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The Effects of Surfing and the Natural Environment on the Well-Being of Combat Veterans

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Abstract

Whereas researchers have identified the benefits of physical activity on well-being, there is little evidence concerning the effects of nature-based physical activity. We uniquely investigated the effect of one nature-based activity – surfing – on the well-being of combat veterans experiencing posttraumatic stress disorder (PTSD). We conducted interviews and participant observations with a group of combat veterans belonging to a UK-based veterans' surfing charity. Our primary analytical approach was dialogical narrative analysis. Based on our rigorous analysis and findings, we suggest that surfing facilitated a sense of respite from PTSD. Respite was a fully embodied feeling of release from suffering that was cultivated through surfing and shaped by the stories veterans told of their experiences. We significantly extend previous knowledge on physical activity, combat veterans and PTSD by highlighting how nature-based physical activity – encapsulated in the conceptual notion of the “Blue Gym” - can promote well-being among combat veterans.

Keywords: exercise / physical activity; health and well-being; narrative inquiry; posttraumatic stress disorder (PTSD); phenomenology

Building on evidence that physical activity can support and enhance people's psychological health and well-being (e.g., Biddle & Mutrie, 2008; Carless & Douglas, 2010; Reed & Buck, 2009), researchers have begun to explore the psychological effects of physical activity in natural environments such as parks, woodlands, countryside and coastal regions (Coon et al., 2011; Mitchell, 2013; Pretty, Peacock, Sellens & Griffin, 2005). This interest in the effects of combining physical activity with natural environments builds on the notion that contact with nature might yield benefits for well-being (Hansen-Ketchum & Halpenny, 2010). For example, researchers have suggested that contact with nature can replenish depleted cognitive attention (Hartig & Staats, 2006) and help cultivate general feelings of vitality and well-being (Cervinka, Röderer & Hefler, 2011; Ryan et al., 2010). Whereas the potential for physical activity to influence well-being has been well-established (e.g., Biddle & Mutrie, 2008), there is a paucity of empirical evidence concerning the additional effects of physical activity conducted in the natural environment (Coon et al., 2011). In particular, Coon et al. (2011) suggested that studies involving "populations who might benefit most from the potential advantages of outdoor exercise are needed to fully elucidate the effects on mental and physical wellbeing" (p. 1761).

One environment that has stimulated researchers' interest in terms of possibilities for promoting psychological health is the coastal or water environment (e.g., Wheeler, White, Stahl-Timmins & Depledge, 2012; White et al., 2010). For example, researchers of so-called "blue space" have demonstrated that people prefer to see and be near water over both urban and green environments (White et al., 2010), and that people in coastal communities tend to enjoy better overall health than people who live further inland (Wheeler et al., 2012). Bringing physical activity into the picture, the recent conceptual notion of the "Blue Gym" (Depledge & Bird, 2009) could provide a way of combining physical activity with aquatic environments to influence well-being.

The Blue Gym captures the notion of being active in natural water environments, and encapsulates various forms of activity such as swimming or surfing in the sea, kayaking and fishing in lakes and rivers, or simply walking along the coast (Smith & Sparkes, 2012). As Smith and Sparkes (2012) suggested, "this moves traditional notions of the gym as an indoor, machine-filled contained physical place and space to conceptualising it as part of our multi-sensory natural environment, city surroundings or maritime culture" (p. 343). The Blue Gym thus conveys an environment and set of activities through which people might become active and connect with nature in ways that could impact their health. However, because there is

currently very little research in this area, the capacity of the Blue Gym to influence psychological health and well-being is empirically unknown.

Our purpose in this article was to explore how surfing – as one application of the Blue Gym concept – could influence well-being among a group of combat veterans experiencing posttraumatic stress disorder (PTSD). PTSD is the term used to describe the psychological and emotional distress that some combat veterans experience following traumatic events in war. Research conducted with combat veterans has revealed that PTSD is associated with diminished well-being, poorer mental and physical health functioning, and increased risk of suicide (e.g., Jakupcak et al., 2009; Vasterling et al., 2008). Such findings powerfully illustrate the negative personal consequences of war for some veterans, and underscore the need to provide support for those experiencing PTSD.

Moreover, the need for support is reinforced by suggestions that the prevalence of PTSD among US troops returning from Iraq and Afghanistan could be as high as 31% (Tanielian & Jaycox, 2008). In the UK, researchers have indicated the rate of PTSD among combat-deployed troops is around 6.9% (Fear et al., 2010). However, given the widely reported influence of stigma in restricting service members – both active and retired – from seeking treatment for PTSD (e.g., Green et al., 2010; Walker, 2010), this figure likely underestimates the scale of mental health need among UK combat veterans.

Our focus on veterans' well-being contrasts with a symptom-focused approach to understanding and treating PTSD that currently dominates the literature on combat veterans (Dustin, Bricker, Arave & Wall, 2011). Following Ryan and Deci (2001), we understand well-being as a multi-dimensional conceptualization of psychological health consisting of two broad categories: subjective well-being and psychological well-being. Subjective well-being encompasses a person's overall satisfaction with life alongside the balance of positive and negative emotions they feel over time (Diener, 2000; Ryan & Deci, 2001). This concept is intended to reflect a person's subjective evaluation of the quality of their life, based on overall satisfaction, and relative frequency of pleasure over pain. In contrast, psychological well-being involves experiences of psychological growth and the fulfilment of human potential (Ryff, 1989; Ryff & Singer, 1998). Rather than determining *a priori* what we looked for in the veterans' experiences, these conceptualizations of well-being allowed us to consider how surfing might have influenced veterans' psychological health beyond the medical emphasis on treating symptoms and disorder (Summerfield, 2004).

The central research question we explored was: what effect did surfing and the natural environment have on veterans' well-being? Furthermore, we considered how did these effects occur, and finally, why did these effects occur? We aimed to answer these questions by engaging with veterans' personal stories, and by seeking detailed descriptions of their lived experiences of surfing. Accordingly, we chose a narrative approach.

