Multiple motives for participating in adventure sports

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A B S T R A C T

Objectives: The purpose of the present study was to explore possible multiple motives for participation in different adventure sports.
Design: Qualitative design, specifically an inductive-deductive approach informed by reversal theory, was used to analyze participation motivation data.
Method: Data was collected using the Scanlan Collaborative Interview Method (SCIM; Scanlan, Russell, Wilson, & Scanlan, 2003). Participants were very experienced adventure sport participants involved in riversurfing, mountain biking, kayaking, mountain climbing and hang gliding.
Results: The results indicated that the participants' motivation was multifaceted. While some participants shared common motives, these were often described in different orders of importance by different participants. The range of motives for adventure sport participation found included: goal achievement, risk taking, social motivation, escape from boredom, pushing personal boundaries and overcoming fear, as well as connecting with the natural environment, and pleasurable kinaesthetic bodily sensations from moving in water or air.
Conclusions: The authors argue for a continuation of a recent trend to provide a more comprehensive picture of the complexities of human motivation for participation in adventure sports which go beyond excitement- or thrill-seeking behaviour.

In psychology, the study of extreme, risk or adventure sports (e.g., bungy jumping, skydiving, mountain biking, downhill skiing, mountaineering and rock climbing), has generally concentrated on the excitement- or thrill-seeking associated with risk taking during these activities. This may have resulted, in part, from the development of psychological measures such as the Sensation Seeking Scale (Zuckerman, 1971) and the Telic Dominance Scale, with its arousal-seeking subscale (Murgatroyd, Rushton, Apter, & Ray, 1978). The ready availability of these types of scales may have been a factor in the design of adventure sport research studies and the quantitative methods employed (e.g., Bouter, Knipschild, Feij, & Vollovics, 1988; Chirivella & Martinez, 1994; Cogan & Brown, 1999; Freixanet, 1991; Heyman & Rose, 1980; Hymbaugh & Garrett, 1974; Kerr, 1991; Kerr & Svebak, 1989; Robinson, 1985; Rowland, Franken, & Harrison, 1986; Straub, 1982). These studies, while informative, were limited to examining only the sensation-seeking or arousal-seeking dimensions of motivation and failed to examine other possible motives for participation in adventure sports. As a result, with other motives for taking part in adventure sports being largely ignored, there has been a gap in the literature which is only recently being addressed by researchers.

For example, Castanier, Le Scanff, and Woodman (2010) have argued that taking risks in high-risk sport can serve many different goals beyond the simple management of physiological arousal. In their study of high-risk sportsmen, they found that *negative affectivity* and *escape self-awareness* predicted risk taking behaviour. (Escape self-awareness is a means of regulating negative affect by turning attention and thinking away from the self by, for example, engaging in high-risk adventure activities.) Even when the researchers controlled for sensation-seeking, negative affectivity led participants to take risks, provided it occurred in conjunction with an escape self-awareness strategy. Furthermore, Brown and Fraser (2009) re-examined the centrality of risk as the main motivator in educational adventure activities. They concluded that risk need not be central to adventure activities and that by taking the emphasis away from risk, teaching and learning opportunities in adventure settings could be enhanced and extended.

In quantitative research studies of extreme, risk or adventure sports the activities have often been grouped together in a single category as a necessity for statistical analysis (e.g., Kerr, 1991; Kerr &

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Svebak, 1989). By grouping them together, researchers conducting these studies may have overlooked or over-simplified the contrasting characteristics of these types of activity or sport. The appropriateness of this single category approach has recently been questioned (Brymer, Downey, & Gray, 2010; Woodman, Cazenave, & Le Scanff, 2008; Woodman, Hardy, Barlow, & Le Scanff, 2010; Woodman, Huggins, Le Scanff, & Cazenave, 2009). Closer inspection reveals considerable diversity amongst different adventure activities. For example, some are of relatively short duration (skydiving, downhill skiing, mountain biking), and have been described as "having a reputation for being risk focused and adrenaline[1] fuelled" (Brymer et al., 2010, p. 193). As a result, participants experience a rush of excitement or thrill. Others (e.g., mountain climbing and ocean rowing) are of much longer duration and require considerable long-term planning and organization. These activities reward participants with feelings of achievement and satisfaction through prolonged engagement against the natural elements and the self (Woodman et al., 2010).

The broadening of the research focus in adventure sport has been assisted by the use of qualitative research methods. Participant observation and interview methods have been utilized in studies examining the motivation and experience of both adventure sport participants (Allman, Mittelstaedt, Martin, & Goldenberg, 2009; Varley, 2011; Willig, 2008) and adventure sport guides (Beedie, 2003; Sharpe, 2005). For example, in a sociological study Varley (2011), unconvinced that the pursuit of risk was a singular explanation of adventurous leisure, spent seven months studying sea kayakers in North Wales. As well as interviewing kayakers, he joined sea kayaking courses and expeditions, and took part in outings with sea kayaking club members as a participant observer. He concluded:

> The presence of risk and the relative unpredictability in the ever-changing ocean environment provide a tremendous theatre for the late-modern adventurer to enact their escape attempts and to re-engage with themselves and with others at leisure. Thus it is proposed that *both* aspects of meaning may be derived (via communion with nature, and via self-mastery in the face of risk) and that both are important aspects in the theoretical construction of the outdoor adventure (Varley, 2011, p. 96).

Similarly, Brymer et al. (2010) challenged the notion that extreme sports participants only seek to conquer, compete against, or defeat natural forces. Rather, after obtaining data from interviewing extreme sports participants and other sources, they concluded that positive changes in participants' relationships with the natural world, reflected by the development of strong personal feelings of being connected to that world, occurred as a result of extreme sports participation. These are just two examples from recent research studies on adventure sports which demonstrate that participation motivation goes beyond simple excitement- or thrill-seeking behaviour. While it is not necessary to discard the excitement- or thrill-seeking dimension completely, results, such as the role of participants' relationship with the natural world and self-mastery when confronted by risks posed by nature, suggest that further research extending the search for multiple motives for participation in adventure sports is warranted.

Brymer et al. (2010) and Varley (2011) both used qualitative methods to identify additional participant motives among a group of participants from a range of adventure activities. Qualitative methods often allow the motivation of individuals engaging in adventure sports to be investigated in greater depth than quantitative studies. A qualitative approach was also adopted in the present study where the adventure sport participants were examined as individual case studies.

