ own lived experiences or what they had witnessed. This said, people with SCI did also say that certain characters or aspects of

them diverged from their own lived experiences of doing or promoting physical activity. This however did not devalue the authenticity of the story. On the contrary, it was a positive feature. Reflecting the polyphonic aspirations of the story, participants suggested that characters which diverged from what they lived through meant that the story was more authentic and credible because it communicated the diverse experiences they had witnessed. That is, whilst they could see themselves in the voices of certain characters, they were also different from other voices. But these voices were embodied in spinal injured people they knew inside and outside rehabilitation. In this sense, the stories were textures of resonances that acclaimed ‘sameness’ *and* ‘difference’, thereby making the characters and each story credible and more effective messengers of physical activity knowledge.

### *Context*

For many participants, locating the story and its characters in a believable and relevant context – the rehabilitation hospital – was important for achieving narrative authenticity. Context included both the ‘whens’ (i.e., time) and ‘wheres’ (i.e., place and space) (Phoenix & Howe, 2010). Regarding the ‘whens’, in order to realistically capture the process and challenges of initiating and maintaining physical activity following SCI, the story consisted of showing people talking about their past, present and possible future physical activity experiences. In terms of the ‘wheres’, the rehabilitation centre, as the place with a set of spaces where characters interacted, was deemed a meaningful context to talk about these challenges, promote health-related activities, and target many people. As one peer mentor put it, in terms of promoting physical activity “rehabilitation is a great place to plant a seed.” Likewise a person with SCI said:

The whole setting is very appropriate, the rehab center and where all those initial thoughts, fears, anxieties, curiosities are pretty rampant. I think a lot of people can relate with that. That definitely struck me, and pulled me back in a lot of ways... The description of the rehab center was very good... Those doors in the rehab that will swing open and the smells of the

rehab center come wafting out...I could certainly relate with all that.

As suggested by these comments, the physical context was not simply important for contextualizing the story and making it authentic. Also useful was capturing the various senses that can elicit memories and help shape how we act. As testified by an adult with SCI:

I could picture myself wheeling down in a corridor... When he was talking about wheeling out into the garden, I was picturing myself in rehab and doing that very same thing and sitting out..., catching the sun and smelling the grass, I kind of put myself there...A lot of it was real life is I guess what I want to say. It's a real life episode and... I could see that physical activity discussion happening with somebody I met in a rehab center for sure.

### *Dialogue*

As suggested in the comments above, the fourth sub-theme, dialogue, was another key means participants frequently identified as making the information authentic. This echoes work by others (e.g., Petraglia, 2009), which suggests there is a dialogic dimension to rendering the communication of evidence-based knowledge authentic. For example, and as the participants reputed, the story's dialogue is often how people communicate in their everyday lives. Not only is it faithful to real life, dialogue helps deliver a sharp and engaging pace to the story. It is also action-orientated and can imaginatively transport people into the story, capturing attention and resonating with personal experiences, unraveling closely held assumptions, and provoking thought and action. Rather than being passive, dialogue fosters a sense of interactive engagement and can show people counter-arguing. It helps persuade, as some of the quotes above reveal along with the following comments from a person with SCI: "The story is really persuasive because, and this isn't the only reason but a big one, the discussions between the people are really lifelike and the chit-chat gets across so many of the issues we face in getting active."

### **Credible Messengers**

This theme describes participants' perceptions of who is the most ideal person to share the

stories in order to achieve maximum impact and facilitate the up-take of knowledge. It offers insights into how the utility of the stories might be maximized when they are disseminated. Unprompted as opposed to being asked directly, often participants recommended that for the story to be effective as a physical activity KT tool, there were two ideal groups of people and various organizations to actively deliver it. With regard to people, the most ideal messengers proposed were first peers with SCI and then HCPs. Supporting previous work (Faulkner et al., 2010; Letts et al., 2011), all participant groups said that a peer should ideally share the stories. The reason for this, as one person with SCI said, “is that peers are the same as us, have gone through what we’ve been through, have got the badge, and are best as they can relate to us and we can relate to them. I’d listen to what they had to say or be more inclined to listen and take seriously the story because of this.”

