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Extreme Sport: Understanding the Concept, Recognizing the Value

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Minds are of three kinds: one is capable of thinking for itself, another is able to understand the thinking of others, and a third can neither think for itself nor understand the thinking of others. The first is of the highest excellence, the second is excellent and the third is worthless (Niccolo Machiavelli, The Prince; Craig, 2008, p. 8).

Abstract

Extreme sport is one of the fastest-growing areas in sporting activity in this century. Extreme sport appears to be used interchangeably with high-risk sport in much of the research literature. Both high-risk sport and extreme sport are defined as any sport where one has to accept a possibility of severe injury or death as an inherent part of the activity. Extreme sports are rapidly becoming the physical activity of choice. Extreme sports have diffused around the world at a phenomenal rate and far faster than established sports. Commercially, extreme is the password for corporations and advertisers to access young population. Extreme sports increasingly attract participants from different social classes and age groups, as well as females and minority groups. The extreme sport comprises tourist activities, therapeutic activities, recreational activities, and sporting activities. They have become a sporting spectacle. Extreme sports are even discussed in marketing (niche market), management, and policy literature as legitimate niches that require their peculiar understanding or inappropriate activities that need to be banned. Adventure and risk-taking sports such

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as mountaineering, whitewater rafting, surfing, skiing, skydiving, downhill mountain biking, rock climbing, and BASE (Building, Antenna (or Aerial), Span (i.e., bridge), Earth (cliffs or other rock formations)) have increased in popularity in recent years. This study is an overview of previous studies carried out by eminent scholars of psychology and different disciplines. The objective of this study is to understand extreme sport in better way on one side and how extreme (or adventurous) sport has been theoretically conceptualized and re-conceptualized on the other. The researcher made an effort to disseminate the knowledge of extreme sports to the students, researchers, entrepreneurs, media personnel, and other concerned authorities, related organizations, and institutions. It is also believed that this study will help to promote adventure education, adventure tourism (niche tourism) and deep ecology. The participants strongly believe that the natural world acts as a facilitator to a deeper, more positive understanding of self and its place in the environment. Fear, emotion, stress, risk, uncertainty, motivation, wellness, wellbeing, personality traits and determination are the key elements of extreme sports.

Introduction

The term 'sport' is often viewed as synonymous with structured competition. McPherson et al. (1989) defined sport as "a structured, goal oriented, competitive, contest based ludic physical activity" (McPherson, Curties & Loy, 1989; in Kunwar, 2013). However, from an etymological perspective, the English word 'sport', derived from the old French word 'desport', originally refers to a 'pastime' (Online Etymology Dictionary [Internet]; in Brymer, Orth, Davids, Feletti, & Jaakkola, 2017). Also, for example, the Finnish equivalent 'urheilu' is derived from 'urhea', referring to the adjectives 'brave' or 'valiant' and can be defined as an activity to maintain physical fitness, recreation or as a competition according to specific rules. Specifically, sports are considered to be multifaceted, boundary-crossing activities that do not necessarily involve structured competitive activity, regulated performance environments, rules, or institutions (Brymer et al., 2017). A very fitting definition comes from Tony Mason (1989; in Puchan, 2004) who defined sport as 'a more or less physically energetic, competitive, recreational activity…usually...in the open air (which) might involve team against team, athlete against athlete or athlete against nature, or the clock'. This study begins with what is extreme sport? In order to get answer of the question, the researcher consulted with many secondary sources of extreme sport as an academic subject. 'Understanding the concept, Recognizing the Value' as an approach has been borrowed from Williams (2010; in Kunwar, 2013, p.14) for making the title of this study.

Before describing extreme sport, an effort has been made to make clear about the meaning of 'extreme'. Extreme may be defined as recreational physical activity, which carries a risk of serious physical injury or even death. Extreme is a popular adjective used to describe a range of individualistic, adventure-type pursuits and sports with

various elements of risk (Booth & Thorpe, 2007, p.181). According to Merriam-Webster's online dictionary (retrieved September 2018) the word extreme means: (1) Exceeding the ordinary, usual, or expected. (2) Existing to a very high degree. (3) Going to a great, or exaggerated length. Therefore, extreme as used in "extreme sport" suggests a deviation beyond what is generally viewed as "normal" or "traditional" activity and assumes participants pursue activities beyond these limits. Extreme sports are defined as leisure activities where the most likely outcome of a mismanaged mistake or accident is death. Extreme sports and extreme sport participants have been most commonly explored from a negative perspective, for example, "they need to take the unnecessary risk". Typically, participation is considered to be about crazy people taking unnecessary risks, having "no fear" or holding onto a death wish-why else would someone willingly undertake a leisure activity where death is a real potential? (Brymer & Oades, 2009).

The online Oxford University Dictionary (2018) defines "extreme sport" as "Denoting or relating to a sport performed in a hazardous environment and involving great risk." So, the concept of "going beyond normal limits" and "risk" seems integral to what constitutes an extreme sport. Booker (1998; in Cohen, Baluch, & Duffy, 2018, p. 2) stated that "extreme sports" were beyond the boundary of moderation; surpassing what is accounted for as reasonable – i.e., radical, and sports that are located at the outermost. Breivik et al. (1994), defined extreme sport' as a high-risk sport where the possibility of severe injury or death is a possibility as well as integral to the sport or activity. So, the components of these definitions include going beyond the norm of what is considered reasonable and may result in severe injury or death, i.e., high physical and/or psychological risk. "Extreme Sports" appears to be used interchangeably with "high-risk sport" in much of the research literature. Both "high risk" and "extreme sport" are defined as any sport where one has to accept a possibility of severe injury or death as an inherent part of the activity (Breivik et al., 1994).

Taking risks with one's life in sport competitions is nothing new in the human experience. Extreme sports have diffused around the world at a phenomenal rate and far faster than established sports. Extreme sports have benefited from a historically unique conjecture of mass communications, corporate sponsors, entertainment industries, political aspirations of cities, and a growing affluent and young population. Extreme sports are about taking risks, pushing the limits, breaking the rules, and at least sometimes about having fun. They are also a major cultural, economic, and media phenomena with far-reaching implications that go beyond the few active participants. Culturally, extreme sports are seen as representing values such as fierce individualism, civil disobedience, the quest for human potential, taking control of one's own life, and intimate engagements with the environment. Commercially, extreme is the password for corporations and advertisers to access young population. Some are indeed very free while others are codified and commercialized. Extreme

sports increasingly attract participants from different social classes and age groups, as well as females and minority groups (Booth & Thorpe, 2007).

The extreme sport comprises tourist activities, therapeutic activities, recreational activities, and sporting activities. They have become a sporting spectacle. They are discussed in medical literature by those interested in injury or other medical concepts, in psychology by those interested in motivations, performance, and health, in psychology by those interested in how the body functions in extreme conditions and in the military to enhance performance. Extreme sports are even discussed in marketing, management, and policy literature as legitimate niches that require their peculiar understanding or inappropriate activities that need to be banned (Brymer & Schweitzer, 2017).

Cohen, Baluchi, and Duffy (2018) argue that "extreme sport" is predominantly competitive (comparison or self-evaluative) activity within which the participant is subjected to natural and unusual physical and mental challenges such as speed, height depth, or natural forces. Moreover, an unsuccessful outcome is more likely to result in the injury or fatality of the participant of mainstream sport. Therefore, it is suggested that incidents of injury/ fatality are the defining factors that separate extreme sports from other sports which fit into the alternative categories listed, i.e., adventure sport, and alternative sport. High-risk sport immediately evokes a sense of danger and extremism, activities similarly to nature of extreme sport (Cohen et al., 2018).

Robinson (1992; in Cohen et al. (2018), p.99), viewed "extreme sport as an activity based on both cognitive and emotional components as a variety of self-initiated activities that generally occur in natural environment settings and that, due to their always uncertain and potentially harmful nature, provide for intense cognitive and affective involvement". Tomlinson et al. (2005; in Cohen et al., 2018) also recognized the "emotional dimension" within "extreme sport" which can be identified as a sensation of wholeness. This is akin to the concept of flow which Csikszentmihalyi (1977; in Cohen et al., 2018) described as a conscious state of being completely absorbed in a situation of sport. For Olivier (2006), the exact nature of extreme or adventure sport remains unclear (Olivier, 2006; in Brymer & Houge Mackenzie, 2015, p. 129).