In order to better (a) conceptualise the diverse range of motives underpinning adventure sports participation and (b) understand how these diverse motives manifest inter- and intra-personally, this study employed an established psychological model of motivation (reversal theory) to inform the research methods used in the study. Reversal theory (Apter, 1982, 2001) is an innovative and flexible conceptual model applicable to diverse areas of psychology. It is a phenomenologically-based theory concerned with subjective processes, cognition and affect and the experience of one's own motivation. Therefore, the theory can provide a meaningful understanding of how multiple motives in adventure sports might operate.

A brief explanation of reversal theory

Reversal theory (Apter, 1982, 2001) is a general theoretical model of motivation, emotion and personality. Conceptualized within the reversal theory approach are four pairs of mental or *metamotivational states*. Metamotivational states are frames of mind concerned with the way a person interprets his or her motives at a certain time. There are four pairs of opposing metamotivational states and each state has its own characteristics. A person in the *telic state* tends to be primarily serious, goal-oriented and arousal avoidant, and spontaneous, playful and arousal-seeking in the opposing *paratelic state*. In the *conformist state*, a person is compliant and agreeable, and rebellious, unconventional and defiant in the opposing *negativistic state*. A person in the *mastery state* tends to be competitive and dominating, and has a desire for harmony and unity and tries to be cooperative in the opposing *sympathy state*. In the *autic state*, a person is egoistic, and altruistic and concerned with others in the opposing *alloic state*. People are thought to switch back and forth or *reverse* between paired metamotivational states during everyday life, producing significant changes in a person's outlook, motivations, and emotional experience. Reversals are caused by *environmental stimuli, frustration*, or *satiation.*

The amount of time a person spends in one or other of each pair of states over time is known as metamotivational dominance (e.g., *paratelic dominance*, *mastery dominance*). Metamotivational dominances tend to be persistent and may be thought of as personality dimensions. These personality dimensions (dominances) contribute to a person's *motivational style* and may bias motivation and behaviour in certain directions over the long-term (Apter, 2001).

Reversal theory provides a balanced, broad, and orderly pattern of emotional experience. Different combinations of metamotivational states result in the possible experience of 16 primary emotions. The somatic emotions are based on an individual's experience of bodily arousal and the transactional emotions are based on the perceived outcome (gain or loss) of transactions with other people or objects. For both somatic and transactional emotion categories, there are four pleasant (somatic: relaxation, excitement, placidity, provocativeness; transactional: pride, gratitude, modesty, virtue) and four unpleasant (somatic: anxiety, boredom, anger, sullenness; transactional: humiliation, resentment, shame, guilt) emotions arising from separate combinations of somatic and transactional metamotivational states (e.g., a combination of paratelic and conformist states results in the experience of excitement or boredom and a combination of autic-mastery in pride or humiliation). Four-way state combinations are possible where two

[1] The term "adrenaline rush" has become common in everyday language in association with adventure sports. However, to the authors' knowledge it has yet to be established that the pleasant feelings experienced by participants are caused by the release of adrenaline in their bodies.

somatic and two transactional states are operative together (e.g., paratelic-negativistic-autic-mastery). While four states are operative in these state combinations, some will be more salient than others and one state may enhance the experience of another.

Although all the metamotivational states are important, the telic and paratelic states and the concept of *paratelic protective frames are* of particular relevance to the participants' experience of adventure sports. Paratelic protective frames are cognitively-based and subjectively determined and concern the different ways that the contents of experience are interpreted by a person at a particular time. From the perspective provided by reversal theory, protective frames give adventure sport participants the confidence and feelings of safety necessary to allow them to experience pleasure from these activities. With a protective frame in place, adventure sport participants tend to approach these sports with a reduced sense of danger, an increased sense of safety, and increased confidence in their ability to deal with any problems that may occur. These psychological frames affect individuals' risk perception, so that any dangers or threats associated with an activity are seen as enjoyable and pleasant. However, this perception of the risk involved in an activity could change (e.g., increased level of risk) if a reversal to the telic state takes place. Should a reversal occur, the experience of pleasant emotions associated with the activity is likely to become unpleasant. In adventure sports, for example, an equipment failure or malfunction at a crucial point could trigger a paratelic to telic reversal, affecting an individual's protective frame and changing feelings of excitement to anxiety. This was illustrated by the case of an experienced female skydiver who suddenly withdrew from skydiving following the death of her friend in a fatal skydiving accident (Kerr, 2007).

Reversal theory has previously been applied to understanding various aspects of adventure and leisure activities (e.g., Apter, 1992; Apter & Batler, 1997; Chirivella & Martinez, 1994; Cogan & Brown, 1999; Florenthal & Shoham, 2001; Kerr, 1991; Kerr, Fujiyama, & Campano, 2002; Kerr & Svebak, 1989; Legrand & Apter, 2004; Pain & Kerr, 2004; Thatcher, Reeves, Dorling, & Palmer, 2003; Trimpop, Kirkcaldy, & Kerr, 1996). For example, Apter and Batler (1997) investigated male and female sport parachutists. One of their questions asked respondents to indicate from a list: "What would you say was the nature of the pleasure that you derive from this sport? (Check all such pleasures or pleasurable feelings)". The items were (the number of citations per item is included in brackets): Serious achievement (45); immediate fun (51); relief afterwards (15); excitement or thrill (56); defying convention (19); being part of a community or group (42); control and mastery (42); being a centre of concerned attention (6); helping others master the situation (22); being concerned for others (10). These results indicated that all the basic motives outlined in reversal theory were represented, with the excitement-seeking motive receiving most endorsements. Therefore, this study supported (a) the notion, outlined above: that adventure sports people have other important participation motives beyond sensation-seeking; and (b) the basic tenet of reversal theory: that almost any activity, including adventure sport activities, can be performed to satisfy different motives in different people or even different motives in the same person at discrete times (Apter & Batler, 1997).

The purpose of the present study was to explore possible multiple motives for participation in adventure sports. Qualitative methods, informed by reversal theory, were used to analyse participation motivation data collected as part of a wider investigation into the experience of flow among adventure sports participants (Houge, 2009). The unique interview data reported below was not included in an earlier publication (Houge Mackenzie, Hodge, & Boyes, 2011), which used reversal theory to expand the flow model of optimal experience in adventure activities.