While all three of the participant groups suggested that a HCP would be another viable messenger, there tended to be a preference for the story to be shared by either an occupational therapist, physical therapist, or recreational therapist, as opposed to a physician, nurse, or psychologist. The reasons for this preference were that inpatients interact with their therapists for many hours a day, from the start of their acute care until discharge from rehabilitation. As a result of these lengthy interactions, there are opportunities to develop trust and rapport that, in turn, can transport the HCP into a trusted and credible messenger.

Participants also suggested that the stories could be effectively disseminated by several organizations or made openly available in certain organizational places/spaces. Rehabilitation hospitals, a context where very little information about physical activity in the community is shared, was frequently suggested to be a viable place for the dissemination of the stories to both individuals and groups. It was also suggested that the dissemination of physical activity stories should be early and ongoing within rehabilitation. Participants from all groups did however offer two caveats. First, several people suggested that disseminating such stories early in rehabilitation to people who are in chaos, that is imagining that life is over following SCI (Smith & Sparkes, 2008, 2011), might be

detrimental to their short-term well-being. Second, it was recommended the dissemination of the stories should extend beyond the inpatient rehabilitation phase into the community reintegration phase through hospital libraries or resource centers, public libraries, and community exercise facilities that offer accessible physical activity opportunities.

### **Narrative Format**

This theme describes what the participants frequently perceived to be the most viable format for sharing the stories. It offers further knowledge in terms of how the utility of the stories might be maximized as well as improved when they are disseminated. All participants said that the aural story used in this study was a useful and effective means of disseminating physical activity information. They also suggested that many other people with SCI or HCPs they knew would find this format useful for communicating physical activity knowledge and health messages. For example, as one person with SCI put it:

The story works for me as it is. It's realistic and I think because it's a story it holds your interest. I'll certainly be able to remember more. So, and I think others would like it, and use it too, not just people in a chair like me, but physios and such...I'd personally rather listen to the story than read it. But I know some people would prefer to read it. The best way though would be to record it on, like a film. Maybe not a long film, but so people can watch it too. More people would get to see it that way and you could show it in so many places...Ideally real disabled people would be in it.

As the above comments suggest, the aural narrative was a viable format for disseminating physical activity knowledge. Whilst this format was useful, the participants also suggested that the story could have been communicated even more effectively through a video presentation, with disabled people as the actors. Although attached with a higher production cost than most other formats, video was perceived to be able to capture embodied interactions better, would be visually captivating, and could be presented on a loop in numerous contexts to attract, or in narrative terms

narratively ambush (Frank, 2010), a multitude of people. These benefits noted, it was also pointed out that what was most important for communicating knowledge was a diversity of narrative formats. It was felt that different people might prefer a range of formats, thereby increasing the potential effectiveness of knowledge dissemination and uptake. These different narrative formats could be disseminated through websites, newsletters, SCI community events, hard-copy paper handouts, radio programs, peer-led workshops, and inpatient education sessions, for example.

### **Narrative as a Form of Action**

The final theme captures people's views on the processes and outcomes associated with using the stories. It offers knowledge about the perceived functions of the stories by illuminating what the participants believed the stories could do and subsequently how the stories might be used by them, as well as other HCPs and people with SCI. Participants consistently reported that the stories were viable and useful means of communicating knowledge. That is, each story performed a communication function. It was suggested too that the story could do at least three things that are captured by the following sub-themes.