Narrative Approach to Psychological Health and Well-Being

A narrative approach involves studying the stories people tell of their lives and experiences (Smith & Sparkes, 2009). Narrative is an important topic for qualitative health researchers because, as Frank (2010) suggested, stories are more than simply passive representations of people's lives; they do things. Narratives have the capacity to act on, in and for people in ways that can have both good and dangerous implications for their psychological health. Narratives act on people in the sense that they constitute certain emotions, beliefs and practices as appropriate in the context of a particular story while others are necessarily eschewed. They act by shaping our awareness of what good psychological health is and can be, and also what health behaviours are seen as important for promoting it. For example, narratives can act by getting people to care about their health and by calling on them to adopt certain health-promoting practices (Smith, 2013).

Like Frank (2010), we reject a purely mimetic understanding of narrative whereby "stories imitate life that has already happened and now is being represented in the story" (p. 21). Rather, stories also shape what becomes experience. This said, we readily acknowledge that people's everyday experience is of a physical world in which their embodied actions – their fleshy, physical, and sentient capabilities – have the power to influence their lives. People's experiences, therefore, also influence the stories they tell to represent those experiences. As Frank put it "mimesis happens, but as a reciprocal process. Life and story imitate each other, ceaselessly and seamlessly, but neither enjoys temporal or causal precedence" (p. 21). Thus, narrative shapes experience, and experience also shapes narrative, continuously and recursively.

Focusing purely on narrative, however, can sometimes obscure the fleshy physicality of people's lived experience, subsuming it as the product of a story. Our desire was to understand not only how stories shaped the veterans' surfing experiences – and influenced well-being - but also the visceral and embodied qualities of veterans' active engagement with surfing and the Blue Gym. Accordingly, we attempted to draw out veterans' embodied and

sensory experiences of surfing using phenomenological theory and principles, primarily the work of Merleau-Ponty (1962). We thus describe our approach as a phenomenologically inspired narrative analysis.

Method

Sampling and Participants

We used purposive sampling to recruit participants for this study from a UK-based veterans' surfing charity. Potential participants were contacted individually by Nick Caddick and asked if they would take part in the study. We then provided the 15 male combat veterans (aged 27-60) who agreed to do so with information about the project and how the data would be used, as well as their right to withdraw at any time without penalty. Following Caddick and Smith (2014), the term combat veteran can be defined as "any current or former member of the military who has previously deployed to a warzone and been exposed to the risks of combat" (p. 16). All 15 participants met this description and had been directly involved in front line duties and combat roles during their service. Ten out of the 15 had been diagnosed with PTSD. Being officially diagnosed with PTSD was not a requirement for inclusion in our study given that PTSD is a contested category of disorder and could arguably be viewed as the medicalization of veterans' suffering (Summerfield, 2004). Regardless of diagnosis, however, all of the participants referred to themselves as living with PTSD. One additional participant was a former member of the civilian emergency services who was diagnosed with PTSD. On hearing of the study, this man also volunteered to take part, bringing the total number of participants to 16. Informed consent was gained from all participants, and ethical approval was granted by Loughborough University Research Ethics Committee.

Data Collection

Our research design was an iterative process of data collection and analysis, which included the write-up of our findings (Frank, 2012; Sparkes & Smith, 2014). To begin, we used two forms of data collection concurrently to generate rich, storied data. The first was interviews. All participants were involved in semistructured life history interviews, conducted face-to-face between Nick Caddick and the participants, either in the participant's home or in the charity's headquarters. In each of these encounters, Nick encouraged participants to tell stories about how they had lived their lives over time, providing us with detailed insight into their personal and social lives (Smith & Caddick, 2012; Sparkes & Smith, 2014). He also

used a semistructured interview guide in a flexible manner to help stimulate reflection on important topics (guide is available on request from the first author). Half of the participants ($n = 8$) also took part in a follow-up interview when the researchers required further clarification/elaboration of participants' responses. The interviews numbered 24 in total, each lasting between 1 and 4 hours.

The second method was participant observation (Smith & Caddick, 2012; Sparkes & Smith, 2014). This entailed the researcher (Nick) observing and participating in the daily activities of the veterans during 18 of the charity's twice weekly surf camps, and during three residential weeks in which Nick actively immersed himself in the group environment and joined in their activities which included surfing each day, coastal walks and yoga/meditation sessions. Following a period of observation, Nick used fieldnotes to document the findings, resulting in approximately 90 hours of observational data. We used the method of participant observation because it enabled us to gain insight into the mundane, the typical, and occasionally extraordinary features of everyday life in the context of the group (Sparkes & Smith, 2014). Furthermore, combining interviews with participant observation was useful for us to build a more complex account of participants' lives and the socio-cultural worlds they inhabited. Overall, data collection for this study spanned a period of 1 year and six months, with interviews and participant observations beginning in April 2012 and conducted at routine intervals until September 2013.

Data Analysis

We analysed our data through the lens of a dialogical narrative analysis (DNA). In a DNA, as described by Frank (2010; 2012), the analyst examines stories not as mere products of telling, but as "actors" that do things for and to people. The analyst first considers what type of story is being told and how that story is structured (as per a structural analysis). He/she then seeks to understand "the mirroring between what is told in the story - the story's content - and what happens as a result of telling that story - its effects" (Frank, 2010, pp. 71–72). Furthermore, in DNA stories are understood as artful representations of people's lives (Frank, 2012).

Recognizing this, the dialogical analyst attempts to understand the reasons why a person chooses to represent their life using a particular story and what the storyteller does by telling that story. In line with our purpose of exploring how surfing influenced well-being, the dialogical analysis enabled us to consider how well-being itself derived meaning from the veterans' stories, and what role surfing played in these stories.