Method

Participants

Data was collected from expert adventure sport participants ($N = 5$). Each participant was experienced at recreational and professional levels in their activity of expertise. Three participants had also competed at an elite level in their adventure activities. The participants included: a female riversurfer; a female downhill mountain bike racer; a male whitewater kayaker; a male mountaineer and a male hang glider pilot. Participants ranged in age from 19 to 52 years (mean age = 36 years).

Study design and procedures

The data used in the present study was obtained from a wider qualitative investigation (Houge, 2009; Houge Mackenzie et al., 2011) which used a constructivist approach to understanding the data (Charmaz, 2000). It was conducted using the Scanlan Collaborative Interview Method (SCIM; Scanlan et al., 2003) which consists of four parts designed to capture both inductive and deductive data. In part one the interview procedure and main concept(s) were introduced. At this stage, participants were asked to sign an informed consent form and informed that they could withdraw from the interview at any time, or choose not to answer a question. This portion of the interview guide also focused on developing a collaborative partnership with the participant (See Appendix A for questions from part 1 of the Interview Guide relating to data presented in this manuscript). Part two was an inductive section in which open-ended questions relating to the adventure sport participation were posed. While participants recalled their experiences, the interviewer recorded raw data descriptors on index cards that summarised the participant's descriptions. These cards were then displayed on the table in front of the interviewer and participant. Once an exhaustive set of raw descriptors was generated, the interviewer and the participant worked collaboratively to create inductive dimension "themes" to form a preliminary "picture" of that individual's unique adventure experience (Lonsdale, Hodge, & Raedeke, 2007).

This section was followed by a deductive section (part three) which focused on testing theory-derived concepts via questions adapted from the Metamotivational State Coding Schedule (MSCS; O'Connell, Potocky, Cook, & Gerkovich, 1991), which had been successfully used in previous studies to assess reversal theory constructs (e.g., Males, Kerr, & Gerkovich, 1998; O'Connell et al., 1991; Potocky, Cook, & O'Connell, 1993). Key reversal theory concepts (e.g., serious-minded; playful; spontaneous; bored; excited) were recorded on a separate index card and displayed individually to the participant. As each index card was placed on the table, the participant had the opportunity to confirm that it was already a part of the "inductive picture", or add, or reject the dimension as being a part of his or her adventure experience (Lonsdale et al., 2007). In the fourth part, participants had the opportunity to give feedback on the interview process and make adjustments to their personal picture(s) of the adventure experience. This methodology clearly distinguished inductive, or emergent, data from deductive, theory-confirming data and areas of convergence amongst these two data sources.

Data analysis

External validity and, therefore, trustworthiness was established by providing "thick description"[2] of the data collection and analysis procedures used in this study. Analysis consisted of transcribing interview audio tapes and perusing these transcripts for inductive and deductive themes. The reversal theory concepts of metamotivational states, emotions, reversals, reversal agents and protective frames were assessed with the Metamotivational State Coding Scale (O'Connell et al., 1991), which was used as a guide to data categorization. Once key themes were identified within the data, quotes associated with those themes were then grouped together and examined for consistency. Deductive and inductive quotes were distinguished via a colour coding system. Any inconsistencies within raw data were clarified in part four of the interview and in written member checks sent to participants 7–10 days after their interview. To verify the consistency of the researcher's interpretations, an audit trail was conducted by an experienced academic researcher familiar with reversal theory, qualitative research and risk sports. The auditor first read and analysed all transcripts and member checks and then compared his analyses to the researcher's interpretations. The auditor did not identify misrepresentations of the data and any minor discrepancies or clarifications were discussed and resolved.

Results

This section reports and discusses participation motivation data from interviews with expert adventure sport participants. The participants participated in different adventure activities and their interview data were analysed and interpreted on an individual case study basis. The full gamut of participant motives are reported, which were sometimes exclusive to one individual or sport and sometimes shared. The experts and their interview statements are presented in the following order: riversurfing (Jody), mountain biking (Sarah), kayaking (Edan), rock climbing (Doug), and hang gliding (Alrik) (all participant names are pseudonyms). Each adventure sport case study example introduces the participant and provides general information regarding his or her adventure experiences before examining his or her motives for participation.

Jody: riversurfer

Jody was a 26 year old riversurfing and kayaking instructor with 10 years of whitewater and competitive swimming experience. (Riversurfers wear flippers and lie face down on a body board, negotiating rapids and surfing stationary waves as they move down-river head-first.) She had competed in high-level multi-sport races and kayaking competitions, but at the time of the study the majority of her time was spent riversurfing. Her interest in water activities started as a young girl on family camping trips near rivers and lakes:

> That'd be why I got into [whitewater pursuits]: family background and because I want to do something that's fun and challenging - physically, mentally. And also because there is risk … The risk, it's fun, it's physical and it's outdoors … and I love water.

Jody was quite emphatic about one of the factors that motivated her to participate in adventure sports: "One of the best feelings in the world! It's just adrenaline. You're just stoked". However, she went to add a second factor:

> It's not just your adrenaline… It's a sense of achievement… You set out to do something and you've done it. It's the adrenaline, but it's also everything else leading up to it which enabled you to be able to do it properly, like the skills that you have or the hard work that you've done. . . . The build-up to it really. Some of it – I mean sure, most of it's adrenaline but it's your own abilities.

Jody's primary motivation was typical of that portrayed in previous research findings on motivation in risk and adventure sports (e.g., Freixanet, 1991; Kerr, 1991; Kerr & Svebak, 1989). She enjoyed the risk, challenge and thrill of riversurfing. She was a sensation- or arousal-seeker (Apter, 1982; Zuckerman, 1971) who enjoyed feeling the high arousal associated with the "adrenaline pumping" and being "stoked". Jody experienced a strong emotional reward in the form of excitement when, for example, she successfully negotiated rock hazards and rapids at high speed while riversurfing downstream.