#### *Dialogue*

Participants repeatedly suggested that the stories could open up dialogue. As a consequence, it was also frequently noted that these stories could be useful resources for them, as well as other HCPs and people with SCI, for initiating discussion about physical activity in various contexts and helping in the process of motivating people to live healthier lifestyles over time. As one person with SCI put it, "I'd use the story, and would use it to start a discussion about physical activity and keep it going...It's like a good way to open up people's minds about physical activity, to get people more confident to do things, showing them there are more things to do than just wheelchair sport." Peers also noted that the story would serve as "a lead in with [patients] to start discussing things" in patient-peer interactions. Likewise, a HCP said:

The vignette would allow my patients to discuss things about physical activity. It would

provide a great opportunity for them to think back to what they used to do, activity-wise. I had a patient here who was extremely active and that's one of the reasons he was hurt, actually I have a lot of patients in that situation, they were hurt because of the activities they loved so much... The story could allow them to listen a little bit more and say "Okay well what does this mean for my life?" and sort of start that discussion with [their therapist] in terms of how to match their interests with their level of ability and current level of functioning.

As exemplified in the comments above, what the stories can do and how they could be used was grounded in the dialogic nature of narrative; the stories open up dialogues between people that, in turn, become a useful resource for stimulating discussion about physical activity and perhaps persuading people to be more active. Although using different theoretical language and lenses, these points find support in the work of others. For example, grounded in social constructionism, Petraglia (2009) argued that dialogue plays a crucial role in persuasion and, rather than being incidental or perfunctory, is fundamental to behavior change. Further, based on behavior change theories like Social Cognitive Theory (Bandura, 1986) and Self-Determination Theory (Deci & Ryan, 2000), dialogues that promote self-efficacy or autonomy-supportive social exchanges can be an effective source for motivating people by generating self-efficacy or perceptions of competence. Or, in the language of narrative theory, as forms of action dialogues can act on people, and people can act out what dialogues teach them (Brockmeier, 2012; Frank, 2010). For such processes to be facilitated and outcomes realized, the participants further suggested that it was important to provide an opportunity for people with SCI to engage in follow-up discussions of the story in groups, on a one-to-one basis, or with family; in other words, it is vital to sustain the dialogue that the story generates. For example, a peer mentor recommended that she could encourage patients with SCI to "keep my contact information with them so if they had any questions or if they wanted to follow up on [the story], they could contact me by email or phone number you know, or meet up with me again."

*Stories teach*

Whilst not as common as dialogue, another performative function of the stories was that they taught the participants some new physical activity knowledge. As a result, the participants envisaged that the stories might be useful as professional training resources or pedagogical resources that can be used to teach people about physical activity in authentic and engaging ways. For example, one person with SCI said, “I obviously know it’s important to be fit for my health. But I didn’t know all of what was said. It [the story] taught me a lot, and, like how much exercise I should do, or to keep myself motivated. I’ll start doing more of that.” Further, a HCP said, “I didn’t realize ideas like wheeling to the store count as physical activity so I’ve new ideas to share with patients.”

*Stories remind, reinvigorate, and reassure*

For participants, most notably HCPs and peers with SCI, the stories performed ‘3 R’ functions, that is reminding, reinvigorating, and reassuring. Not only did the story teach, it acted on and for the participants by reminding them about the benefits of being active, the different physical activity options available, and how difficult it can be to initiate and maintain a healthy lifestyle following SCI. Moreover, some HCPs were reinvigorated by the story to stay up-to-date with current research knowledge and to promote physical activity.

The stories also reassured participants about their decision to engage with spinal cord injured people in different ways, rather than adopting as numerous participants put it, a “one size fits all approach/model” that assumes sameness or “everyone is the same when they’re not”. Some participants, notably peer mentors or HCPs, felt more secure in the knowledge that they had done the “right thing” when engaging with disabled people in chaos after hearing the story. Against the dominant stories that circulate in the Western media, on the internet, or through various people about ‘curing SCI’, for some of participants the stories reassured them about the dangers of peddling stories that suggest that following a SCI a person can regain their ability to walk or gain major neurological improvements through engaging in active physical rehabilitation (i.e. a restitution narrative). As one

HCP put it:

Sometimes you get caught up in what some patients say about walking again and how they've heard that doing this or that, and if you do intense physical activity, rehab, you'll get some or all function back... You can't destroy hope, but the story reminded me I need to stay tuned to how we give realistic and good hope about physical activity across without feeding it's a cure.