Extreme sports, in the context of outdoor adventure activities, are a rather recent term. The only published use identified by Google R Scholar prior to 1990, is in an analysis of the Hungarian health insurance system, identifying a category of excluded risks (Kereszty, 1989; in Buckley, 2018, p.3). In the popular mass media, the term extreme carries a dramatic connotation, not specifically differentiated from adventure more broadly. In the medical literature, and also in the legal literature of medical insurance, the terms "extreme sports" and "adventure sports" have been used jointly and interchangeably, to refer to a particular group of the category of outdoor

activities. In some cases, these activities are listed explicitly. As noted by Brymer (2005, unpublished; in Buckley, 2018, p.3), each of these activities can be carried out at various degrees of difficulty, danger, and expertise.

One feature of how the sport is defined is the distinction between extreme and non-extreme sport. BASE (Building, Antenna (or Aerial), Span (i.e., bridge), Earth (cliffs or other rock formations) jumping is an example of an "extreme sport" because it involves a high degree of risk, whilst swimming is classified as "non-extreme" because the risks involved are minimal. Extreme sports differ from traditional in other ways as well. For example, traditional sports have very tightly defined rules and regulations that govern how a sport is to be played whereas extreme sports are not governed by such rules and regulations. Traditional sports are also tightly constrained by fixed and well-maintained environments that have been designed for the sole purpose of carrying out the sport. Extreme sport, on the other hand, is most often about adapting to the natural environment (Brymer & Schweitzer, 2017).

The literature shows that the world has introduced altogether 75 different types of high-risk sports identified until before 2007 (Booth & Thorpe, 2007). All those sports are categorized into Air Sports, Water Sports, Terrestrial Sports, Climbing Sports, Ice and Snow Sports, Combative Sports, and Wheeled Sports. The label 'Extreme sport' has become a well-known denominator for activities such as bungee-jumping, skydiving, skate-and snowboarding, surfing, hang gliding, paragliding, rock-climbing, kayaking, rafting, cannoning, and so on.

'Extreme sport' and 'Adventure sport' encompass a wide range of non-traditional sporting activities (Buckley 2018; Cohen, Baluch, & Duffy, 2018). Other terms commonly used to categorize similar activities include action sports (Thorpe, 2017; Thorpe & Wheaton, 2011; Brymer & Feletti, 2019), nature sports (Houge Mackenzie & Brymer, 2018), youth sports (Coakley 2011; Brymer & Feletti, 2019), lifestyle sports (Gilchrist & Wheaton, 2017; Brymer & Feletti, 2019), high risk sports (Castanier, Le Scanff, & Woodman, 2010) and outdoor sports (van Bottenburg & Salome, 2010; Brymer & Feletti, 2019). While each of the sports highlighted within each category has unique characteristics, there are common aspects (Collins & Brymer, 2018, Online first; in Brymer & Feletti, 2019). For example, nature sports emphasize that the sport is undertaken in a natural environment, action sports emphasize the notion of a cool and desirable culture (e.g., skateboarding), and lifestyle sports portray passion, camaraderie, and alienation from mainstream sports, (Cohen, Baluch, & Duffy, 2018). Activities such as climbing and snowboarding are examples of sports that can fit across several categories (Brymer & Feletti, 2019).

Among the various extreme sports, here it is noteworthy to mention about the BASE jumping as one of the most dangerous sports which has been internationally

recognized. BASE jumping is a parachute sport in which participants jump from solid structures such as buildings, cliffs or Bridge-stone might be only a few hundred feet off the ground (Celsi et al., 1993; Brymer & Schweitzer, 2017), while skydivers use safety devices such as warning technology and second parachutes. BASE jumpers do not have such mechanisms. The low altitude means that warning devices will not work and if a participant did carry a spare parachute the likelihood is that a jumper would hit the solid structure or the ground before the parachute could be deployed. This is not a new sport whose history goes back to the 1700s, it has just been defined in the mid-1970s because its technology replaced the devices of skydiving. Proximity flying is a version of BASE jumping whereby flyers or pilots wear a specially designed suit called wingsuit that facilitates forward motion. A proximity flyer is able to travel forwards for a few kilometers, often at speeds of 200 miles per hour (over 300 kph) (Brymer & Schweitzer, 2017, p.4). Like many extreme sports, extreme skiing also began in the 1970s. Extreme skiing requires that the skier descend long, dangerous and sheer mountain cliffs with gradients Picardy close to 50 to 60 degrees. The terrain is often littered with large boulders, trees, or steep cliffs. A fall in this terrain results in the skier tumbling out of control (Brymer & Schweitzer, 2017, p.4). Big wave surfing takes surfers into a wave over 20 feet (6.2 meters) tall, where even renowned surfers have died. Surfers are often towed into the wave by a jet ski because the speed and size of the wave are too great for the surfer to reach their destinations unaided. If a surfer falls off their board they are forced deep underwater. To recover from this the surfer will have a matter of seconds to reorient and resurface before being hit by the next wave. Waterfall kayaking involves kayaking over waterfalls often over 30 meters high (Brymer et al., 2009, p.194; Brymer & Schweitzer, 2017). At this level it is not only the height of the waterfall that contributes to the sport's extreme nature but also the power of the water that comes with it. The record of the highest successfully descended by kayak is 57 meters. Extreme mountaineering is harder to define as standing on the roof of the Worldham becomes a tourist quest. At its core, it involves mountaineering over 8000 meters. At this level, often called the death zone, the mountaineer must have the skills to manage the terrain and weather conditions even though the oxygen level is so low that normal breathing is mostly impossible. Most climbers at this level require oxygen bottles, however, a few mountaineers have climbed above this level successfully without oxygen. Rheinhold Messner is credited as the first person to solo Everest (of Nepal) without oxygen, in 1980 (Brymer & Schweitzer, 2017, pp.4-5).

Review of literature

Review is defined as 'to view, inspect, or examine second time or again' (*Oxford English Dictionary*, 2008; in Grant & Booth, 2009). According to Steward (Capocchi et al. 2019), a good review should be comprehensive, fully referenced, selective, relevant, a synthesis of key themes and ideas, balanced, critical, and analytical. A literature

review can provide a concise examination and discussion of evidence in a particular subject or area of reviews play, and essential role in academic research to gather existing knowledge and to examine the state of a field (Linnenluecke et al., 2019).

This study is based on published literatures and analytical approach methodology and has described the nature and scope, typologies, motivation, concept, theories, approaches, wellbeing and wellness, fear and emotion, and tragedy found in various studies of extreme studies. Unlike original articles, literature reviews do not present new data but intend to assess what is already published, and to provide the best currently available evidence (Ferrari, 2015, p.230; in Maphanga & Henama, 2019). A literature review looks at surveys published articles and other literature sources related to the topic of interest. A literature review must be an objective, thorough summary, and critical analysis of the relevant available research (Cronin et al., 2008, p.38; in Maphanga & Henama, 2019). Hart (1998; in Maphanga & Henama, 2019) acknowledged that a literature review is an objective that summarizes and makes serious analysis of the relevant research and non-research literature on the topic being studied. A plethora of sources was consulted during the secondary data analysis process to try to fill the scarcity in the academic gap on extreme sports

In a review of participation in extreme sports Kaufman (2001; in Puchan, 2004) stated that 100 million people worldwide participated in aggressive inline skating, whitewater canoeing and kayaking, skateboarding, mountain biking, snowboarding, snowmobiling, BMX riding, wakeboarding, surfing, rock climbing, artificial wall climbing and adventure racing in 2000 (Kaufman, 2001; in Puchan, 2004, p. 173). Campbell and Johnson (2005; in Willig, 2008) report in the Observer newspaper that new research for Sport England into the growth of extreme sports found that over 5 percent would take part. In the USA, participation in such 'alternative' sports has increased by 244.7 percent between 1978 and 2000 (Puchan, 2004; in Willig, 2008). In addition, the demographics of participants in extreme sports have broadened to include people of all ages and increasing numbers of women (Celsi, Rose, & Leigh, 1993; in Willig, 2008, pp. 691-6920).

Over the past two decades, participation rates in these sports have grown exponentially. Between 1998 and 2001 participation rates in extreme sports far outstripped any other sporting activity (American Sport Data, 2002; in Brymer, 2009). According to Puchan (2004), involvement has been shown not to be just a 'flash in the pan' but a signed of the times in which people are looking for a new way to define their lives and to escape from an increasingly regulated and sanitized way of living (Puchan, 2004, p.177). In extreme sport, there is no second chance, the most likely outcome of a mismanaged error or accident is death (Brymer, 2005; in Brymer & Oades, 2009).