Sarah: mountain biker

Sarah, the youngest participant (age 19 years), was a world-ranked downhill mountain biker. She began biking at age four and, at age seven, a neighbour introduced her to downhill racing. At 13, she won her first national competition which gave her confidence. She had since competed in seven national series, four world championships and travelled to 14 countries on various competitive tours. Aside from mountain biking, her other recreational pursuits were typically exciting and fast:

> It's [mountain biking] pretty exciting! . . .I like anything with wheels like motorbikes and race car driving. . . .I like go-carts and heaps of motor biking and rockclimbing and snowboarding and skiing and. . . . Anything kind of exciting! Anything fast.

Initially, biking provided an outlet through which Sarah could relax. "I used to bike around the house as kind of release and to chill out". At the time of the interview, Sarah was motivated by the challenge of competition and training, and rewarding feelings from goal attainment:

> I like winning and having a goal. I'm not really competitive in any other areas of my life, only in mountain biking. . . . I like having a goal [and] training. I like doing all the technical side of it, just working out how you can go faster.

Perceived challenge and risk were integral to her enjoyment of mountain biking insofar as these elements allowed her to surmount physical and mental obstacles. Physical obstacles also gave Sarah a competitive advantage on the race course as she felt more mentally prepared than her competitors to attempt them:

> The other girls don't like jumps; I'm the only one in the world that really does the real hard obstacles and jumps. So that's why I want them in there: because it gives me a big advantage mentally and also time. . . . If there's a big jump, they [other competitors] have to go around it.

Fear of injury also became a significant mental challenge for Sarah after she suffered a serious accident two years prior to her interview which reduced her confidence considerably, in addition to watching friends sustain debilitating injuries:

> At world champs this year I saw one of my best mates get paralysed. I was like "this sucks". . . . [I was] a bit sad about that. You just don't want to be like that yourself as well.

[2] Thick description is a term commonly used in qualitative research. It is a way of achieving external validity by providing a detailed account of the procedures undertaken in the qualitative research process (e.g., Lincoln & Guba, 1985).

Sarah had since regained her confidence in mountain biking and adopted a more laissez-faire approach to competition and injuries: "Now I'm just like, who cares. I don't care if I nail [hurt] myself". Sarah still found mountain biking exciting and was committed to pursuing her sport professionally, in spite of the major sacrifices she faced concerning the lack of a normal lifestyle, financial obstacles and injuries:

> I've pretty much got no life apart from biking. . . . You've got to make heaps of sacrifices to be the best in the world. . . . But I don't really mind that; it's just something that you've got to do.

However, in addition to her goal-oriented approach to the sport, there was also a social side to her participation motivation provided by being an elite mountain biker.

> The people I meet. The lifestyle - opportunities to travel to new and different places. I quite like travelling now. It's a really cool crowd that you hang around with. My friends are racers from all around the world. It's kind of lucky.

Edan: kayaker

Edan, a 47 year old, was multi-talented in adventure sports, including kayaking, skiing and rafting. He had taken part in many elite, multi-day, multi-sport and endurance events, such as the Eco Challenge (twice) and the Southern Traverse (nine times). At age 14, he began competing in kayaking at the national level. Edan's initial motivation for joining a kayaking club was the beauty of the environment:

> . . . It was just fantastic. I was totally blown away. So I entered a kayak club as soon as I went back [home from a school trip]. . . . [I] started competing, training a lot and being really passionate about it.

These experiences motivated Edan to pursue physical education as a career. He subsequently taught outdoor pursuits for four years before travelling the world as an outdoor instructor in a range of disciplines:

> That was a whole discovery of myself. . . . Suddenly, my goal became that I wanted to teach sports. . . . There was the goal-setting aspect as well at many levels because I wanted to become a kayak teacher. I loved the teaching, I loved passing it on.

Edan's motivation for kayaking evolved somewhat over time:

> [Initially] adrenaline had a big impact because I was a teenager and suddenly it was almost a drug. We were challenging ourselves to do more difficult rivers and to go to grade 3 and then to grade 4. For a teenager who is full of testosterone and wants to prove [him]self, it is the ideal thing. But a lot of it was just that connection, or reconnection, I needed with the environment. Suddenly I was feeling strong, healthy, fit . . . discovering some absolutely stunning places. The river is always a very privileged way to discover new environments.
>
> The adrenaline part is probably a good thing but there was also - my friends were kayakers and it became a circle of friends — it became social motivation as well. . . But the main thing was an experience as a whole.

Edan's early kayaking days were characterised by the desire for adrenaline, fitness, camaraderie and to prove himself by surmounting ever-increasing levels of risk and challenge, while connecting to novel natural surroundings. However, over time, motivational changes took place as he progressed with his career as a kayaker: "My approach to the sport is so different now, because really it doesn't have to do much with the adrenaline stuff."

Connecting with the natural environment appears to be an important source of motivation for some adventure sport participants (e.g., Brymer et al., 2010). Brymer et al. (2010) found that participation in extreme sports could lead to positive changes in participants' relationships with the natural world. Emphasizing his feelings of having a connection with the natural environment at a national selection race, Edan stated:

> For me, there was the beauty of the snow in the morning, the beautiful stone village that we were camping at. . . and then we were in our kayaks with snow around and a lot of people were totally daunted and said "oh it's bloody cold!" They weren't enjoying it that much, but I was just absolutely lapping it up, so that whole combination of a beautiful, beautiful river, a challenging grade — grade 4 — and just feeling that the body was moving quite elegantly and fluidly. . . . There's been a few opportunities where I felt that and every time it's been just quite stunning in terms of the experience itself.

In addition, Edan drew attention to his own movements and body sensations as he kayaked through that particular environment: "The sensation of the activity itself was enjoyable". Although Edan was river kayaking, this pleasurable kinaesthetic experience is similar to the experience of ocean kayaking described by Varley (2011). Varley (2011) argued that sea kayaking changed paddlers' connection with their own bodies and developed kinaesthetic connections between body, paddle, kayak, and the ocean.

Edan's case study expands upon the participation motivation exhibited by Sarah, the mountain biker. As a developing young kayaker progressing through the river grades and competition, Edan exhibited the same goal-oriented (e.g., "I wanted to teach sports"), thrill-seeking and risk taking (e.g., "adrenaline had a big impact"), and social (e.g., "my friends were kayakers") motives as Sarah. However, Edan was also motivated from the outset by his connection with the natural world and the kinaesthetic sensations he experienced while paddling through the water in that natural environment. Later in life, the high arousal experience aspect of his motivation for kayaking had greatly diminished (e.g., "My approach to the sport is so different now, because really it doesn't have to do much with the adrenaline stuff.")