Finally, all groups of participants suggested that what stories can do on and for people in terms of these 3 R's – reminding, reinvigorating, and reassuring – could be transferred into everyday lives. The stories themselves, or the research knowledge that continues breathing after being read, watched or heard, could be used to promote competence and confidence in people by reminding and reassuring them about what to do. It was suggested too that each story could (re)invigorate people to want to know more about physical activity and how best to promote and do it. As one HCP said:

I'm going to work tomorrow so I think I will be a little more conscious about how I present information and what that looks like, how it's talked about. But like I said I do it already but it's just reinforcing the importance, it's a good friendly reminder of just the truth and how it is also my responsibility to, as a nurse, to encourage that lifestyle and you know we do but I think as a whole we could do it even more.

### **Closing thoughts**

Despite the need to promote healthy behavior among disabled people, there is scant work that theoretically and empirically links disability, physical activity, and the dissemination of research evidence through stories in the context of rehabilitation and health. This significant knowledge gap was addressed here by examining the utility of synthesized research evidence in the form of a story as a knowledge translation tool. Informed by narrative theory, the analysis of qualitative data highlights that evidence-based stories were an effective means for disseminating physical activity knowledge to spinal cord injured adults and HCPs working with this population. In terms of why this

was the case, our analysis reveals that several attributes of the story were important for making it effective. These include a plot and content that resonates with the audience whilst promoting diversity, credible characters as actors, authentic dialogue between each character, and a multi-sensory context concerned with both the ‘wheres’ and ‘whens’ that audiences can relate to. The participants’ perceptions of the stories also highlight that to maximize the dissemination of physical activity knowledge, the stories need to be shared by credible messengers and in various formats, with a digital short-film/video being the preferred format. In revealing all this, this paper offers a model or template others can utilize for designing narrative-based knowledge tools that can be used as part of intervention programs and/or health promotion efforts. For instance, if one seeks to design an effective story for dissemination purposes the story needs to include credible characters and dialogue. Although speculative, the template and findings from this study might be similar when transferred to people without SCI, thereby increasing the naturalistic generalizability of our work. This may be particularly so for those individuals for whom there are few alternative stories to the foreclosed ones offered by society and culture.

Furthermore, our study has made a contribution to health psychology, as well as the sport and exercise sciences literature, by highlighting that people with SCI and HCPs themselves perceive that narrative can do several things on and for people that extend beyond just translating research-based knowledge about physical activity. Whilst the main purpose of each story was to perform a communicative function, the participants suggested that the stories could also act by opening up dialogues about physical activity, teaching them and others new knowledge, and reminding, reinvigorating, and reassuring the people in terms of working with spinal cord injured people. All of which, each group believed, would be useful for helping to facilitate the uptake of knowledge and move people to action. That said, we do not claim that a narrative can directly elicit behavior change. But, the participants did suggest that narratives have the power to change how they think, feel, and learn about physical activity. Thus, the use of these stories as a real-world intervention for enhancing

the narrative and social cognitive antecedents of behavior and behavior change itself are an interesting avenue for further research.

In addition to contributing to knowledge, important practical implications also emerge from this work. As part of a toolkit of resources, researchers, HCPs, disabled people and user-groups, policy makers, and public health communication programs could utilize evidence-based stories to share knowledge effectively and move people towards behavior change. This practical use for stories is particularly appealing for several reasons. Providing information through standard written instructions or guidelines has been found lacking (Scott et al., 2012) in part because these ways of communicating research often operate non-dialogically, that is, monologically. Like cognitive modes of communicating, monological communication closes itself from the *embodied* response of the reader or listener; it is *static* instead of *shift shaping*, *asserts* rather than *engages*, *speaks at* not *with* people, and *informs* cognitively but struggles to *compel*, *animate memory*, and capture *bodies emotionally* (Frank, 2010). The issue then is not about the validity or reliability of the knowledge communicated. Rather, the issue is about how knowledge is conveyed in a way that attracts people, holds their attention, and gets under their skin. Stories have the capacity to do this; they offer much that isolated bullets of health information cannot.