A report published in 2016 by the physical activity council in the United States of America (USA) estimated that about 50% of active people, that is, 22 million people in the USA, undertook adventurous outdoor activities. Participation rates published by sport England in 2015 concluded that 50% of people who were active in sport participated in outdoor sports. In 2016, approximately 130 million people undertook outdoor activities in China. Outdoor adventure activities are also becoming popular in India. In Iran, women are the surfing pioneers (Brymer & Schweitzer, 2017). Saxena and Dey (2010) have categorized adventure sports into four classes: (1) mountain sports; (2) extreme sports like bungee jumping and free fall; (3) rafting and kayaking; (4) paragliding, skydiving, and skiing. A total of fifteen motivational factors have been identified with the help of a literature review and an exploratory study. These are: Thrill, Zeal/Energy, Spells status, Builds confidence, Helps in personality development, Instills self-belief, Creates unique identity, Is a stress buster, Helps in goal- setting, Is challenging, Requires toughness, Builds a sense of achievement, Is a unique experience (Saxena & Dey, 2010).

The impact of adventure and extreme sports on the international market is perhaps most obviously appreciated through its economic impact. The US outdoor industry supports 6.1 million jobs and the spending associated with the industry is approximately $646 billion annually. Therefore, how we understand extreme sport and extreme sport participation is important (Brymer & Schweitzer, 2017, pp. 2-3). According to Pain and Pain (2005; in Brymer, 2010), the extreme sports participants are careful, well trained well prepared, and self-aware and prefer to remain in control: Despite the public's perception, extreme sports demand perpetual care, high degrees of training and preparation, and, above all, discipline and control. Most of those involved are well aware of their strengths and limitations in the face of clear dangers. Findings of extensive research in climbers suggest that the individuals do not want to put their lives in danger by going beyond personal capabilities (Pain & Pain, 2005, p.S34; in Brymer, 2010).

Studies have also indicated that extreme sport participants are not inclined to search for uncertainty or uncontrollability. For example, the study by Celsi et al. (1993; in Brymer, 2010, p. 223) referred to numerous examples of well-respected extreme sport participants who considered that they participated well within their personal capabilities. Evidence to support this notion that extreme sports may not be about risk has come from a statistical comparison between the death rates of motorcyclists, BASE-jumpers and climbers (Storry, 2003; in Brymer, 2010, p. 223). Storry (2003; in Brymer, 2010, p. 223) found that in the UK the death rate for climbers was 1:4000 which compares favorably against motor cycle riding where the death rate is 1:500. Soreide et al. (2007; in Brymer, 2010, p. 223) undertook an analysis of 20 850 BASE-jumps in Norway over 11 years and found that the death rate was 1:2317 and while

the injury rate was high they were in the main linked to sprains and bruises. Perhaps then, as Storry (2003; in Brymer, 2010, p. 223) recognised, the tendency to focus on theories that search for labels involving 'risk' and/or 'thrills' is entirely missing the point. That is, extreme sports are not necessarily synonymous with risk and participation may not be about risk taking.

Motivation and personality traits

In recent years, numerous studies as cited by Hungenberg et al. (2014) have examined sport motivation with concepts, such as involvement (Kyle, Absher, Norman, Hammett, & Jodice, 2007; in Hungenberg et al.,2014), commitment (Swanland, Carpenter, Schmidt, Simon, & Keeler,1993) serious leisure (1992; in Hungenberg et al.,2014), and recreation specialization (Scott & Shafer,2001; in Hungenberg et al.,2014). Each of these frameworks has provided a unique contribution to understanding and measuring an individual's dedication to sports. However, a serious leisure framework was chosen based on its ability to aid participants in overcoming barriers (Jackson et al.,1993) by heightening one's competence and revealing the value individuals place in affiliating with the activity (Hungenberg et al.,2014).

Participant motivations, as cited by Brymer (2010), have been explained through the range of analytical frameworks, including, sensation seeking (Rossi & Cereatti, 1993; Zuckerman, 2000), edgework (Lyng, 1990; Lauredeau, 2008), Psychoanalysis (Hunt, 1995a,), neoliberalism or sub-cultural formation (Midol & Broyer, 1995) and masculinity theory (Polay, 2001; Wheaton, 2003). These perspectives argue that a combination of personality traits, socialization processes, and previous experiences induce a desire for a participant to put their life at risk through extreme sports (Brymer & Schweitzer, 2012). Psychological theories presented include type 'T' (arousal seeking) and type 't' (arousal reducing/avoiding) (Self et al., 2007), psychoanalysis (Hunt, 1996), and sensation seeking (Breivik, 1996; Goma, 1991; Robinson, 1985; Rossi & Cereatti, 1993; Slanger & wann, 1999; Straub, 1982; Zarevski et al., 1998; Rudestam, 1997; Zuckerman, 2007; in Brymer 2010, p.4).

Almost all the adventure tourism literatures show that the tourists are motivated by peak experience. But in this study, there was found a concept known as "plateau experience". Emmons (1999; in Brymer & Oades, 2009) indicated that severe stress, most likely in the forms of trauma, tragedy, or death, drastically changes life. Maslow considered that these severe events would only result in deep changes if a person was initially emotionally stable. The plateau experience as a concept was first coined by A. Maslow on March 17, 1971. For him, the term refers to "a constellation of extraordinary experiences, which shared some similar features with peak experiences but were also distinctly unique" (Krippner 1972; in Brymer & Oades, 2009). Nonetheless, the essence of this constellation can be gradually revealed through the morsels

available. Wong (1998; in Brymer & Oades, 2009) echoed such determination and persuasively argued that by facing our own fear of death and death itself, we become fully self-aware, and life takes on a new, profound, and positive meaning (Brymer & Oades,2009). Plateau experience has more to do with the growth of the individual, while the peak experience could serve like an LSD experience, as an opener. Plateau experience is essentially cognitive. This is witnessing reality.

A number of studies have investigated the relationship between personality traits and participation in high-risk physical sports, such as mountaineering. Sensation seeking is by far the most consistently studied personality factor in the literature (Castaneir et al., 2010; Cronin, 1991; Frixanet, 1991; Diego & Armatas, 2004; Zuckerman, 1979; Jack & Ronan, 1998; in Monasterio & Brymer, 2015). Zuckerman (1979, p.10; in Monasterio & Brymer, 2015, p.201) defined sensation seeking as 'the need for varied, novel and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experience'. The sensation seeking model has to some extent dominated the traditional view that mountaineers are driven by an institute need for new or novel experiences and intense sensations, attracting the pejorative label of 'adrenaline junkies (Monasterio & Brymer, 2015).

There comes another important sociological theory which is known as edgework propounded by Lyng in 1990. Theoretical perspective on risk-taking in extreme sports has been focused on psychological and sociological explanation. The main sociological theory that has been put forward to explain participation is 'edgework' (Laurendeau, 2008; Lyng, 1990). Edgework explains extreme sport participation from a sociological perspective by proposing that participants voluntarily navigate the edges of control to escape the routine and monotony of modern life (Lois,2001; in Clough et al.,2016). The model attempts to account for voluntary risk-taking within a sociological framework is termed edgework (Lois, 2001; Lyng, 2004; in Brymer & Schweitzer, 2017). The notion of edgework refers to an individual's desire to explore the edge or limits of her/ his own control in specific risk contexts. The theory suggests that all 'risk-takers' share the same characteristics and as such participating in extreme sports is motivated by the same underlying factors as found in stock-traders, vandals and those involved in unprotected sex, and sadomasochism (Lyng, 2004; in Brymer & Schweitzer, 2012).

Proponents of edgework suggest that participants move through four stages. The first is the preparation stage where individuals might be a little nervous and anxious. The second is the performing stage which is characterized by thoughtless action. The third is the aftermath stage where participants feel omnipotent, and the last stage is where participants defuse feelings to prepare for the next event (Brymer & Schweitzer, 2017). An example of edgework in the extreme sport of BASE jumping found support for this notion in that BASE jumpers were deemed to those participants often reported motivations that include fun, being alive, and deep personal transformations and

positive aspects of their chosen activity (Allman, Mittlestaedt, Martin & Goldenberg, 2009; in Brymer & Schweitzer, 2017, pp.61-62). Similar findings have been previously reported where participants relate that they do not push the boundary of their control and prefer to stay well within their comfort zones (Celsi, Rose & Leigh, 1993).