Doug: mountaineer

Doug was a 52 year old mountaineer and rock climber with extensive qualifications in outdoor mountain activities and helicopter rescue safety. He began rock climbing at age 28 in an effort to escape the boredom of his occupation, and soon after began pursuing mountaineering full-time:

> I realised surveying is actually pretty boring and I was into adventure … I did want to have an adventure in my life and for the rest of my life, and climbing was the medium that was going to give me that lifestyle.

Unlike some of the previous participants, Doug stated clearly that "I'm not an adrenaline junkie". Nevertheless, he was drawn to the adventurous aspects of climbing and the escape from boredom it offered, because he was intrinsically motivated to seek out challenges ("but not risk") to test himself:

> The world of reality is so much easier than being a climber because it's comfortable and you never extend your comfort zones. When you're a climber, you're constantly extending your comfort zones.

As a novice climber, fear of heights and lack of natural aptitude pushed Doug to explore his personal limits: "I had to try very hard. I wasn't a natural and I'm still scared of heights … [Yet] I know that

can be overcome with the right kind of attitude and focus". Climbing provided an important medium for Doug to overcome his fears and gain in self-confidence without an evaluative audience: "[Climbing] is a selfish activity. It's just about you and your survival. You learn to be very self-sufficient and you gain a lot of self-confidence from it". . . . "You don't have an audience. That's one of the pleasures. There's no one there to look at you." For Doug, the loss of selfconsciousness was an enjoyable and intrinsically motivating part of the climbing experience. In line with Brymer et al. (2010) (and the kayaker, Edan, from the present study), Doug was also motivated by opportunities to connect with the climbing environment: "Being more in touch with my surroundings, the rock and being up high in the beautiful mountains."

Although Doug was initially motivated by creating opportunities to overcome challenges and prove his climbing status, like Edan the kayaker, his motives changed with age and experience:

> When you are an amateur climber, a lot of the pressure you put on yourself. . . . Accomplishing a climb like [my first multi-pitch climb] . . . it is self-ego . . . It's self-gratification. . . . I certainly don't go climbing for those reasons anymore. I still do hard climbs, but they come from an inner drive because I just haven't accomplished all the climbs that I have wanted to do in my life.
>
> You tend to control your situations more when you've had more experience and you tend to not get into these really out of your comfort zone experiences anymore - unless one of your friends drags you into it.

Alrik: hang glider pilot

Alrik was a 37 year old hang glider pilot with 14 years of experience across four continents. He was also an instructor and a qualified tandem pilot assessor. Alrik discovered hang gliding while on holiday where his experience of the three-dimensional movement of the glider became his primary motive for participation:

> [My first flight] was pretty short, but I knew instantly this is what I wanted to do anyway. It wasn't very thrilling or anything. It was just mellow and it's just the feeling of being in the air and moving in three dimensions — it's awesome. . . . It's so dynamic - you move quick through the air and you move up and down and sideways and you balance the glider in the air as well in all dimensions.

The sentiments expressed in Alrik's statement reflect the pleasurable kinaesthetic experience of Edan, the river kayaker, and the findings obtained by Varley (2011) with sea kayakers. The language Alrik uses is similar to Varley's description of the kinaesthetic connections between body, paddle, kayak and the ocean developed by the sea kayakers; in Alrik's case, the connection was with his body, the hang glider and the air currents or thermals.

Alrik eventually progressed to longer cross-country flights which became his passion: "What got me really hooked was cross-country flying. It's very exciting to do that. You try to fly as far as you can [by staying] up in the thermals. It can last up to 7 or 8 hours." It was on these long cross-country flights that he discovered a strong additional motive for hang gliding: the challenges and excitement of dealing with the unknown:

> My most memorable experiences are when it's really dangerous. . . . I've been scared several times — I got sucked up into clouds — you can't see anything and you can fly into a mountain. . . .It's always like that when you do things and you get away with them … it's a good feeling (laughs). Couple of times I've done things and I think I shouldn't have done that, but I got away with it. Once you're over the scary bit there, then you feel pretty good . . . . I've still been enjoying it because it's very, very exciting.

Discussion

The purpose of the present study was to explore possible multiple motives for participation in adventure sports. The qualitative results represented a range of participation motives that varied inter- and intra-personally. In order to better conceptualise and understand how this diverse range of motives underpins adventure sports participation, a reversal theory analysis of the data was conducted. The advantage of reversal theory (Apter, 1982, 2001) is that it can accommodate multiple motives for behaviour, where other approaches have largely proposed single causes (e.g., sensation-seeking; Zuckerman, 1971). In addition, it can explain how changes in motivation can occur over time, sometimes very rapidly. At the beginning of this section, reversal theory concepts are applied to the interview statements to extend our understanding of the motivational processes that were experienced by the adventure sport participants in the mountains, on the river, or in the sky. Following this, a number of additional considerations of multiple motives for adventure sports participation will be discussed. Finally, some limitations of the study will be described.

Interpreting the findings through reversal theory

When riversurfing, Jody's motivation was associated with her enjoyment of paratelic-oriented high arousal activities in which she could be playful, spontaneous and experience being "in the moment" (e.g., "I want to do something that's fun and challenging."; "The risk, it's fun, it's physical and it's outdoors … and I love water"). However, in her mind this experience was only possible after she had put in the hard work beforehand to develop her skills and ability adequately (e.g., ". . . it's also everything else leading up to it which enabled you to be able to do it properly, like the skills that you have or the hard work that you've done"). This is telic-oriented motivation, where serious behaviour, planning ahead, and achieving goals are characteristic (e.g., "You set out to do something and you've done it."). In other words, once she was satisfied with her skill training and preparation work, Jody was able to reverse from the telic to the paratelic state and enjoy the high arousal and excitement that surfing down a new stretch of river or negotiating an unknown set of rapids would generate for her.