Indeed, as Scott et al. (2012) suggests, the appeal of stories lies in what they can do to memory and emotion. As they note, memory is predominately story-based and as a consequence new information can be more easily absorbed, integrated, and remembered in order to act on. Not only do “stories appear to be processed in an automatic, relatively effortless way facilitating efficient memory storage and retrieval” (p. 162). Scott et al. add that “stories generate emotional impact” (p. 163). In addition, Frank (2010) argues that stories “have the capacity to make one particular perspective not only plausible but compelling” (p. 31). They can resonate and make life dramatic, thereby enabling people to “get *caught up* in a story” (p. 32). Further, in stories plots and characters shift to allow many different people to locate themselves in characters in those plots.

Finally, “perhaps most significant” for Frank (2010), stories “have the capacity to arouse people’s imaginations; they make the unseen not only visible but compelling. Through imagination, stories arouse emotions” (p. 41). Others support the view that imagination is integrally tied to narrative and gives us sustenance to discern other possible ways of being (Brockmeier, 2012; Andrews, 2014). Given this, there is an exciting base from which to generate practical opportunities in research and application around narrative imagination. For instance, when designing and implementing health related promotion campaigns or health behavior interventions, narrative imaginative change could be supported through encouraging storytelling about not simply what people see and do, but also what is possible and how. Such a suggestion could also be part of a much broader programme that incorporates what is known as Appreciative Inquiry. This is an approach to organizational change that has been adapted for use in public health (Petraglia, 2009). It works through four stages: discovery, dream, design, and delivery (Cooperrider, Whitney, & Stavros 2008). For example, knowledge and strengths that are developed in the discovery stage are applied in the dream stage to imagine futures (e.g., “What physical activities would you want to be doing in one year?”). The design stage moves the group toward planning and concrete action, and the delivery stage encompasses the resultant action. Narratives can play a key part in addressing these ‘stages’ by co-creating stories and provoking people’s imagination in ways that move beyond problem solving to appreciating what is going well, envisioning what might be, engaging in dialogue about what could be, and innovating what will be. In addition, narratives could be used in behavioral counseling sessions as both an informational resource and a tool for motivating behavior change.

This paper examined the utility of evidence-based stories as a knowledge tool for disseminating research knowledge about physical activity to people with SCI and HCPs. Participants perceived that the stories were useful and viable. Their perceptions offered important insights into what attributes, formats, and messengers are crucial for successfully disseminating knowledge through stories. Further, whilst this research was not designed as an intervention study, after hearing

the story, the participants suggested that narrative could do various things in terms of positively promoting physical activity. As such, the power of narrative as a novel approach for disseminating complex evidence-based health information, and generating impact by moving people toward behavior change, should be taken seriously. The utility of narrative needs exploring further by health psychology researchers and practitioners. It is hoped this paper has opened up further consideration of narrative as a way to enhance our scholarly knowledge, share knowledge more effectively to different audiences, and apply what we know in practice to help people live meaningful lives.