Personality is an important predictor of various risk-taking behaviors (Selosse, 1998; Vollrath, Knoch, & Cassano, 1999; in Castanier, Scanff, & Woodman, 2010), and neuroticism, extraversion, and conscientiousness are the most studied personality factors in this area (e.g., Bermúdez, 1999; Clarke & Robertson, 2005; Vollrath & Torgersen, 2002). Frixanet (1991; in Monasterio & Brymer, 2015, p.201) investigated the personality traits of high physical risk sports participants, including 97 alpine climbers and mountaineers, and found that extraversion was positively correlated, while neuroticism was negatively correlated to high-risk climbing. They found that there were no differences in personality traits between alpine climbers and mountaineers (who climbed the Himalayas above 8000m). They determined that alpine and mountain climbers are generally presented with a personality profile characterized by extraversion, emotional stability, conformity to social norms and seeking thrill, and experience by socialized means. More recently, Castanier et al., (2010) found individuals with personality types demonstrating a combination of low conscientiousness, high extraversion, and or high neuroticism were greater risk-takers in a population of 302 men involved in high-risk sports (e.g., downhill skiing, mountaineering, rock climbing, paragliding, and skydiving), of which 50 percent were mountaineers.

However, of these three personality traits, neuroticism and extraversion yield equivocal findings. For example, although a number of researchers reported a positive relationship between extraversion and high-risk health behaviors (Vollrath et al., 1999; in Castanier et al., 2010, p. 478) or traffic and job accident involvement (e.g., Arthur & Graziano, 1996; Clarke & Robertson, 2005; in Castanier et al., 2010), others reported the opposite relationship in the same domains (e.g., Iverson & Erwin, 1997; Judge, 1993; in Castanier et al., 2010). Similar inconsistencies surround neuroticism findings: many studies demonstrated that individuals high in neuroticism are more prone to taking high-risk health behaviors (Vollrath et al., 1999; Castanier et al. 2010; Scanff & Woodman, 2010, p. 479) and are more accident-involved (e.g., Clarke & Robertson, 2005; Sutherland & Cooper, 1991; in Castanier et al. 2010).

Methodology

"Method" is to be understood here not as a technique of research but in the etymological sense, as a means of access to a field of research, that is, these considerations belong to the theory of science… (Giorgi, 1997, p. 252) according to Rosenau (1992; in Repko, 2012), (research) "method concerns how one conduct research, analyses

the data or evidence, test theories and creates new knowledge" (Repko, 2012, p.128). Basically, this study is based on interdisciplinary approach. According to Vinsentine (2011, xiii), "… interdisciplinary is a means to identify and study new themes that single discipline would not be able to put into focus, described interpret by themselves". Newell (2007, p.240; in Repko, 2012) writes, "interdisciplinary study is a two part process: it draws critically on disciplinary perspectives and it integrates into a more comprehensive understanding… of an existing complex, phenomenon [or into] the creation of new phenomenon" (Repko, 2012, p.15). Both as an applied and social field of study, it is inevitable that academic should be involved in supplying research to the academia, industry and government. Methodologically extreme sport studies have been analyzed by two different approaches which are known as phenomenology and autoethnography guided by qualitative approach.

Qualitative methodologies commonly refer to the compilation and analysis of material that seeks to discover meaning and promote a complete and diverse understanding of the experiences of the research subjects (Yin,2011; Denning & Licoln,2018; in Figueroa-Domecq, & Segovia-Perez, 2020).It focuses language and observation. It consists of descriptions of situations, events, people, interactions ad observed behavior, direct accounts of personal experiences, attitudes, beliefs and thoughts complete passages of documents, correspondence, reports and historical cases (Babbie,2011; Cea Azcona,1997; Valles,1997; in Figoeroa-Domecq & Segovia-Perez, 2020).

All qualitative methods have to go through a minimum of five basic steps:(1) collection of verbal data, (2) reading of the data, (3) breaking of the data into some kind of parts, (4) organization and expression of the data from a disciplinary perspective, and (5) synthesis or summary of the data for purpose of communication to the scholarly community (Giorgi, 1997, p.245).

The descriptive statement has been structured around a series of themes. Four of them were invoked by all participants. These were Context, Challenge, Suffering, and Other People. A further five themes were shared that are known as Mastery and Skill, Contrast, Being in the Present, Compulsion, and Pleasure (Willig, 2008).

The scholars who carried out research on extreme sports they have followed phenomenological approaches as their research methodologies (Willig, 2008; Brymer, 2005; Brymer, 2009; Brymer, 2009; Brymer, 2010; Brymer & Oades, 2008; Brymer et. al., 2009; Brymer & Schweitzer, 2012; Brymer & Schweitzer, 2017; Schweitzer & Brymer, 2018).Therefore, it is important to know how this approach became instrument for this kind of outdoor adventure sport studies.

There are several different ways in which researchers have used a phenomenological orientation to carry out empirical research (e.g., Giorgi, 1970; Moustakas, 1994; Giorgi,

Fscher & Murray, 1975; Smith, 1996; Jorman & Osborn, 1999; in Willig, 2008). Willig's (2008) research is based on Collaizzi's (1978) account of phenomenological approach which is influenced by Giorgi's (1970, 1984; Giorgi & Giorgi, 2003) descriptive pre-transcendental Husserlian phenomenology (Giorgi, 2000; in Willig, 2008). This means that its aim is the identification of the basic structure of a phenomenon based upon the convergence of accounts (Willig, 2008, p. 693).

While writing about the importance of phenomenological approach, Brotherton (2010) mentions that "phenomenologists reject the epistemological, ontological and methodological foundations of the positivist approach and advocate essentially opposing views on each of these". They are generally interested to understanding and explaining how people make sense of the world they inhabit. By implication, context is an important element in developing this understanding because people exist and interact with context (Brotherton, 2010, pp. 36-37).

For Giorgi, phenomenological psychology refers to a human-scientific project whereby one conducts concrete analysis of the psychological meanings of specific experiences by using steps consistent with Edmund Husserl's philosophical phenomenological vision (Giorgi, 1981, 1986c; in Giorgi, 1997, p. 252). Phenomenological research seeks to illuminate the essence of an experience, as understood by participants (Brymer & Schweitzer, 2012, p. 479).

Hermeneutic phenomenology is a research method used in qualitative research in the fields of education and other human science. Out of four types of phenomenological approaches (experiential phenomenology, transcendental phenomenology, transpersonal phenomenology, and hermeneutic phenomenology), most of the researchers of extreme sports studies have adopted hermeneutic phenomenology.

Hermeneutic phenomenology is both descriptive and interpretive. Apart from hermeneutic phenomenology, Van Manen (1996; in Kakkori, 2009) is well known for his hermeneutic phenomenological method. Hermeneutic is oriented to historical and relative meanings. Phenomenology in Husserlian (1913,1983; in Giorgi, 1997) sense is oriented to universal and absolute essences. For Heidegger (1927/1962), hermeneutic phenomenology is the research of the meaning of the Being as a fundamental ontology (Kakkori, 2009). The hermeneutic phenomenological approach used in this research project aims to investigate an experience as it is lived and demands the use of a multitude of data sources for exploring a phenomenon such as extreme sports (Van Manen, 1997; in Brymer, et al., 2009, p. 140). The researchers examined a wide range of materials in addition to interviews in an effort to understand the nature of a particular experience and to assure that some accounts are originating outside the interview setting. Phenomenological research achieves rigor, in part, by 'bracketing' or setting aside pre-existing understandings and by comparing among a variety of

accounts to see if dimensions of the experience recur across multiple subjects (Giorgi, 1997; Brymer et. al., 2009, p. 140).

The hermeneutic phenomenological approach opens up a multitude of data sources such as interviews, biographies, autobiography, and video or any source that might help explain the experience in question. This study selects minimum 10 to maximum 20 respondents in one project. The phenomenological perspective aims to return to the experience as lived and provide a detailed description of a phenomenon based on the structure and meaning of an experience (Laverty, 2003; Van Manen, 1997; in Brymer, 2010).