Sarah's attraction to speed was also paratelic-oriented (e.g., "Anything kind of exciting! Anything fast"), but her intense focus on goal achievement (i.e., winning) indicated a predominantly telic-conformist-autic-mastery approach to competitive downhill mountain biking. The telic-conformist element was characterised by her willingness to train hard, overcome serious injury and give up living a normal lifestyle, while the autic-mastery element is reflected in her desire for personal mastery over other competitors and to continue winning (see e.g., Kerr, 1997). Although the telic aspect of Sarah's motivation was similar to Jody's, it was much more intensely focused, a requirement in a world-ranked performer. For example, when descending rapidly down the course during race events, she liked saving time by jumping over course obstacles and biking as fast as possible, while her opponents chose to go around the obstacles. ("If there's a big jump, they have to go around it"). When competing she had this metamotivational state combination operative for much of the time. However, an additional dimension of her participation motivation concerned the social interaction (e.g., "hanging out with her friends"; "a really cool crowd") involved in a mountain biking lifestyle. This suggests that away from the

competition and training, Sarah was able to reverse from the autic and mastery states to the alloic and sympathy states to maximise her experience of pleasant emotions when she interacted socially with other racers.

Edan's goal-oriented motivation during competitions and goal-setting motivation to become a teacher were based on a combination of telic-conformist-autic-mastery states. His thrill-seeking while kayaking was associated with a high arousal paratelic-autic-mastery state combination, indicating that he was able to reverse between telic and paratelic states when the situation required it. The strong connection he experienced with the natural world was also paratelic-based, as was the kinaesthetic sensation he enjoyed while paddling through water. In contrast to thrill-seeking behaviours, these were likely to have been low arousal experiences. For Edan, connection with the natural environment was his primary motive for participation which surpassed his other motives in importance, as supported by Brymer et al. (2010).

As time went on, the social aspect of Edan's participation motivation invoked the transactional states and particularly reversals to the alloic-sympathy state combination as he interacted with friends ("it became a circle of friends") or taught others how to kayak ("I loved the teaching, I loved passing it on"). Edan had several motives for kayaking and some of these changed as he became older, but it appeared that he was able to reverse regularly and enjoy the various experiences and satisfactions associated with the different metamotivational states.

One of the noteworthy aspects of mountaineer Doug's motivation was the basic anxiety (telic) which underpinned much of his climbing experience (e.g., "I'm still scared of heights"). It appeared that, paradoxically, Doug could confront and conquer his anxiety for climbing by engaging in the practical tasks involved in actually climbing. This engagement in the practicalities enabled Doug to form a paratelic protective frame which allowed him to experience his anxiety differently and allowed him to take the risks involved in mountaineering ("As soon as you're occupied by the actual climbing movement – the negotiation [with fear] stops."). As Doug became more experienced, he searched for more difficult climbs to regenerate sufficiently stimulating levels of fear ("When you are more experienced, the fear is not so great, so therefore you've got to look for harder and harder climbs to get the fear back again to stimulate your system").

Yet there was an apparent contradiction noted here, which related to Doug's development of different motivations over time (e.g., "you tend to not get into these really out of your comfort zone experiences anymore"). In other words, his participation motivation had become focused on mountaineering challenges that were somewhat, but not too far beyond his ability. This appeared to be Doug's strategy to ensure his protective frame remained in place while climbing. When the challenges greatly exceeded his capabilities, a paratelic to telic reversal ensued and his paratelic protective frame disappeared leaving Doug to experience high levels of unpleasant anxiety (e.g., Kerr, 1997). This was a situation he avoided by careful planning. Doug's desire to test himself and experience mastery in climbing situations indicated that the autic and mastery states were also operative and strongly influenced his emotional experience of climbing. This finding may provide support for previous research which found that people with emotional difficulties (alexithymia) may use adventure sports (skydiving) to regulate their emotions, specifically anxiety, despite the short-lived emotional benefits of this tactic. Specifically, alexithymia was found to significantly moderate the pre- to post-jump fluctuation of state anxiety in skydivers. That is, only alexithymic skydivers' anxiety levels diminished as a result of skydiving. However, the significant rise in anxiety shortly after landing suggested that any emotional benefits are short-lived. No anxiety fluctuations were found for nonalexithymic skydivers (Woodman et al., 2008, 2009).

Alrik, the hang glider pilot's two main participation motives were largely paratelic-oriented. While his enjoyment of the three-dimensional movements of the glider appeared to be low arousal experiences ("It wasn't very thrilling or anything. It was just mellow."), the long distance flights were high arousal experiences ("It's very exciting to do that."). The autic and mastery states also appeared to be operative in these contexts. It is noteworthy that Alrik's account clearly described the impact of a loss of protective frame when he encountered a sudden problem while cross-country flying (e.g., "I got sucked up into clouds."), his strong feeling of excitement, changed to high anxiety ("I've been scared several times."). This clearly demonstrated a reversal from the paratelic to the telic state caused by an environmental event. Once the danger was over, Alrik reversed back to the paratelic state ("Once you're over the scary bit there then you feel pretty good"; "I've still been enjoying it because it's very very exciting"). Similar paratelic to telic reversals and protective frame failure, as a result of unexpected environmental events, were also found to be experienced on some occasions by a skydiver during free fall (Kerr, 2007). Despite being unaware of reversal theory's paratelic protective frame concept, Alrik described the essence of this concept ("Fear protects you for sure. It always does – it's there for you. You don't think about how scared you are – you know that the danger is there, but you do what it takes."). If, when he encountered dangerous situations, Alrik thought too much about being scared and did not react to the situation and "do what it takes" to extricate himself, he might not have survived. Like the parachutists (Apter & Batler, 1997) and the skydiver (Kerr, 2007), Alrik's protective frame, which promoted confidence and feelings of safety, was based on factors such as: high personal skills, knowledge of safety procedures, confidence in the structure and capability of his equipment, and a perception that the risks involved in his adventure sport (cross-country hang gliding) were manageable. Within the participants' statements there was evidence of motives based on different metamotivational states, changes in metamotivational states over time, reversals as a result of environmental events, and the use of protective frames to allow participants to enjoy risky adventure contexts.