The iterative process of doing the DNA (see Frank, 2012) began with Nick immersing himself in the data by reading and closely re-reading the interview transcripts and fieldnotes to gain familiarity with the data. He then marked up the transcripts and fieldnotes with conceptual comments which included, for example, notes on the type of stories being told by the veterans and how and why the stories were told in this way. Next, the researchers collectively considered the data in relation to various dialogical questions (Frank, 2012), which we asked to illuminate the effects that stories were having on the veterans' lives. Such questions included what resources the storyteller draws on to shape their subjectivity, and what is at stake for the teller in a particular story? (Frank, 2012).

Added to the above dialogical questions, we asked how the veterans' stories were grounded in their embodied and sensory experiences of surfing and the natural environment (Hockey & Allen-Collinson, 2007). We thus sought to incorporate within our analysis a phenomenology of the body and the senses, revealing through their stories how the veterans experienced their being-in-the-world in relation to surfing and the elements (Hockey & Allen-Collinson, 2007; Merleau-Ponty, 1962). Throughout the analysis, Nick used theoretical and procedural memos to record emerging analytical ideas and interpretations of the data. One role of the second and third authors in this process was to act as critical friends who each provided a different theoretical sounding board and encouraged reflection on interpretations as they emerged in relation to the data.

Findings

Without wishing to finalize the participants (i.e., to claim the last word on who or what they might become; Frank, 2012), the results are presented as follows. First, we outline the dominant story told by the veterans about their experiences of surfing as respite from PTSD. We then highlight the effects of surfing as respite on veterans' well-being. Next, we describe how surfing facilitated this sense of respite for combat veterans, before finally concluding with some practical implications of the research.

Experiencing Respite from PTSD

All of the participants spoke at length of the suffering they encountered associated with PTSD. Consistent with symptoms of PTSD (American Psychiatric Association, 2000), this suffering typically involved the traumatic reliving of combat events through nightmares and flashbacks, a sense of being constantly anxious or on alert, problems with anger and/or

alcohol, and a profound sense of morbid sadness. The veterans experienced these symptoms as an exhausting cycle of suffering that dominated their everyday lives and kept PTSD at the forefront of their thoughts and awareness. There was, however, one activity – surfing - that enabled the veterans to push PTSD into the background and experience a sense of respite from suffering, as exemplified in the following veteran’s comments:

It frees you up. It’s freedom for those two or three hours, kind of like a bit of respite. It takes your mind off it. Just leave all that away somewhere on the beach and then, we’ll deal with that later. But for now, when we’re surfing, we’re going to have a laugh. And there’s not a lot you can do to not have a laugh; it’s kind of the antidote to PTSD in a way. You know, get your wetsuit on, go for a paddle, ride a wave and it’s like PTSD doesn’t exist for that short time, which is all good in my book.

Respite, as articulated by the participants, can be described as a positive feeling of release from everyday struggles associated with PTSD. The notion of respite conveys the temporary absence of trauma-related thoughts and feelings, bringing about a much-needed relief from suffering. Respite allowed the veterans to forget about PTSD, or to place it on hold, while they focused on enjoying the surfing experience. The story they told can thus be summarized as follows: “I suffer from PTSD. But when surfing, for these few hours, PTSD is placed in the background and laughter/enjoyment is possible. Surfing provides a break from suffering.” Accordingly, experiencing respite did not mean that veterans expected their problems to disappear forever by going surfing. Rather, surfing provided the veterans with a welcome release or escape from the distressing PTSD symptoms that encompassed their experience of everyday life.

As part of their stories of cultivating respite through surfing, the veterans emphasized the need to go surfing regularly. Regular surfing was regarded throughout the charity’s subculture as necessary for disrupting the cycle of PTSD symptoms that would otherwise remain a continuous or uninterrupted source of suffering. This notion of regularity which characterised the veterans’ stories seemed to lend itself to the telling of what Riessman (1993) termed a habitual narrative. As Riessman suggested, a habitual narrative is where events occur repeatedly over and over and consequently there is no peak in the action. For these veterans, surfing was the repetitive event at the centre of a habitual narrative that organized their experiences temporally around regular periods of respite from PTSD. This said, the veterans also recognized that respite only “worked” while surfing, and did not extend beyond

time spent in the water.

Furthermore, the veterans' stories gave a sense of the embodied sensations that helped to constitute the experience of respite. Consider, for example, the following exchange between the interviewer and one of the participants:

Interviewer (I): Can you describe what sort of effect surfing has on you psychologically?

Participant (P): It's just a fantastic feeling of forgetting about all my problems, worries, just forget about it and just do it. And it's just great. I always tell that to others, you know, just get down there and get in there and you'll know what I'm talking about. Because it's great.

I: And what do you think it is about surfing that's so good and makes you feel that way?

P: Well, it's the atmosphere, the surroundings, and also the sound I suppose as well - of the waves - because that be used for relaxation. It calms you, helps calm you down. And the smell - there's no smell - you know, it's clean, fresh air. And then you're just focused on your waves and your board.

As Merleau-Ponty (1962) made clear, we live the world through our bodies. For the veterans, respite from PTSD was grounded in their physical bodies and channelled through the various senses; notably the aural, visual, haptic (touch), and olfactory (smell) senses. Also evident, though mentioned less frequently, was gustatory perception in the salty taste of seawater the veterans occasionally swallowed.

The role of the senses in cultivating respite through surfing is illuminated by Merleau-Ponty's notion of bodily intentionality; that is, the directedness or intentional object of consciousness (i.e., what we are conscious of at any particular moment). For Merleau-Ponty, sensory perception is tied to bodily movement, "and all bodily movement is accompanied by intentionality which lies at the core of perception" (Hockey & Allen-Collinson, 2007; p. 117). As the veterans' stories suggest, when they moved throughout the seascape with its constantly fluid and shifting modality, the intentionality of their consciousness was no longer dominated by PTSD. Rather, it was directed outwards toward the sensory stimulations of the ocean. Viewed phenomenologically, respite involved a shift in intentionality that disrupted

the persistent ruminations that researchers deem responsible for preserving and maintaining PTSD (Cann et al., 2011; Michael, Halligan, Clark & Ehlers, 2007). Respite from PTSD was thus felt through the body and the senses, and these feelings were interpreted through a story that the veterans already knew and expected when they went surfing. Embodied respite became part of an ongoing narrative that shaped how the veterans experienced the Blue Gym over time.