Brymer et. al. (2009) have followed interpretive phenomenology as a methodological tool. Interpretive phenomenology accepts that lived experiences are made sense through language and therefore participant accounts will reflect this process (Willis, 2001; in Brymer & Schweitzer, 2012). Interpretive phenomenology aims to penetrate beyond the reflective interpretation of an event in-order to reveal the essence of an experience (Brymer & Schweitzer, 2012).

Autoethnography, according to Buckley (2018), is a form of qualitative research in which an author uses self-reflection and writing to explore anecdotal and personal experience and connect this autobiographical story to wider cultural, political, and social meanings and understands (Adams, Holland, & Ellis, 2015; Buckley, 2018). Autoethnography is an approach to research and writing that seeks to describe and systematically analyze (*graphy*) personal experience (*auto*) to understand cultural experience (*ethno*) (Ellis, 2004; Holman, Jones, 2005; in Ellis, Adams, & Bochner, 2011; Singh, 2015). As an approach it acknowledges and accommodates subjectivity, emotionality, and the researcher's influence on research, rather than hiding from these matters or assuming they do not exist (Ellis et al., 2011). A central distinction between autoethnography and traditional methodologies is that the researcher's biases and reflexivity are openly acknowledged and discussed in autoethnography. In contrast to ethnography, in which the researcher attempts to become an insider, the researcher autoethnographic inquiry is the insider who provides unique insights into personal and emotional lifeworld (Ateljevic et al., 2007; in Houge Mackenzie, 2015). Anderson (2006 in Houge Mackenzie, 2016) presents five key autoethnographic features: complete member status of the researcher; analytic reflexivity; narrative visibility; of the researcher's self; dialogue with informants beyond the self; and commitment to theoretical analysis (Houge Mackenzie, 2015). A researcher uses tenets of autobiography and ethnography, when marriage occurred between grounded theory and ethnography (Pettigrew, 2000; Singh, 2015), to do and write autoethnography. Autoethnography, according to Pettigrew (2000; Singh, 2015) as a concept came out of marriage between grounded theory and ethnography. Thus, as a method, autoethnography is both process and product.

A small number of sociologists, sport, have opted to produce what has been defined as autoethnographies or narratives of self. In this regard, Krizek (1998; in Sparks, 2000) wrote, "Many of us "do" ethnography but "write" in the conservative voice of science…. In short, we often render our research reports devoid of human emotion and self-reflection. As ethnographers we experience life, but we write science (p.93; in Sparks, 2000).

The practical methodology for retrospective analytical autoethnography of intense human emotional experiences is the same as for conventional ethnography (Hammersly & Atkinson, 2007; in Buckley, 2015). Analytical autoethnography is the logical continuation, narrowest but deepest (Buckley, 2015). This is a systematic study of a researcher's own experience.

Lifeworld approach

Lifeworld approach has became an important theoretical concept that has captured the phenomenological experiences of the particular group in the society. Therefore, it is noteworthy to mention the importance of lifeworld approach as adopted by Brymer and Schweitzer (2017). This concept was founded by Edmund Husserl (1970) who used the term as *Lebenswelt* or lifeforms (Husserl, 1970). The notion of *Lebenswelt* referred to the world as encountered and lived in everyday life, given in direct and immediate experience independent of scientific interpretations. This theory is directly relevant to the understanding of phenomena, such as the extreme sport experience. Husserl distinguished between the world as known to science and the world in which we live, i.e., the *Lebenswelt*. The study of the lived world and our experience of it now became the primary task of phenomenology. Husserl drew attention to three features of the lifeworld (Brymer & Schweitzer, 2017):

1. The world of everyday experience is extended in space and time. Space and time constitute a comprehensive frame in which all the existence of our experience can be related in spatial and temporal terms with one another. Furthermore, things exhibit spatial forms as physiognomy, which is a phenomenon that has characteristics.

2. The lifeworld exhibits various regularities, as evidenced, for example, by the cycle of day and night altering with the change of the seasons. Things, according to Husserl, have their habits of behavior. It is not from science that we learn, for instance, that stones, when lifted and released, fall to the ground, but it is a matter of everyday experience in the lifeworld.

3. And thirdly, things in the lifeworld present themselves in certain relativity with respect to the experiencing subjects, e.g., a number of persons in a room perceive the same objects, but each person may perceive the objects from their own point of observation. It is through intersubjective agreement, brought

about several ways, that we find ourselves living the same lifeworld, with respect to the social group, however small or large (Brymer & Schweitzer, 2017).

Noema and noesis

This is another theory that has influenced to the scholars of extreme sports. They are Schweitzer and Brymer (2017) who have connected this theory with phenomenology. In *Ideas*, Husserl (1967, 2003; in Shahabi & Rassi, 2015) uses this pair of terms, "Noema" and "Noesis" to refer to correlated elements of the structure of any intentional act. Husserl says that every intentional act has noetic content. This noetic content is that mental act-process that becomes directed towards the intentionally held object. In other words, every intentional act has an "I-pole and an "object-pole. According to Husserl, noesis is the real content and real character, the part of the act that gives the character to a thing. Noema is the ideal essence of the character (Rassi & Shahabi, 2015, p. 29).

At its core, phenomenology considers that consciousness has to be conscious of something. The noema is the 'what' of consciousness, that is, the 'thing' of intentionality. The noesis is the 'how' or process through which there comes the experience and the intentional acts. The importance of this consideration is that both the noema and noesis describe the 'what' and 'how' as considered through the phenomenological attitude, as distinct from the natural attitude, where the natural attitude reflects everyday life in which people, objects and even ideas are 'just there'. There will be no question of existence rather this could be experienced as facts. From Husserl's perspective, this attitude is neither good nor bad, it simply reflects the ordinary or familiar way of being- in-the- world.

Theoretical constructs of nature human relationship

Are you getting enough Vitamin N? Richard Louv (2008; in Van Heezik & Brymer, 2018) coined this term in his book "*Last Child in the Woods*," in response to growing evidence that suggests humans are increasingly disinterested with, and disconnected from the natural world. Concurrent with the literature on the extent of disconnection (Miller, 2005; Soga et al., 2016; Van Heezik & Hight, 2017; in Van Heezik & Brymer, 2018) is an ever-expanding body of literature documenting the many psychological, physical, and spiritual health benefits derived from nature contact (Keniger et al., 2013; Bratman et al., 2015; Martyn & Brymer, 2016; Frumkin et al., 2017; in Van Heezik & Brymer, 2018). In fact, human survival is inextricably linked with nature: the species and their inter-relationships that make up the fabric of ecosystems function to sustain all life on Earth.

While analyzing nature human relationship, Brymer et. al. (2009) express "Our experience-based analysis has found that extreme sports aficionados do not simply

view the natural world as a commodity, a stage for risk taking, or vehicle for self-gratification. On the contrary, for veteran adventure athletes the natural world acts as a facilitator to a deeper, more positive understanding of self and its place in the environment" (Brymer et. al., 2009, p. 135). In their study, Brymer et. al. (2009) further highlight on ecocentric relationship between extreme sports participation and nature by asking the question, 'How does the extreme sports participant relate to the natural world?'. The authors find that participants' descriptions of a relationship they characterized as a harmonious and rhythmical interaction between partners, an engagement some likened to a 'dance'. Through 'dancing' with the natural world, an extreme sports participant generally undergoes a transformation in self-understanding at the same time his or her view of nature also changes (Brymer et. al., 2009, p. 138-139).

Van Heezik and Brymer (2018) are of opinion that a culture of stewardship should be developed instead of exploitation of nature as pill and as commodity. Lifting biodiversity baselines through ecological restoration is necessary. From a psychological health perspective, what is urgently needed is a principled theoretical framework, combining ecological, and psychological related knowledge that can guide a more enlightened program of research and practice (Van Heezik & Brymer, 2018, p. 3). It in noteworthy to mention about the Norwegian environmentalist Aerne Naess (1973; in Holden, 2008, p. 59) who identified two broad philosophical approaches. 'Shallow ecology' is based upon an 'anthropocentric' view of nature, meaning that nature is viewed as being separate from humans, and its value rests purely in terms of the use it has in meeting human needs and desires. Consequently, the anthropocentric view of why the environment should be conserved or treated in a responsible way, rests solely with the benefits this would bring for humans. By contrast 'deep ecology' rejects any separation of nature and humanity, stressing their interconnectivity, and that all beings are of equal value. A value is given to nature, which emphasizes its right to existence, rather than its instrumental value. Thus, rather than assuming that society should utilize natural resources for its own benefit, deep ecologists would question the purpose of the use of those resources and whether they were really necessary or not (Holden, 2008, pp. 59-60).