Additional considerations

There has been a trend in recent adventure sports research to search for and identify participation motives in addition to excitement- or thrill-seeking behaviour (e.g., Apter & Batler, 1997; Brymer et al., 2010; Varley, 2011; Woodman et al., 2008, 2009, 2010). The present study, which examined participants in a range of different adventure sports, suggested that the participants' motivations were multifaceted. While some participants shared common motives, these were often described in different orders of importance by different participants. For some, the excitement- or thrill-seeking associated with risk taking during adventure sports was strongly motivating, but it was not always participants' primary motive.

The three oldest participants were male and involved to some degree in teaching or instructing adventure sports. The other two participants were female, considerably younger, and had more recently progressed from just being participants to instructional or guiding activities. Edan's interview statements suggested that motivational maturation may occur as participants' motives change over time ("My approach to the sport is so different now, because really it doesn't have to do much with the adrenaline stuff."). Previous research has also demonstrated significant differences on a number of important personality dimensions between females who participate in risk sports for leisure purposes only and females who participate in risk sports as professionals (Cazenave, Le Scanff,

& Woodman, 2007). In that study, for example, female professionals scored lower on impulsivity, alexithymia and sensation-seeking when compared to female leisure participants. These findings indicate that participants in the present study may have different personality characteristics (metamotivational dominances), and therefore exhibit different motivational tendencies (motivational styles), based on their gender and/or level of involvement (e.g., professional, competitive, recreational). As reversal theory would predict, while personality characteristics may be related to participation motives among the present participants, motives may also change over time according to expertise and experience.

The motives for adventure sport participation identified in the present study (listed in no particular order) were: risk taking (e.g., excitement, "adrenaline rush"); goal achievement (e.g., winning competitions, becoming a teacher); social motivation (e.g., interaction with friends, passing on knowledge to students); escape from boredom; testing personal abilities and overcoming fear; connecting with the natural environment; unselfconsciousness; and pleasurable kinaesthetic bodily sensations from moving in water or air. Therefore, the study successfully demonstrated that there are multiple motives for participation in adventure sports which include, but also go beyond, sensation-seeking. The first five motives support previous findings by Allman et al. (2009) and Willig (2008) and the latter two motives provide support for the findings of Brymer et al. (2010) and Varley (2011) regarding adventure sport participation motives.

The present authors propose that there is a need to refine the motivational models used to understand adventure participation. Reversal theory (Apter 1982, 2001) provides a comprehensive conceptual model which can not only accommodate multiple motives for participation, but also can explain how these motives might change for individuals with changing circumstances during an activity, or over time as participants gain experience or age. In addition, reversal theory's protective frame concept further elucidates how individuals can face dangerous situations and the risks of severe injury or death inherent in adventure sports and still enjoy these activities. These findings of the present study are compatible with the motives for participation identified by Apter and Batler (1997) in their study of sport parachutists.

In summary, the contribution of the present research study included using an established general psychological theory (reversal theory) to interpret in-depth qualitative case studies and thereby further establish and conceptualise adventure sport participants' multiple participation motives. Whereas quantitative methods have traditionally concentrated on the sensation- or thrill-seeking aspect of motivation, qualitative methods provided the detail which showed the multifaceted nature of adventure sports motivation. However, there were some limitations to the present study with its individual case study approach. One was the relatively small number of participants and the limited number of adventure sports investigated. The results of the present study, which focused on riversurfing, downhill mountain biking, kayaking, mountaineering, and hang gliding may not be representative of other participants in these or other adventure sports. It would be desirable for researchers to investigate participation motives (a) in larger numbers of participants, (b) in particular sports in depth, and (c) across a wide range of adventure sports. This would provide a more comprehensive picture of the complexities of human motivation for participation in adventure sports.

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Appendix A. Part 1 of the interview guide

Part I. Introduction

Introduce interview procedure and sign informed consent (if not done already).

Ethics: You may withdraw at any time or choose not to answer a question.

Background Information:

1. Name/Age/Place of Birth/ Education
2. How did you come to be in NZ?
3. Length of time in NZ/Occupation(s)
4. Recreational activities (aside from [*High Risk Act])
5. How/where/when did you become interested/ involved in [High Risk Act]?
6. What are your first memories/experiences of [High Risk Act]?
7. Why do you participate in [High Risk Act]?
8. What are the challenges/demands involved in [High Risk Act]?

*The actual name of each participant's High Risk Activity was used here (e.g., kayaking).

References

Allman, T. L., Mittelstaedt, R., Martin, B., & Goldenberg, M. (2009). Exploring the motivations of base jumpers: extreme sport enthusiasts. *Journal of Sport & Tourism, 14*, 229–247.

Apter, M. J. (1982). *The experience of motivation*. London and New York: Academic Press.

Apter, M. J. (1992). *The dangerous edge*. New York: Free Press.

Apter, M. J. (2001). *Motivational styles in everyday life: A guide to reversal theory*. Washington, DC: American Psychological Association.

Apter, M. J., & Batler, R. (1997). Gratuitous risk: a study of parachuting. In S. Svebak, & M. J. Apter (Eds.), *Stress and health. A reversal theory perspective* (pp. 119–129). Washington DC: Taylor & Francis.

Beedie, P. (2003). Mountain guiding and adventure tourism: reflections on the choreography of experience. *Leisure Studies, 22*, 147–167.

Bouter, L. M., Knipschild, P. G., Feij, J. A., & Vollovics, A. (1988). Sensation seeking and injury risk in downhill skiing. *Personality and Individual Differences, 9*, 667–673.

Brown, M., & Fraser, D. (2009). Re-evaluating risk and exploring educational alternatives. *Journal of Adventure Education and Outdoor Learning, 9*, 61–77.

Brymer, E., Downey, G., & Gray, T. (2010). Extreme sports as a precursor to environmental sustainability. *Journal of Sport and Tourism, 14*, 193–204.

Castanier, C., Le Scanff, C., & Woodman, T. (2010). Beyond sensation seeking: affect regulation as a framework for predicting risk-taking behaviors in high-risk sport. *Journal of Sport & Exercise Psychology, 32*, 731–738.

Cazenave, N., Le Scanff, C., & Woodman, T. (2007). Psychological profiles and emotional regulation characteristics of women engaged in risk-taking sports. *Anxiety, Stress & Coping, 20*, 421–435.

Charmaz, K. (2000). Grounded Theory: objectivist and constructivist methods. In N. K. Lincoln, & Y. S. Denzin (Eds.), *Handbook of qualitative research* (2nd ed.). (pp. 509–535) Thousand Oaks, CA: Sage.