Effects of Surfing on Well-Being

We understood the effects of surfing as related more to subjective well-being than to psychological well-being. That is, surfing was a vehicle for pursuing pleasure and escaping pain, rather than for loftier notions of psychological growth and development. Going surfing and experiencing respite influenced the veterans' subjective well-being in two key ways. First, by pushing PTSD into the background of their lives, experiencing respite through surfing protected the veterans' well-being against some of the more serious problems (e.g., suicide) that can be associated with PTSD. For example, another veteran commented:

It's just that escape isn't it. Get out of that cycle of all the symptoms for a few hours. And it shows that if you don't do it - if you don't go - you end up going back downhill again, everything starts getting worse again. That's it, if you stop, you don't know where you're going to end up. A few guys who haven't been for a long time have had serious problems. You know, they come back in and they're alright. They've not cured anything, but you can see the difference.

Veterans' stories of surfing as respite worked to keep the chaos (Frank, 2013; Smith & Sparkes, 2011) of suffering far enough at bay. As Frank (2013) explained, chaos is an anti-narrative whereby the teller of the story imagines life never getting better, and life is swallowed up by the hopelessness of chronic suffering. As the comments above suggest, regular surfing prevented the veterans from entering a downward spiral in which they felt overwhelmed by their suffering, thus avoiding chaos. Indeed, the habitual narrative of surfing as respite from PTSD provided the veterans with an important alternative to the chaos narrative. Moreover, for some veterans, the importance of forestalling chaos was nothing less than life-saving given their previous contemplation of suicide as a way of ending their suffering.

In addition to holding off chaos, a second effect of surfing on subjective well-being

was the positive emotions it generated for the veterans. Consider, for example, the following fieldnote recorded by Nick Caddick in August 2012 after one of the charity's weekly surf camps:

Great surf session today with the guys. As we left the water and threw our boards down on the beach, I observed two veterans high-five each other while enthusiastically discussing the best waves they caught that day. It was clear from this brief exchange that these veterans had a good time in the water; the broad grins across their faces revealing much about their enjoyment of the experience.

The veterans themselves also testified how the activity of surfing evoked in them feelings of pleasure and joy. In the words of another veteran:

The feel good effect it has is fantastic really for me. I mean, I just come out of there [sea], one, I'm pretty knackered, and two, you got that feeling of just like "Ahhhh, God", you know, "That was so good!" But that feeling of - it's not just being in the water, it's like a washing away [of PTSD], you know, with the water. And especially when it gets a bit rough and you get turned over by the waves a few times, it feels like it's just pummeling it out of you or just washing it out of your system a little bit.

Addressing our central research question, these comments reveal that going surfing and experiencing respite provided the veterans with a positive boost to their subjective well-being. Also evident was the way in which being physically immersed in the ocean environment was an intrinsic feature of the emotional benefits derived from surfing. Indeed, the body's haptic connection with the ocean was strongly emphasized and was portrayed by the veterans as charged with emotion, for example in feeling one's troubles being "pummelled out" by the force of the waves. Moreover, the positive emotions generated through surfing were not only experienced at the bodily level, they were also framed by the veterans' stories of surfing as respite from PTSD. This is evident in the above comments whereby the bodily feelings evoked in this veteran by his surfing experiences are couched in respite terms (e.g., in feeling PTSD being "washed out of his system").

Through respite stories, the bodily feelings evoked through surfing were shaped by the narrative pre-understandings (Mattingly, 2010) that veterans brought to their surfing experiences. Following Mattingly (2010), we thus propose what might be called a phenomenology of storytelling in relation to respite. That is, people's structures of awareness

- the terms in which they attend to the world - develop through hearing and telling stories. Stories are less reports of how the world is than they are a means of making the world available to consciousness, and making consciousness intersubjective. For the veterans, respite stories became a way of structuring perceptual awareness in line with the sensory pleasures of surfing, helping to cultivate subjective well-being in the process.

How did Surfing Influence Well-Being?

The veterans' stories also revealed two ways in which surfing influenced well-being, and facilitated respite from PTSD. One way in which surfing worked for the participants to facilitate respite was by keeping them focused on the present:

For me, it's not just the couple of hours in the water; it kind of starts Monday/Tuesday and sort of, doesn't really finish till I get home Wednesday. And then Thursday/Friday – fucking hell – I'm still thinking about what I did Wednesday! And then Saturday/Sunday it's like “Aaaaahhhhh, fucking hell.” Yeah, so Saturday I get fucking suicidal. But do you know what I mean, you get to the point where you think “Aaaaahhhhh, fucking hell, Wednesday's miles away.” And then Monday, you're thinking “Yay, only two more sleeps and it's surfing day!” So yeah, it's really good. In all, I think I've probably got more out of this in three months than I've had out the NHS [UK's National Health Service] in fucking eighteen months.

Regular surfing facilitated respite by helping the participants stay focused on experiences in the present and avoid dwelling on the traumatic memories hidden in their past. A useful way of conceptualizing this finding is through the notion of shifting time tenses (Phoenix, Smith & Sparkes, 2007) that framed the telling of participants' respite stories. For example, the problems associated with PTSD can be understood in part as a reliving of the past in the present. Regularly experiencing respite through surfing worked for the veterans by keeping the past in the past and the present in the present. That is, going surfing enabled the participants to experience time in the present and keep the traumatic memories of the past from entering their thoughts and narrative consciousness (Sparkes & Smith, 2009). Furthermore, surfing gave the veterans something concrete to look forward to that helped prevent them from ruminating over their troubled past in between bouts of respite. As one veteran commented:

You can take the feeling back when you're having shit days and you can go “Yeah,

it's shit today, but I'm going surfing in a couple of days, and that's not gonna be shit." And then you're happier, instantly happier. You go, "Fucking hell, yeah, let's get on that surf!" And you can almost change your mood immediately. Maybe not reverse it 100%, you know, even just a little bit. A little bit here and there can make such a huge difference when you're so stressed; even the thought of surfing can get you below that fight/flight line where you kind of go, "Umm, actually yeah, what else do I like doing? Going for walks. Right, come on, go for a walk." Or play the guitar for an hour and then relax.