## References

- Andrews, M. (2014). *Narrative imagination and everyday life*. Oxford: Oxford University Press.
- Bandura A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77–101. doi: 10.1191/1478088706qp063oa
- Brockmeier, J. (2009). Reaching for meaning: Human agency and the narrative imagination. *Theory & Psychology, 19*, 213-233. doi: 10.1177/0959354309103540
- Brockmeier, J. (2012). Narrative scenarios: Toward a culturally thick notion of narrative. In J. Valsiner (Ed.), *The oxford handbook of culture and psychology* (pp. 439-467). Oxford: Oxford University Press.
- Canadian Institutes of Health Research. (2012). Guide to knowledge translation planning at CIHR: Integrated and end-of-grant approaches. Ottawa, Ontario. Cat. No. MR4-11/2012E-PDF ISBN 978-1-100-20517-5
- Cooperrider, D.L., Whitney, D.L., Stavros, J.M. (2008). *Appreciative inquiry handbook*. Brunswick, OH: Crown Custom Publishing, Inc.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227–268.
- Faulkner, G., Gorczynski, P., Arbour, K. P., Letts, L., Wolfe, D. L. & Martin Ginis, K. A. (2010). Messengers and methods of disseminating health information among individuals with spinal cord injury. In: Berkovsky TC, ed. *Handbook of Spinal Cord Injuries*. New York: Nova Science Publishers, Inc. pp. 329-374.
- Foulon, B. L, Lemay, V., Ainsworth, V., & Martin Ginis, K. A. (2012). Enhancing physical activity guidelines: A needs survey of adults with spinal cord injury and health care professionals. *Adapted Physical Activity Quarterly, 29*, 329-345.

- Foulon, B., & Martin Ginis, K.A. (2013) The effects of physical activity vignettes on physical activity-related social cognitions among people with spinal cord injury. *Disability Rehabilitation, 35*, 2073-2080. doi: 10.3109/09638288.2013.800916.
- Frank, A.W. (2010). *Letting stories breathe*. Chicago: The University of Chicago Press.
- Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W. & Robinson, N. (2006). Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions, 26*, 13–24. doi: 10.1002/chp.47
- Graham, I. D. & Tetroe, J. (2007). How to translate health research knowledge into effective healthcare action. *Healthcare Quarterly, 10*, 20-22.
- Gray, J. B., & Harrington, N. G. (2011). Narrative and framing: A test of an integrated message strategy in the exercise context. *Journal of Health Communication, 16*, 264-281, doi: 10.1080/10810730.2010.529490
- Grimshaw, J. M., Eccles, M. P., Lavis, J. N., Hill, S., & Squires, J. E. (2012) Knowledge translation of research findings. *Implementation Science, 7*:50 doi:10.1186/1748-5908-7-50
- Hinyard, L.J., & Kreuter, M.W. (2007). Using narrative communication as a tool for health behavior change: A conceptual, theoretical, and empirical overview. *Health Education & Behavior, 34*, 777-792.
- Kehn, M., & Kroll, T. (2009). Staying physically active after spinal cord injury. *BMC Public Health, 9*, 168. doi:10.1186/1471-2458-9-168
- Larkey, LK., & Gonzalez J. (2007). Storytelling for promoting colorectal cancer prevention and early detection among Latinos. *Patient Education Counseling, 67*, 272-278.
- Lavis, J. N. (2006). Research, public policymaking, and knowledge-translation processes: Canadian efforts to build bridges. *Journal of Continuing Education in the Health Professions, 6*, 37-45. doi: 10.1002/chp.