The above mentioned issues of humanity and nature are captured by Schweitzer, Glab and Brymer (2018) who analyzed the various theories propounded by different scholars at different times that has put forward to understand the relationship between nature-man nexus. Schweitzer et al. (2018) found a positive relationship between experiences of nature and psychological health and wellbeing (e.g., Ulrich et al., 1991; Kaplan, 1995; Korpela et al., 2001, 2014; in Schweitzer et al., 2018, p. 2). The major theoretical frameworks drawn upon to explain the observed link include Biophilia (Wilson, 1984), Attention restoration theory (ART) (Kaplan, 1993), Stress

reduction theory (SRT) (Ulrich et al., 1991), and Place attachment theory (Giuliani and Feldman, 1993; Giuliani, 2003; in Schweitzer et al., 2018, p. 2). Biophilia proposes that human beings have an innate affiliation with the natural world which is in turn fundamental to psychological and other domains of wellbeing (Kellert, 1997; in Schweitzer et al.,2018). From an SRT perspective interactions in natural environments reduce stress built up as a result of time spent in urban and everyday environments. Specifically, SRT claims that human beings have an evolutionary connection with nature and that specific characteristics of nature (complexity, depth, absence of threat) provide solace and the observed restorative benefits. While the SRT and Biophilic frameworks have made a considerable contribution to our understanding of the relationship between human beings and nature, critics point out that for a number of reasons these evolutionary notions do not stand up to scrutiny (Joye and van den Berg, 2011; Brymer et al., 2014; in Schweitzer et al., 2018). Attention restoration theory suggests that some environments are more conducive to restoring mental fatigue resulting from everyday urban lifestyles. The natural world on the other hand restores cognitive resources and the subsequent ability to focus because attention is held with the reduced requirement of effort. ART, though popular, might not be able to fully explain the genesis of wellbeing benefits arising out of the human-nature relationship (Hartig & Jahncke, 2017; in Schweitzer et al., 2018). Alternatively, an evolutionary perspective may be conceptualized in terms of cognitive processes, referred to as motivation and valuation (Mercado-Doménech et al., 2017; in Schweitzer et al.,2018). Motivation is thus a complex process involving both cognitive and implicit processes which play a part in the potential survival value of the human-nature process (Schweitzer et al., 2018, p. 2).

Place attachment theory is a multifaceted framework that proposes human beings develop emotional bonds with a real or imagined place. While not directly developed to explore the human-nature relationship from a wellbeing perspective the framework suggests that wellbeing can be enhanced through the effective interactions of individual characteristics and characteristics of particular places. Place attachment theory suggests that when compared to urban environments the natural world is rich in characteristics that facilitate positive emotional bonds and therefore wellbeing (Schweitzer et al., 2018).

So far as psychoanalytic theory is concerned, it is an overarching term encompassing a range of perspectives with contemporary theory being influenced by object relations and relational theorists, who adopt a two persons analytic perspective, and recognized the significance of inter subjectivity. The relational perspective proposes that human experience can be understood in terms of projective identification, which intern values counter transference as a key component of understanding "the other". This notion is consistence with Husserl's original emphasis upon the *Lebenswelt* or

lifeworld in which the direct experience of all players in human experience is valued (Schweitzer et al., 2018).

Wellbeing and wellness approach

Wellbeing is a complex concept with no single definition or interpretation (Richardson et al., 2019; Shakespeare et al., 2020; in Scheyvens, Movono, Auckram, 2021). In recent years, a growing body of literature supports the idea that participation can promote psychological and physical well-being and health (Brymer & Schweitzer, 2013; Brymer et. al., 2009).

Positive psychology is concerned with understanding and fostering wellbeing by studying optimal experiences and functioning across individuals, communities, organizations, and societies (Seligman & Csikszentmihalyi, 2014; in Houge Mackenzie & Brymer,2018). Prior to the establishment of positive psychology as an official branch of psychology, Ryff (1989; in Houge Mackenzie,2018) proposed a model of psychological well-being that included personal growth, self-acceptance, life purpose, mastery, autonomy, and positive relationships.

In positive psychology literature, wellbeing has generally been approached from two distinct perspectives: hedonism and *eudaimonia*. Hedonic well-being consists of pleasure, positive emotions, and avoidance of pain (e.g., Waterman, Schwartz & Conti, 2008; in Houge Mackenzie & Brymer, 2018). Conversely, Eudaimonic wellbeing encompasses meaning, purpose, optimal functioning, self-realization, and flourishing (Huppert & So, 2013; Ryan & Deci, 2011; in Houge Mackenzie & Brymer, 2018). While connecting these approaches, Huta and Ryan (2010; in Houge Mackenzie & Brymer, 2018) argued that the pursuit of eudaimonic well-being results in a more complete and meaningful life and fosters a more stable and enduring hedonism happiness. Eudaimonic benefits have been shown to stem directly from the immediate satisfaction of basic psychological needs for autonomy, competence, and relatedness (Ryan, Huta, & Deci, 2013; in Houge Mackenzie & Brymer, 2018).

Christopher and Hickinbottom's (2008; in Filep et al., 2013) review shows that there are two dominant conceptions of well-being in psychology: the subjective well-being (SWB) theory, which suggests well-being is mostly pleasure, and second, the authentic happiness theory (Seligman, 2002; in Filep et al., 2013, p.35) and its extension PERMA (positive emotions, engagement, relationships, meaning and achievement) (Seligman, 2011; in Filep et al., 2013). Seligman's conceptions integrate the hedonic aspects (positive emotions) with the eudemonic aspects (meaning and sense of achievement).

Both SWB and PERMA models have been applied to the investigation of tourist wellbeing (Nawijin, 2011; in Filep et al., 2013). However, Seligman's (2002, 2011)

conceptions of wellbeing have received less attention in adventure tourism contexts (Kler & Tribe, 2012; in Filep et al., 2013). But there is room for Seligman's authentic happiness theory and PERMA model to receive more attention in adventure tourism research. It can be argued that the authentic happiness or PERMA conceptualization includes more relevant theoretical constructs (positive emotions, engagement, and a sense of meaning) that better explain wellbeing in relation to adventure tourist experiences than SWB.

Extreme sport participants directly relate their experience to positive personal changes. For Ogilvie (1974), participants are "extremely autonomous people who march to their own beat" (p 93; in Brymer & Oades, 2009). Participation in extreme sports, as Brymer (2009) strongly believed that the notion of 'no fear' and 'extreme Dude' are reframed as courage and humility.

Another typical response is that participation at such an extreme level teaches humility (Ahluwalia, 2003; Muir, 2003; Breathers, 1999; in Brymer & Oades, 2009). Humility is "characterized by an accurate assessment of one's characteristics, an ability to acknowledge limitations, and a 'forgetting of the self'" (Tangey, 2005, p. 411; in Brymer & Oades, 2009, p. 2; Brymer, 2009, p.48). For Gonzales (2003; in Brymer & Oades, 2009) humility is an essential element for successful participation in extreme environments. Gerber (2002; in Brymer & Oades, 2009; Brymer, 2009, p.48) argued that to be truly humble, we must be in contact with something greater and perhaps more powerful, not just larger, than self.

Courage, in physical terms, is considered to be "the ability to overcome the overwhelming fear of harm or death" (Lopez, Koetting O'Byrne, & Petersen, 2003, p. 186; in Brymer & Oades, 2009, p. 3; Brymer, 2009, p.48). Those who modeled high sensation-seeking behavior and who demonstrated mastery, positive feelings and little fear in high-risk situations are regarded as fearless. Overconfident people feel little worry before a high-risk situation but have greater feelings of fear preceding further similarly risky situations. Courage, then, is about facing fears and taking risks (Lopez et al., 2003; in Brymer & Oades, 2009; Brymer, 2009, p.48).

Emerging research (Clough, Houge Mackenzie, Mallabon, & Brymer, 2016) suggests that adventurous physical health and wellbeing in a variety of ways. The literature suggests that adventurous physical activities generally provide the following benefits:

1. Increase positive psychological outcomes such as positive affect, self-efficacy, and resilience.
2. Provide opportunities to overcome challenges and have optimal experiences.
3. Provide opportunities to fulfill basic psychological needs of anatomy, competence, and relatedness.