In addition to keeping participants focused on the present, a second way in which surfing facilitated respite was through relationships with other veterans. Surfing provided a context for veterans to relate to one another in a positive fashion, which in turn helped to facilitate respite from PTSD. Consider, for example, how surfing and relationships are linked in the following veteran's respite story:

That buzz you get from "Shit! I'm standing up!" You know, back on the world-wide free-ride, riding waves. And looking across at everyone else riding the same wave and wiping out and flying wetsuits. And just the kind of "Whoop-whooping" and the encouragement you get off everyone else as they're paddling out: it's just a really, really good feeling. And for those moments when you're out there, all your crap and PTSD doesn't exist. You know, just being out by the sea is good in itself, being in it is far better and learning how to ride waves doesn't compare with anything. Especially with a bunch of blokes in the same situation, so there's none of that peer pressure or no-one's looking down at you. All these ex-forces guys, you know they're all there for the same reason. They've all got this PTSD, or whatever, not that we talk about any of that. It's simply about the surfing and just leaving all that emotional stuff behind you and just going out and egging each other on and taking the piss and having a bit of a laugh, as the squaddies do. Yeah, it's good.

For the veterans in this study, the lived experience of PTSD was characterised by loneliness and social isolation; conditions which, in turn, perpetuated their distress and allowed their PTSD symptoms to spiral out of control, tipping them closer toward chaos (Frank, 2013; Smith & Sparkes, 2011). By bringing the veterans together and immersing them in a common activity, surfing helped to overcome social isolation and temporarily relieved the problems associated with PTSD. Indeed, as the comments above indicate, positive social interactions

(e.g., encouragement, laughter, support) occurring between veterans while in the water helped to create a feeling of respite. Furthermore, the participants spoke of a sense of security they felt around other veterans. They were able to let their guard down around people who understood and accepted them, which enabled them to relax and enjoy the activity of surfing. An example of this occurred on another of the charity's surf camps in February 2013, during which the following fieldnote was recorded:

Two of the veterans, both of whom had recently been diagnosed with PTSD were sat in the beach cafe prior to the surf meet chatting over a coffee. Later, during the surf, the pair both caught the same wave and ended up on a collision course, crashing together and falling on top of each other. Both roared with laughter and pretended to fight over whose wave it was before paddling back out side-by-side to catch another.

Thus, as the data show, relationships between the veterans were part of how surfing was able to elevate subjective well-being.

Discussion

Our purpose in this article was to examine the effects of surfing and the natural environment on the well-being of combat veterans. The evidence we present is the first to indicate that surfing and the Blue Gym could have a role to play in promoting veterans' well-being. We also extend previous knowledge in the area of physical activity, combat veterans and PTSD (see Caddick & Smith, 2014) by highlighting how nature-based physical activity can influence the well-being of combat veterans. Specifically, we showed that experiencing regular respite and embodying this narrative through surfing can elevate subjective well-being in combat veterans. This is not to suggest that psychological well-being was unimportant to the veterans, or that they did not grow and develop through their surfing experiences. Rather, surfing and the sense of respite it produced seemed to satisfy a more immediate need for subjective well-being in two key ways. The first was by preventing decline into a state of embodied chaos (Frank, 2013; Smith & Sparkes, 2011) whereby the hopelessness of chronic suffering becomes unbearable. The second was through the positive emotions evoked by going surfing and connecting with the ocean environment.

Based on our findings, we suggest several reasons why combat veterans might be drawn to surfing and the notion of the Blue Gym, and hence why surfing was able to elevate subjective well-being. One reason was linked to the veterans' prior experiences of being and having an active and physical body. Mirroring the active and physical nature of their former

military careers, the veterans embraced the challenge that learning to surf presented them with. In particular, they seemed to engage with the physicality associated with surfing and being in the ocean, and even enjoyed being thrown about and pummelled by the waves. That veterans took to surfing in this way is perhaps not surprising, given that throwing themselves into a physical challenge was a response embedded within their military past and in their embodied history of actions and interactions in that context (Crossley, 2011). Indeed, as Carless et al. (2013) suggested, stories that revolve around being active align strongly with veterans' biography, expectations, and ways of being in the world, mapping onto their cultural (i.e., military, masculine) legacy. This resonance with their prior experiences might be one reason why the veterans were drawn to the natural environment as a context for engaging in vigorous physical activity and experiencing a sense of respite from PTSD.

Another reason why surfing might have appealed to these veterans was that it provided them with a safe context in which to engage in traditionally masculine behaviour and relationships. For example, going surfing was associated with opportunities to participate in masculine forms of humour such as "taking the piss" and "banter"² that typified the style of interaction between the veterans. All of the veterans spoke about how they valued the opportunity to engage in laddish banter through surfing and the added social benefits it brought in terms of camaraderie with other veterans. Moreover, engaging in banter can be seen as reproducing masculine identities that were previously cultivated and reinforced during the participants' military careers (Green et al., 2010). That is, banter helped the veterans to be themselves and relate to others in ways that were often constrained by the demands of civilian life. The research therefore highlights the role played by military and masculine identities in helping veterans to engage with the Blue Gym and draw benefits from this environment for their subjective well-being.

Without wishing to detract at all from the important psychological benefits that veterans gained by going surfing, it is also necessary to acknowledge the potentially problematic side of veterans' stories of surfing as respite from PTSD. For example, as we noted in the findings, the veterans generally regarded the emotional benefits of surfing as limited to the time they spent in the water. Beyond this limitation, some of the veterans also reported experiencing adverse emotional effects after the surfing had finished. Such effects included a sense of longing for respite and an emotionally empty feeling when surfing was over and the positive emotions associated with it disappeared. That is, when surfing was over and the bodily feelings of pleasure evaporated, respite stories began to fade into the

background of the veterans' lives, leaving them feeling empty.