- Lavis, J.N., Robertson, D., Woodside, J.M., McLeod, C.B., & Abelson, J. (2003). How can research organizations more effectively transfer research knowledge to decision makers? *The Milbank Quarterly*, *81*, 221–248. doi:10.1111/1468-0009.t01-1-00052
- Letts, L., Martin Ginis, K. A., Faulkner, G., Colquhoun, H., Levac, D., & Gorczynski, P. (2011). Preferred methods and messengers for delivering physical activity information to people with spinal cord injury: A focus group study. *Rehabilitation Psychology*, *56*, 128-137. doi: 10.1037/a0023624
- Martin Ginis, K. A., Arbour-Nicitopoulos, K. P., Latimer, A. E., Buchholz, A. C., Bray, S. R., Craven, C.,...Horrocks, J. (2012). Predictors of leisure-time physical activity among people with spinal cord injury. *Annals of Behavioral Medicine*, *42*, 127-133.
- Martin Ginis, K. A., Hicks, A. L., Latimer, A. E., Warburton, D. E. R., Bourne, C., Ditor, D. S.,...Wolfe, D. L. (2011). The development of evidence-informed physical activity guidelines for adults with spinal cord injury. *Spinal Cord*, *49*, 1088–1096. doi:10.1038/sc.2011.63
- Martin Ginis, K. A., Jetha, A., Mack, D. E., & Hetz, S. (2010). Physical activity and subjective well-being among people with spinal cord injury: A meta-analysis. *Spinal Cord*, *48*, 65–72. doi:10.1038/sc.2009.87
- Martin Ginis, K. A., Latimer, A. E., Arbour-Nicitopoulos, K. P., Bassett, R. L., Wolfe, D. L., & Hanna, S. E. (2011). Determinants of physical activity among people with spinal cord injury: A test of social cognitive theory. *Annals of Behavioral Medicine*, *42*, 127–133. doi:10.1007/s12160-011-9278-9
- Martin Ginis, K.A., Latimer, A.E., Arbour-Nicitopoulos, K.P., Buchholz, A.C., Bray, S.R., Craven, B.C., . . . Wolfe, D.L. (2010). Leisure time physical activity in a population- based sample of people with spinal cord injury Part I: Demographic and injury-related correlates. *Archives of Physical Medicine and Rehabilitation*, *91*, 722–728. doi:10.1016/j.apmr.2009.12.027

- Martin Ginis, K.A., Latimer-Cheung, A.E., Corkum, S. Ginis, S., Anathasopoulos, P., Arbour-Nicitopoulos, K.P., & Gainforth, H. (2012). A case study of a community-university multidisciplinary partnership approach to increasing physical activity participation among people with spinal cord injury. *Translational Behavioral Medicine*, Advance Online Publication doi: 10.1007/s13142-012-0157-0
- McQueen, A., & Kreuter, MW. (2012). Measuring the effects of cancer survivor stories on cognitive and affective outcomes: A structural equation analysis. *Patient Education Counseling*, 81, 15–21.
- O'Reilly, M., & Parker, N. (2013). 'Unsatisfactory Saturation': A critical exploration of the notion of saturated sample sizes in qualitative research. *Qualitative Research*, 13, 190-197. doi: 10.1177/1468794112446106
- Pappas-DeLuca, K. A., Kraft, J. M., Galavotti, C., Warner, L., Mooki, M., Hastings, P., Kilmarx, P. H. (2009). Entertainment-education radio serial drama and outcomes related to HIV testing in Botswana. *AIDS Education Prevention*, 20, 486-503. doi: 10.1521/aeap.2008.20.6.486
- Parsons, J., & Lavery, J. (2012). Brokered dialogue: A new research method for controversial health and social issues. *BMC Medical Research Methodology*, 12:92. doi:10.1186/1471-2288-12-92
- Perrier, M-J., Smith, B., & Latimer-Cheung, AE. (2013). Narrative environments and the capacity of disability narratives to motivate leisure-time physical activity among individuals with spinal cord injury. *Disability and Rehabilitation*, 35, 2089-2096. doi: 10.3109/09638288.2013.821179
- Petraglia J. (2009). The importance of being authentic: persuasion, narration, and dialogue in health communication and education. *Health Communication*, 24, 176–85. doi: 10.1080/10410230802676771
- Phoenix, C., & Howe, A. (2010). Working the when, where, and who of social context: The case of a traumatic injury narrative. *Qualitative Research in Psychology*, 7, 140-155. doi: 10.1080/14780880802571176