4. Facilitate feelings connections to nature (as they normally occur in natural settings.

5. Increase physical activity levels.

6. Provide opportunities for participants to experience intense emotions.

Each of these elements has been shown to promote wellbeing or health. Based on the literature reviewed, Clough et al. (2016) conclude that adventurous physical activities may be viable wellness promotion tools that should be included in large-scale preventive health strategies (Clough et al., 2016).

Exposure to nature has been shown to improve emotional wellbeing and relieve stress (Leather,et al. ,1998; in Brymer,Cuddihy & Sharma-Brymer, 2010), increase positive mood (Maller, Townsend, Pryor,Brown & St.Leger, 2006; in Brymer, Cuddihy & Sharma-Brymer, 2010), enhance life skills (Mayer & Frantz, 2005; in Brymer et al., 2010), reduce mental fatigue and increase concentration (Maller et al., 2008; in Brymer et al., 2010). The desire to seek out brief nature-based experiences is increasing 2001; in Brymer et al., 2010). While this trend has been in practice in the Western countries for some time now mostly for leisure (Scherl, 1989; in Brymer et al., 2010), developing countries are catching up. This is especially true for young adults coming from a fast-paced city lifestyle. Researchers have found that wilderness experiences improve self-perception (Young & Crandall, 1984; in Brymer et al., 2010), self-concept (1984; in Brymer et al., 2010), and improved occupational, emotional, physical and intellectual wellness (Moore, 1990; Priest, 1990; in Brymer et al., 2010).

Human wellness is defined as the positive component of optimal health (Corbin, Welk, Corbin, & Welk, 2009, p.4; in Brymer et al., 2010). Good health will be freedom from illness and disease. Human wellness is generally considered to be the integration of various dimensions. The most common of these dimensions are emotional wellness, physical wellness, social wellness, intellectual wellness, occupational wellness, and spiritual wellness (National Wellness Institute, 2009; in Brymer et al., 2010). Emotional wellness is conceptualized as "an awareness and acceptance of feelings, as well as a positive about life, oneself and the future" (Roscoe, 2009, p.218; in Brymer et al., 2010). Physical wellness is also about physical states and a focus on the journey towards realizing personal potential (Roscoe, 2009; Suckley, Noonan, & Miller, 2000; in Brymer et al.,2010). Social wellness emphasizes the quality of interactions with others. A socially well person cultivates effective relationships that enhance the quality of life for all people involved and is willing to both receive and give support (Corbin et al, 2009; Horton & Snyder, 2009; in Brymer et al, 2010). Intellectual wellness concerns learning for learning's sake. A person who is intellectually well searching for mental stimulation for its own sake ((Horton & Snyder, 2009). Occupational wellness describes the fit between the workplace and the worker. Spiritual wellness

is the realization of a shared connection to greater power and the search for purpose and meaning. To be fully healthy beings we must establish an intimate relationship with the natural world (Glendinning, 1994; in Brymer et. al., 2009).

Body and extreme sport

The body is very important in extreme sport. The body is the source, medium, and outcome for the thrill and pleasure. The body is often put at considerable risk in extreme sport. The body is powerfully socialized. Indeed, without an appreciation of the body in extreme sports one cannot understand these activities more generally. Therefore, it is quintessential to understand what human's body is? In the humanities and social sciences, "the body" is a complicated interaction between biology and society. The body helps to shape the mind as well as the mind shapes the body so that it is called the "lived body". In the past two decades, the body has become an important subject of study in the field of anthropology, psychology, sociology, literary criticism, history, and cultural geography, and others, i.e., sports and physical culture-extreme sports. Booth & Thorpe (2007) have explored the body in extreme sports through social theory and condensed it into three dimensions of human activity: that of practical bodies, interacting bodies, and storied bodies. Participants in extreme sports immerse their bodies in specific practical engagements with the world. Perhaps the most refined perspective of the practical body is that developed by the French sociologist Pierre Bourdieu (1990; in Booth & Thorpe, 2007) which he called "logic of practice" (Bourdeau, 1990; in Booth & Thorpe, 2007). The second fundamental observation of the extreme sporting body is that it constantly and significantly interacts with other bodies, selves, objects, and its environment. In this regard, the bodily behavior in relation to a specific sport reflects the ritualized idiom in their particular domain called "body idiom" that refers to the way in which these meanings are shared by both performer and the valued observer of the behavior (Booth & Thorpe, 2007). The third fundamental of the body in extreme sports is that it becomes storied. Cobley reflects the widely held view that "wherever there are humans there appear to be stories"(Cobkey, 2001, p.2; in Booth & Thorpe, 2007).

Mental toughness approach

Extreme sports are also connected with adventurous activities. In this regard, Clough et al. (2016) have written that mental toughness offers a way of integrating many aspects of the adventure activity domain, but perhaps more importantly, it highlights the importance of individual differences in the choice of, and the potential benefits derived from, leisure pursuits. Mental toughness itself has been described as a "narrow personality trait" (Clough & Strycharczyk, 2012; in Clough et al., 2016) and has a clear genetic basis (Clough, Earle, & Sewell, 2002; in Clough et al., 2016). Individuals who score highly on mental toughness are excited by the challenge and

therefore may be drawn to Adventure. Applying the concept of mental toughness to the field of adventure provides an opportunity to integrate the extant literature regarding stress, risk, resilience wellbeing. Arguably, the most widely used model of mental toughness is the 4' C's model (Clough et al., 2002; in Clough et al., 2016). In the 4 C's model, overall mental toughness is a product of four central pillars: *challenge*: seeing challenge as an opportunity; *confidence*: having a high level of self-belief; *commitment*: having the ability to stick to tasks; and *control*: having the belief that you control your own destiny.

Fear and emotion

The most commonly associated emotion with extreme sports is fear. Fear refers to a feeling state in which there is both a subject and an object. In extreme sports, this involves the potential destruction of the physical self. Adults are supposed to control their intense emotions, fear is supposed to be curtailed (Ellias & Dunning, 1986). In extreme sports, the general assumption is that participants must have either an unhealthy relationship to fear or they must be pathologically fearless (Brymer & Schweitzer, 2012, p.479). Fear is a crucial and potentially aversive part of the extreme sport experience.

Fear is not a protagonist but represents a stage which can be recognized and transcended. From an evolutionary perspective fear is related to survival (Ewert, 1986; in Brymer & Schweitzer, 2012, p. 484). Those who were 'too fearful to face the do-or-die world outside' (Marino, 2001, p. 1; in Brymer & Schweitzer, 2012, p. 484) probably starved. For Ewert (1986: 45) a 'successful' society is one which tends to 'insulate itself from both environmental (e.g., cold, dark, hunger) and societal/psychological (e.g., confrontation, alien cultures) fear'. Paradoxically, Ewert (1986; in Brymer & Schweitzer, 2012, p. 484) noted that by facing and overcoming fear a person can gain valuable self-knowledge and personal growth.

Fear has been interpreted as a positive contribution to personal growth and the development of authenticity (Arnould & Price, 1993; in Brymer & Schweitzer, 2012, p. 484). For example, Arnould and Price (1993, p. 29; in Brymer & Schweitzer, 2012, p. 484) noted that participants on a whitewater raft trip experienced fear which helped to cement a sense of self.

Their concerns carry an undercurrent of fear of rafting – that this is something they might die doing. Such fears contribute to [a] perception of the experience as extraordinary and set the stage for a rise of intensification that extends and renews the self (Brymer & Schweitzer, 2012, p. 484).

In adventure studies, risk has become the central theme that has attracted the concerned participants and researchers. Human beings are recognized as risk-takers and risk-avoiders. But,in adventurous nature sports, risk and sensation-seeking are recognized as the key motivators thus paying attention to risk-taking and risk-

seeking behavior. From an anthropological perspective, Clark (1986; in Mackenzie & Brymer, 2018) differentiated between the inevitable risk-taking that occurs in life, and risk-seeking involved that is deliberate and easily avoidable Clark (1986), and Foster (1993) identified risk-seeking through the adventure as one way of attaining high levels of emotional arousal. Risk-seeking is a deliberate way of inducing the emotional arousal that risk- taking generates...both pleasurable and unpleasurable excitement are involved in risk-seeking (Foster, 1993; in Mackenzie & Brymer, 2018). Risk-taking, danger, and control, although it is considered a traditional concept, were central to Ewert and Hollenhorst (1989).