Accordingly, it might be that an added consequence of the habitual narrative that veterans used to construct respite stories was that time in-between bouts of respite became a case of simply making it through until surfing day. None of the veterans felt that this was enough of a reason not to go surfing and experience the benefits to well-being it provided. However, it did create a potential dilemma for them. For example, whereas they wanted to escape their suffering and boost their subjective well-being by going surfing, they were motivated to avoid a drop in well-being that might follow on from respite.

One way out of this dilemma (identified by the veterans themselves) might be to engage in what McCoy (2005) referred to as health work to bolster well-being in between surfing sessions. Health work involves actively doing things to care for or improve one's health. In relation to mental health, health work can include engaging in activities to enhance, maintain, or stabilize one's mood. Forms of health work mentioned by the veterans (in addition to going surfing) included going for walks, relaxing and playing guitar, practicing mindfulness meditation (Keng, Smoski & Robins, 2011) and being in nature (Cervinka et al., 2011). Engaging in such activities enabled the veterans to manage their well-being in between surfing and, to some extent, mitigate the emotional dip that sometimes occurred after the period of respite had ended. Furthermore, the notion of health work might be used to signal additional ways of countering the effects of PTSD when surfing is not possible (e.g., when injured or on days when there are no waves).

Our research adds to the emerging literature on nature-based physical activity (e.g., Coon et al., 2011; Mitchell, 2013; Pretty et al., 2005) by showing how benefits to subjective well-being are grounded in the participants' embodied lived experiences of movement in and through nature. Drawing on phenomenological perspectives (e.g., Merleau-Ponty, 1962), we showed that benefits to well-being are not primarily cognitive, as researchers sometimes suggest (e.g., Berman, Jonides, & Kaplan, 2008), but are derived from fully embodied contact with and active participation in nature. In surfing, there is an intertwining (Finlay, 2006; Merleau-Ponty, 1962) of the body with the natural world that results in embodied and sensory pleasures through the multi-sensorial stimulation of being active in nature.

Moreover, through a phenomenology of storytelling we showed how perception of the natural world is socially and culturally mediated through stories (Hockey & Allen-Collinson, 2007; Mattingly, 2010). Following Heidegger's (1947/1993) thoughts on language as the

house of being, stories shape how the world becomes available to us in our bodily engagement with the world. Furthermore, as Frank (2010) suggested, life and story imitate each other, operating recursively to shape our subjectivity. Stories of nature-based physical activity thus have the potential to shape how we feel and perceive the natural environment, and how we approach it in relation to improving our well-being.

Our findings are also pertinent to the large and growing literature on PTSD and alternative treatments for veterans experiencing it (e.g., Bisson et al., 2007; Cukor et al., 2009). As a primary treatment, researchers and clinicians typically promote medical intervention such as trauma-focused cognitive behavioural or exposure therapies (Bisson et al., 2007; Cukor et al., 2009). Psychopharmacological treatments are also commonly used, although evidence regarding their efficacy is varied and inconclusive (Cukor et al., 2009). Despite evidence that psychotherapy and exposure techniques can help reduce veterans' PTSD symptoms (though not in all cases), as Cukor et al. (2009) argued "PTSD remains a difficult disorder to treat and identifying alternative treatment options is imperative" (p. 716).

Accordingly, researchers have begun to explore the potential role of sport and physical activity as one alternative for supporting veterans experiencing PTSD (see Caddick & Smith, 2014). Findings from this emerging body of research reveal that sport and physical activity can support veterans' subjective and psychological well-being in many ways including fostering a sense of achievement/accomplishment and helping veterans cope with their problems (Caddick & Smith, 2014). Our notion of respite is a novel and important addition to this field of research and indicates that nature-based physical activities such as surfing could have a role to play in improving veterans' well-being, even if it is only for a certain temporal period during each week.

Furthermore, our findings highlight the usefulness of veterans' stories of respite as an alternative to the dominant medical model approach to PTSD treatment. A medical model treats PTSD as an illness to be cured, or as some damaged portion of the mind or brain that requires fixing through therapy and/or psychopharmacology. However, a medical model makes the problematic assumption that distress can be cured through such means, which might not be the case (Cromby, Harper & Reavey, 2013). Accompanying the medical model is a powerful narrative that acts to shape and constrain people's stories about (and experiences of) mental health problems (Carless & Douglas, 2010). This has been termed the restitution narrative (Frank, 2013) and follows the basic storyline of "Yesterday I was healthy,

today I'm sick, but tomorrow I'll be healthy again." Like the medical model that spawned it, the restitution narrative becomes problematic when a cure is not forthcoming.

The veterans in this study rejected the medical model and the notion of medical cure and instead chose to tell respite stories. They believed that their memories could not be wiped and therefore the shadow of combat trauma was always likely to remain with them in one form or another. Instead, they saw their task as trying to live with or adapt to PTSD as best they could. Bury's (1991) notion of adaptation to chronic illness might be usefully applied here. Following Bury, respite stories constituted a form of positive action that veterans undertook to adapt to and counter the effects of their suffering. Moreover, in pushing PTSD into the background, respite stories helped to normalize PTSD so that it was partially or temporarily bracketed off and its impact on the veterans' health and identities could be limited (Bury, 1991). Respite stories might, therefore, increase the narrative options available to veterans who are locked into a medical restitution narrative that no longer works for them. That is, should medical treatments fail make a difference to their suffering, there is another type of story to fall back on.

Conclusion

We conclude with a practical recommendation from our research. Taking into account the potential geographical, financial, and so forth limitations/challenges involved, we suggest that surfing can be a useful physical activity to promote subjective well-being in combat veterans experiencing PTSD. Warranting this recommendation, we have shown in this article that surfing can provide meaningful benefits to veterans' subjective well-being, and can protect against more serious problems associated with PTSD (e.g., suicide). Furthermore, like physical activity in general, our findings indicate that surfing might need to be practiced regularly to build and maintain well-being and to prevent veterans from spiralling toward chaos (Frank, 2013; Smith & Sparkes, 2011). Surfing can, at least, be considered alongside previously established approaches to supporting veterans such as clinical or medical approaches.