Chirivella, E. C., & Martinez, L. M. (1994). The sensation of risk and motivational tendencies in sports: an empirical study. *Personality and Individual Differences, 16*, 777–786.

Cogan, N. A., & Brown, R. I. F. (1999). Metamotivational dominance, states and injuries in risk and safe sports. *Personality and Individual Differences, 27*, 503–518.

Florenthal, B., & Shoham, A. (2001). The impact of persuasive information on changes in attitude and behavioral intentions toward risky sports for arousal-seeking versus arousal-avoidance individuals. *Sport Marketing Quarterly, 10*, 83–95.

Freixanet, M. G. I. (1991). Personality profiles of subjects engaged in high physical risk sports. *Personality and Individual Differences, 8*, 241–252.

Heyman, S. R., & Rose, K. G. (1980). Psychological variables affecting SCUBA performance. In C. A. Nadeau, W. R. Halliwell, K. M. Newell, & G. C. Roberts (Eds.), *Psychology of motor behavior and sport*. Champaign, IL: Human Kinetics.

Houge, S. P. (2009). *Reversal theory and flow: Toward an integrated framework of optimal experiences in adventure activities*. Unpublished Ph.D. thesis in Physical Education. University of Otago, Dunedin, New Zealand.

Houge Mackenzie, S., Hodge, K., & Boyes, M. (2011). Expanding the flow model in adventure activities: a reversal theory perspective. *Journal of Leisure Research, 43*(4), 519–544.

Hymbaugh, K., & Garrett, J. (1974). Sensation-seeking among skydivers. *Perceptual and Motor Skills, 38*, 118.
Kerr, J. H. (1991). Arousal-seeking in risk sport participants. *Personality and Individual Differences, 12*, 613–616.
Kerr, J. H. (1997). *Motivation and emotion in sport: Reversal theory*. Hove, England: Psychology Press.
Kerr, J. H. (2007). Sudden withdrawal from skydiving: a case study informed by reversal theory's concept of protective frames. *Journal of Applied Sport Psychology, 19*, 337–351.
Kerr, J. H., Fujiyama, H., & Campano, J. (2002). Emotion and stress in serious and hedonistic leisure sport activities. *Journal of Leisure Research, 34*, 272–289.
Kerr, J. H., & Svebak, S. (1989). Motivational aspects of preference for and participation in "risk" and "safe" sports. *Personality and Individual Differences, 10*, 797–800.
Legrand, F. D., & Apter, M. J. (2004). Why do people perform thrilling activities: a study based on reversal theory. *Psychological Reports, 94*, 307–313.
Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage Publications.
Lonsdale, C., Hodge, K., & Raedeke, T. (2007). Athlete engagement: I. A qualitative investigation of relevance and dimensions. *International Journal of Sport Psychology, 38*, 451–470.
Males, J., Kerr, J., & Gerkovich, M. M. (1998). Metamotivational states during canoe slalom competition: a qualitative analysis using reversal theory. *Journal of Applied Sport Psychology, 10*, 185–200.
Murgatroyd, S., Rushton, C., Apter, M., & Ray, C. (1978). The development of the Telic Dominance Scale. *Journal of Personality Assessment, 42*, 519–528.
O'Connell, K. A., Potocky, M., Cook, M. R., & Gerkovich, M. M. (1991). *Metamotivational state interview and coding schedule instruction manual*. Kansas City, MO: Midwest Research Institute.
Pain, M., & Kerr, J. H. (2004). Continued participation in risk sport despite serious injury. *British Journal of Sports Medicine, 38*, 337–339.
Potocky, M., Cook, M. R., & O'Connell, K. A. (1993). The use of an interview and structured coding system to assess metamotivational state. In J. H. Kerr, S. J. Murgatroyd, & M. J. Apter (Eds.), *Advances in reversal theory* (pp. 137–150). Amsterdam: Swets & Zeitlinger.
Robinson, D. W. (1985). Stress-seeking: selected behavioural characteristics of elite rock climbers. *Journal of Sport Psychology, 7*, 400–404.
Rowland, G. L., Franken, R. E., & Harrison, K. (1986). Sensation seeking and participation in sporting activities. *Journal of Sport Psychology, 8*, 212–220.
Scanlan, T. K., Russell, D. G., Wilson, N. C., & Scanlan, L. A. (2003). Project on elite athlete commitment (PEAK): I. Introduction and methodology. *Journal of Sport & Exercise Psychology, 25*, 360–376.
Sharpe, E. K. (2005). "Going above and beyond": the emotional labor of adventure guides. *Journal of Leisure Research, 37*, 29–50.
Straub, W. F. (1982). Sensation seeking among high and low risk male athletes. *Journal of Sport Psychology, 4*, 246–253.
Thatcher, J., Reeves, S., Dorling, D., & Palmer, A. (2003). Motivation, stress and cortisol responses in skydiving. *Perceptual and Motor Skills, 97*, 995–1002.
Trimpop, R. M., Kerr, J. H., & Kirkcaldy, B. (1999). Comparing personality constructs if risk-taking behaviour. *Personality and Individual Differences, 26*, 237–254.
Varley, P. J. (2011). Sea kayakers at the margins: the liminoid character of contemporary adventures. *Leisure Studies, 30*, 85–98.
Willig, C. (2008). A phenomenological investigation of the experience of taking part in extreme sport. *Journal of Health Psychology, 13*, 690–702.
Woodman, T., Cazenave, N., & Le Scanff, C. (2008). Skydiving as emotion regulation: the rise and fall of anxiety is moderated by alexithymia. *Journal of Sport & Exercise Psychology, 30*, 424–433.
Woodman, T., Hardy, L., Barlow, M., & Le Scanff, C. (2010). Motives for prolonged engagement high-risk sports: an agentic emotion regulation perspective. *Psychology of Sport and Exercise, 11*, 345–352.
Woodman, T., Huggins, M., Le Scanff, C., & Cazenave, N. (2009). Alexithymia determines the anxiety experienced in skydiving. *Journal of Affective Disorders, 116*, 134–138.
Zuckerman, M. (1971). Dimensions of sensation seeking. *Journal of Consulting and Clinical Psychology, 36*, 45–52.