- Rauch, A., Fekete, C., Cieza, A., Geyh, S., & Meyer, T. (2013). Participation in physical activity in persons with spinal cord injury: A comprehensive perspective and insights into gender differences. *Disability and Health Journal, 6*, 165-176.
- Rimmer, J. H., Riley, B., Wang, E., Rauworth, A., & Jurkowski, J. (2004). Physical activity participation among persons with disabilities: Barriers and facilitators. *American Journal of Preventative Medicine, 26*, 419-425. doi:10.1016/j.amepre.2004.02.002
- Sallis, R. E. (2009). Exercise is medicine and physicians need to prescribe it! *British Journal of Sports Medicine, 43*, 3-4. doi: 10.1136/bjism.2008.054825
- Scott, S., Hartling, L., O'Leary, K., Archibald, M., & Klassen, TP (2012). Stories - a novel approach to transfer complex health information to parents: A qualitative study. *Arts & Health, 4*, 162-173. Doi: 10.1080/17533015.2012.656203
- Smith, B. & Sparkes, A. C. (2006). Narrative inquiry in psychology: Exploring the tensions within. *Qualitative Research in Psychology, 3*, 169-192. doi: 10.1191/1478088706qrp068oa
- Smith, B. (2013). Disability, sport, and men's narratives of health: A qualitative study. *Health Psychology, 32*, 110-119. doi: 10.1037/a0029187
- Smith, B. & Sparkes, A.C. (2011). Multiple responses to a chaos narrative. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness & Medicine, 15*, 38-53. doi: 10.1177/1363459309360782
- Smith, B. & Sparkes, A. C. (2012). Disability, sport and physical activity: A critical review. In N. Watson, A. Roulstone, & C. Thomas, & (Eds). *Routledge Handbook of Disability Studies* (pp. 336-347). London: Routledge.
- Sparkes, A.C., & Smith, B. (2009). Judging the quality of qualitative inquiry: Criteriology and relativism in action. *Psychology of Sport and Exercise, 10*, 491-497. doi: 10.1016/j.psychsport.2009.02.006

- Sparkes, A.C. & Smith, B. (2014). *Qualitative research methods in sport, exercise & health. From process to product*. London: Routledge.
- Stapleton, J. N., Martin Ginis, K. A., & the SHAPE-SCI Research Group. (In Press). Sex differences in theory-based predictors of leisure-time physical activity in a population-based sample of adults with spinal cord injury. *Archives of Physical Medicine & Rehabilitation*.
- Sweet, S.N., Martin Ginis, K.S., Latimer-Cheung, A.E., & the SHAPE-SCI research group. (2012). Examining physical activity trajectories for people with spinal cord injury. *Health Psychology, 31*, 728-732. doi: 10.1037/a0027795
- Sweet, S. N., Martin Ginis, K. A., & Tomasone, J. R. (2013). Investigating intermediary variables in the physical activity and quality of life relationship in persons with spinal cord injury. *Health Psychology, 32*, 877-885. doi: 10.1037/a0032383
- Tomasone, J. R., Wesch, N. N., Martin Ginis, K. A., & Noreau, L. (2013). Spinal cord injury, physical activity, and quality of life: A systematic review. *Kinesiology Review, 2*, 113-129.
- Tracy, S. (2010). Qualitative quality: Eight 'big tent' criteria for excellent qualitative research. *Qualitative Inquiry, 16*, 837–851. doi: 10.1177/1077800410383121
- Trier-Bieniek, A. (2012). Framing the telephone interview as a participant centred tool for qualitative research: A methodological discussion. *Qualitative Research, 12*, 630-644. doi: 10.1177/1468794112439005
- Williams, T., Smith, B., & Papatomas, A. (2014). The barriers, benefits and facilitators of leisure time physical activity among people with spinal cord injury: A meta-synthesis of qualitative findings. *Health Psychology Review, 8*(4), 404-425. doi: 10.1080/17437199.2014.898406
- Wolfe DL, Martin Ginis KA, Latimer AE, Foulon BL, Eng JJ, Hicks AL, Hsieh JTC (2010). Physical Activity and SCI. In Eng JJ, Teasell RW, Miller WC, Wolfe DL, Townson AF, Hsieh JTC,

Connolly SJ, Mehta S, Sakakibara BM, editors. *Spinal Cord Injury Rehabilitation Evidence*.

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