Moreover, surfing might facilitate well-being in ways that a clinical or medical model approach is unable to cater for. For example, surfing together as a group not only enables veterans to enact health promoting masculine identities, but also draws them out of social isolation and facilitates positive relationships; benefits which are typically elided or glossed over by a medical focus on treating symptoms. We thus support the use of surfing and the Blue Gym – not as a panacea or as a cure for PTSD – but as a promising addition to methods

of treatment and support for combat veterans experiencing PTSD.

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2. These terms refer to a form of humour often used among British men that involves making fun of each other and oneself in an effort to see who can come up with the wittiest comment or joke.

References

- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders*, (revised 4th ed.). Washington, DC: APA.
- Berman, M., Jonides, J., & Kaplan, S. (2008). The cognitive benefits of interacting with nature. *Psychological Science*, *19*, 1207-1212. DOI: 10.1111/j.1467-9280.2008.02225.x.
- Biddle, S., & Mutrie, N. (2008). *Psychology of physical activity: Determinants, well-being and interventions*, (2nd ed.). London: Routledge.
- Bisson, J., Ehlers, A., Matthews, R., Pilling, S., Richards, D., & Turner, S. (2007). Psychological treatments for chronic post-traumatic stress disorder. *British Journal of Psychiatry*, *190*, 97-104. DOI: 10.1192/bjp.bp.106.021402.
- Bury, M. (1991). The sociology of chronic illness: A review of research and prospects. *Sociology of Health and Illness*, *13*, 451-468. DOI: 10.1111/j.1467-9566.1991.tb00522.x.
- Caddick, N., & Smith, B. (2014). The impact of sport and physical activity on the well-being of combat veterans: A systematic review. *Psychology of Sport and Exercise*, *15*, 9-18. URL: <http://dx.doi.org/10.1016/j.psychsport.2013.09.011>.
- Cann, A., Calhoun, L., Tedeschi, R., Triplett, K., Vishnevsky, T., & Lindstrom, C. (2011). Assessing posttraumatic cognitive processes: The Event Related Rumination Inventory. *Anxiety, Stress & Coping*, *24*, 137-156. DOI: 10.1080/10615806.2010.529901.
- Carless, D., & Douglas, K. (2010). *Sport and physical activity for mental health*. Chichester: Wiley-Blackwell.
- Carless, D., Peacock, S., McKenna, J., & Cooke, C. (2013). Psychosocial outcomes of an inclusive adapted sport and adventurous training course for military personnel. *Disability and Rehabilitation*, *35*, 2081-2088. DOI: 10.3109/09638288.2013.802376.
- Cervinka, R., Röderer, K., & Hefler, E. (2011). Are nature lovers happy? On various indicators of well-being and connectedness with nature. *Journal of Health Psychology*, *17*, 379-388. DOI: 10.1177/1359105311416873.

- Coon, J. T., Boddy, K., Stein, K., Whear, R., Barton, J., & Depledge, M. (2011). Does participating in physical activity in outdoor natural environments have a greater effect on physical and mental well-being than physical activity indoors? A systematic review. *Environmental Science & Technology*, *45*, 1761-1772. DOI: 10.1021/es102947t.
- Cromby, J., Harper, D., & Reavey, P. (2013). *Psychology, mental health and distress*. Basingstoke: Palgrave Macmillan
- Crossley, N. (2011). *Towards relational sociology*. London: Routledge.
- Cukor, J., Spitalnick, J., Difede, J., Rizzo, A., & Rothbaum, B. (2009). Emerging treatments for PTSD. *Clinical Psychology Review*, *29*, 715-726. DOI: 10.1016/j.cpr.2009.09.001.
- Depledge, M., & Bird, W. (2009). The Blue Gym: Health and wellbeing from our coasts. *Marine Pollution Bulletin*, *58*, 947–948. DOI: 10.1016/j.marpolbul.2009.04.019.
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, *55*, 34-43. DOI: 10.1037//0003-066X.55.1.34.
- Dustin, D., Bricker, N., Arave, J., & Wall, W. (2011). The promise of river running as a therapeutic medium for veterans coping with post-traumatic stress disorder. *Therapeutic Recreation Journal*, *45*, 326-340. URL: <http://js.sagamorepub.com/trj/article/view/2439>.
- Fear, N. T., Jones, M., Murphy, D., Hull, L., Iversen, A. C., Coker, B., et al. (2010). What are the consequences of deployment to Iraq and Afghanistan on the mental health of the UK armed forces? A cohort study. *The Lancet*, *375*, 1783-1797. DOI:10.1016/S0140-6736(10)60672-1.
- Finlay, L. (2006). The body's disclosure in phenomenological research. *Qualitative Research in Psychology*, *3*, 19-30. DOI: 10.1191/1478088706qp051oa.
- Frank, A. W. (2010). *Letting stories breathe: A socio-narratology*. Chicago: University of Chicago Press.
- Frank, A. W. (2012). Practicing dialogical narrative analysis. In J. Holstein & J. Gubrium (Eds.), *Varieties of narrative analysis* (pp. 33–52). London, UK: Sage.
- Frank, A. W. (2013). *The Wounded Storyteller: Body, illness and ethics* (2nd edition). Chicago, IL: University of Chicago Press.

- Green, G., Emslie, C., O'Neill, D., Hunt, K., & Walker, S. (2010). Exploring the ambiguities of masculinity in accounts of emotional distress in the military among young ex-servicemen. *Social Science and Medicine*, *71*, 1480-1488. DOI: 10.1016/j.socscimed.2010.07.015.
- Hansen-Ketchum, P. A., & Halpenny, E. A. (2010). Engaging with nature to promote health: Bridging research silos to examine the evidence. *Health Promotion International*, *26*, 100-108. DOI: 10.1093/heapro/daq053.
- Hartig, T., & Staats, H. (2006). The need for psychological restoration as a determinant of environmental preferences. *Journal of Environmental Psychology*, *26*, 215-226. DOI:10.1016/j.jenvp.2006.07.007.
- Heidegger, M. (1947/1993). Letter on humanism. In D. Krell (ed.) *Basic writings*. London: Routledge.
- Hockey, J., & Allen-Collinson, J. (2007). Grasping the phenomenology of sporting bodies. *International Review for Sociology of Sport*, *42*, 115-131. DOI: 10.1177/1012690207084747.
- Jakupcak, M., Cook, J., Imel, Z., Fontana, A., Rosenheck, R., & McFall, M. (2009). Posttraumatic stress disorder as a risk factor for suicidal ideation in Iraq and Afghanistan war veterans. *Journal of Traumatic Stress*, *22*, 303-306. DOI: 10.1002/jts.20423.
- Keng, S., Smoski, M., & Robins, C. (2011). Effects of mindfulness on psychological health: A review of empirical studies. *Clinical Psychology Review*, *31*, 1041-1056. DOI:10.1016/j.cpr.2011.04.006.
- Mattingly, C. (2010). *The paradox of hope: Journeys through a clinical borderland*. Berkeley: University of California Press.
- McCoy, L. (2005). HIV-positive patients and the doctor-patient relationship: Perspectives from the margins. *Qualitative Health Research*, *15*, 791-806. DOI: 10.1177/1049732305276752.
- Merleau-Ponty, M. (1962). *Phenomenology of perception*, trans. C. Smith. London: Routledge & Kegan Paul.

- Michael, T., Halligan, S., Clark, D., & Ehlers, A. (2007). Rumination in posttraumatic stress disorder. *Depression and Anxiety, 24*, 307-317. DOI: 10.1002/da.20228.
- Mitchell, R. (2013). Is physical activity in natural environments better for mental health than physical activity in other environments? *Social Science & Medicine, 91*, 130-134. DOI: 10.1016/j.socscimed.2012.04.012.
- Phoenix, C, Smith, B., Sparkes, A. (2007). Experiences and expectations of biographical time among young athletes. *Time & Society, 16*, 231-252. DOI: 10.1177/0961463X07080269.
- Pretty, J., Peacock, J., Sellens, M., & Griffin, M. (2005). The mental and physical health outcomes of green exercise. *International Journal of Environmental Health Research, 15*, 319-337. DOI: 10.1080/09603120500155963.
- Reed, J., & Buck, S. (2009). The effect of regular aerobic exercise on positive activated affect: A meta-analysis. *Psychology of Sport & Exercise, 10*, 581-594. DOI:10.1016/j.psychsport.2009.05.009.
- Riessman, C. (1993). *Narrative analysis*. Newbury Park, CA: Sage.
- Ryan, R., & Deci, E. (2001). On human happiness and potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166. DOI: 10.1146/annurev.psych.52.1.141.
- Ryan, R., Weinstein, N., Bernstein, J., Brown, K., Mistretta, L., & Gagne, M. (2010). Vitalizing effects of being outdoors in nature. *Journal of Environmental Psychology, 30*, 159-168. DOI:10.1016/j.jenvp.2009.10.009.
- Ryff, C. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069-1081. DOI: 0022-3514/89/SOO. 75.
- Ryff, C., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry, 9*, 1-28. DOI: 10.1207/s15327965pli0901_1.
- 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., & Caddick, N. (2012). Qualitative methods in sport: A concise overview for guiding social scientific sport research. *Asia Pacific Journal of Sport and Social Science, 1*, 60-73. DOI: 10.1080/21640599.2012.701373.
- Smith, B., & Sparkes, A. (2009). Narrative inquiry in sport and exercise psychology: What can it mean and why might we do it? *Psychology of Sport and Exercise, 10*, 1-11. DOI:10.1016/j.psychsport.2008.01.004.
- Smith, B., & Sparkes, A. (2011). Exploring multiple responses to a chaos narrative. *Health: An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine, 15*, 38-53. DOI: 10.1177/1363459309360782.
- Smith, B. & Sparkes, A. (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. & Smith, B. (2009). Men, spinal cord injury, memories, and the narrative performance of pain. *Disability & Society, 23*, 679-690. DOI:10.1080/09687590802469172
- Sparkes, A. & Smith, B. (2014). *Qualitative research in sport, exercise & health sciences. From process to product*. London: Routledge.
- Summerfield, D. (2004). Cross-cultural perspectives on the medicalization of human suffering. In G. M. Rosen (ed.), *Posttraumatic stress disorder: Issues and controversies* (pp. 233-245). Chichester: John Wiley & Sons.
- Tanielian, T., & Jaycox, L. (2008). *Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery*. Santa Monica, CA: RAND Corporation.
- Vasterling, J., Schumm, J., Proctor, S., Gentry, E., King, D., & King, L. (2008). Posttraumatic stress disorder and health functioning in a non-treatment-seeking sample of Iraq war veterans: A prospective analysis. *Journal of Rehabilitation Research & Development, 45*, 347-358. DOI: 10.1682/JRRD.2007.05.0077.
- Walker, S. (2010). Assessing the mental health consequences of military combat in Iraq and Afghanistan: A literature review. *Journal of Psychiatric and Mental Health Nursing, 17*, 790-796. DOI: 10.1111/j.1365-2850.2010.01603.x.

Wheeler, B., White, M., Stahl-Timmins, W., & Depledge, M. (2012). Does living by the coast improve health and well-being? *Health & Place, 18*, 1198-1201. URL: <http://dx.doi.org/10.1016/j.healthplace.2012.06.015>.

White, M., Smith, A., Humphreys, K., Pahl, S., Snelling, D., & Depledge, M. (2010). Blue space: The importance of water for preference, affect, and restorativeness ratings of natural and built scenes. *Journal of Environmental Psychology, 30*, 482-493. DOI:10.1016/j.jenvp.2010.04.004.

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