High-risk sport and tragedy

If extreme sport is a high-risk sport, high risk can refer to spatial dimensions, based on "extreme locations-wilderness, remoteness, the forbidden" (Tomlinson et al., 2005; in Cohen et al., 2018). Sport, where participants compete with the natural elements in locations with snow, hills, canyons, islands, mountains, rivers, or volcanoes would fit into the category of "high risk" sport, e.g., extreme skiing and whitewater rafting (Cohen et al.,2018, p.4). Both high-risk sport and extreme sport are defined as any sport where one has to accept a possibility of severe injury or death as an inherent part of the activity.

The most important sociological phenomena affecting perceptions of risk and hazard in mountaineering is the "risky shift" phenomena. Risk-taking is a valued form of behavior among climbers because it creates mental stress essential for promoting optimal performance. However, risk-taking also spawns several phenomena which promote the acceptance of higher levels of risk. When a group verbalizes its decision concerning a risky situation, the group's decision tends to be riskier than the individuals would have recommended privately (Cartwright) (Helms, 1984).

High-risk sports, usually defined as those in which one has to accept the possibility of severe injury or death as an inherent factor (Breivik,1995; in Castnier, Le Scanff, & woodman, 2010), are demanding activities that require specialized equipment and training to manage the risks involved (Fiffe & Peter, 1997; in Castanier et al. 2010, p. 478).

In the study of extreme sport, risk has been highly focused and so many other areas are overlooked. Most theoretical explanations assume that participation reflects a desire for thrills, excitement, or adrenaline-seeking. However, emerging research indicates that these explanations are oversimplifications (Brymer & Oades, 2009; Willig, 2008) and do not reflect the lived experience of participants who refute the thrills and adrenaline notion and instead describe participation as meaningful and life-enhancing (Brymer & Schweitzer, 2013; Brymer et. al., 2009).

Risk-taking behavior has been defined by the reviewers as either a socially unacceptable volition behavior with a potentially negative outcome in which

precautions are not taken (e.g., speeding, drinking, and driving) or a socially accepted behavior in which the danger is recognized (competitive sports, skydiving) (Turner, McClure, & Pirozzo, 2004)

Risk-taking research has largely focused on dis-inhibition behaviors, which are perceived as socially unacceptable volition behaviors (e.g., dangerous driving, drug-taking, gambling, promiscuous sex) in which individuals take insufficient precaution and from which the outcomes are potentially negative (Castanier et al., 2010). Risk is a culturally constructed phenomenon stemming from modern society's deep-seated aversion for, and obsessive desire to be 'liberated' from uncertainty (Davidson, 2008; Fairlie, 1989; in Brymer, 2010). Risk was initially a construct used to understand outcome probability and magnitude in gambling (Creyer, Ross, & Evers, 2003; Davidson, 2008). As modern society has become a negative descriptor synonymous with the unacceptable face of danger and society's primary preoccupation about 'rendering it measurable and controllable (Davidson, 2008, p.6). Society has become so preoccupied with risk reduction that activities not immediately accepted by the majority are instantly labeled undesirable (Brymer, 2010)

Extreme level activities involve higher skill, focus, and risk, but if the skill proves inadequate, the consequences are unlikely to prove fatal, unless the participant is unlucky. Extreme activities involve the continuous application of the highest-level skills and concentration in order to avoid any error, and any failure is likely to prove fatal unless the participant is specially lucky. In many activities any error is likely to cause an immediate and irremediable disaster. Falling on a free solo climb or hitting a cliff during proximity, wingsuit flying commonly permits no recovery or rescue. This provides a distinction that corresponds to that adopted in previous phenomenological research (Brymer, 2005; in Buckley, 2018), but is itself independent of the psychology of the participants.

Public attention in high-risk sports generally focuses on tragedies and as such are highly emotive and sensationalized. Dramatic accounts of accidents and hardships often lead to fierce debates on the merits and ethics of these sports (Monasterio, 2007).

The number of high-risk fatalities were reported in the United States from 1978 through 1980 (Societies and Actuaries, 1983; in Celsi, Rose, & Leigh, 1993). During that period an average of 49 skydivers (one per every 700 participants), 50 mountain climbers (1/1,000), 122 scuba divers (1/100,000), 41 ultralight aircraft pilots (1/ 250), and 27 hang glider pilots (1/1,250) were killed each year. Countless others were injured (Celsi et al.,1993).

In 1996, 16 people died on Mt Everest, including eight in one day (Southerland, 2006; in Brymer,   2013, p.111).In 1999, 21 people died on a canyoning trip in Switzerland (Cater, 2006; Brymer, 2013).in April 2008, six students and a teacher died

in a New Zealand canyoning disaster (Watson et al.,2008; in Brymer,2013), and in May 2008, the Independent Newchapel, (UK) (Judd,2008; in Brymer,2013) reported the drowning of a young back paper while river surfing. Despite such stories, extreme sports are enjoying incredible popularity while more traditional sports are struggling to retain members (Pain & Pain, S33).

In 1996 on the same mountain, Texan pathologist Beck Weathers walked to safety despite twice having been deemed "essentially dead". Over time 245 mountaineers have died in their quest to climb New Zealand's highest mountain, Aoraki/ Mt Cook, and more than one thousand in their quest for Europe's highest peak, Mt Blanc. Australian sea kayaker Andrew McCauley tragically died attempting the first solo-crossing from Australia to New Zealand. BASE jumping is probably the most dangerous sport in the world and involves parachute jumping from either tall natural features or man-made structures. The parachute is initially closed and is opened after a (short) free fall. A comprehensive database of BASE jumping fatalities reveals that 175 jumpers have died since the sport began (approximately 30 years ago) (Monasterio, 2007).

Outdoor education

For educators to maximize the learning potential of outdoor activity, we must come to better 'understand the psychological and emotional connections between humans and the natural world' (Stremba & Bisson, 2009, p. 345; in Brymer et. al., 2009, p. 136) and how these connections might be facilitated.

Outdoor education or adventure education follows the experiential philosophy of learning by doing. It takes place primarily, but not exclusively, through involvement with the natural environment. In outdoor education, the emphasis on learning is placed on relationships concerning people and natural resources. Four types of relationships in outdoor education have been identified: interpersonal, intrapersonal, ecosystems, and existing (Priest, 1986; in Priest & Gass, 2018). Interpersonal relationship refers to how people get along in a group or two or more. Aspects of these relationships include communication, cooperation, trust, conflict resolution, and problem-solving. Intrapersonal relationships refer to how individuals get along with themselves. Aspects of these relationships include self-concept, confidence, and self-efficacy. Eco-systemic refers to the interdependence of living organisms in an ecological system. Aspects of these relationships include basic biological concepts, such as the web of life, the food chain, and the energy pyramid. Ekistic relationships refer to the key interactions between human society and the natural resources of an environment or how people influence the quality of the environment (e.g., water pollution or strip mining) and how the environment influences the quality of their lives (e.g., clean drinking water or beauty). Historically, two branches of outdoor education have been identified; adventure and environmental (Priest & Gass, 2018).

As mentioned above, adventure education is the branch of outdoor education concerned with interpersonal and intrapersonal relationships. Adventure education uses adventurous activities that provide a group or an individual with the compelling tasks to accomplish. These tasks often involve group problem solving (requiring discussion making, judgment, cooperation, communication, and trust) and personal challenge testing competence against mental, social or physical risks). Environmental education is the branch of outdoor education concerned primarily with ecosystems and ekistic relationships. This study further explores recreation, outdoor recreation, and outdoor pursuits. Recreation refers to the activities that take place during leisure. Outdoor recreation is simply done outdoors at leisure. Outdoor pursuits are human-powered outdoor recreation.

Extreme sport and community development

Recent research revealing transformational aspects of extreme sport participation has coincided with a gradual positive shift in attitudes towards extreme sports by the non-participating public. In Malaysia, BASE jumping is seen as a legitimate competitive sport and is recognized by the Malaysian tourism association as a sustainable tourist attraction. The first jump from the Kuala Lumpur Tower in 1999 was soon followed by the world's first BASE jumping competition in 2001. This innovative event catapulted Malaysia's reputation as an extreme tourism destination amongst the international BASE community. In 2006, the event expanded to include five buildings in five Malaysian states. The competition, called the Merdeka BASE Circuit, sees international BASE jumpers travel around Malaysia for nearly a month, jumping from various iconic buildings (www.kltowerjump.com/sponsors.html) (Brymer & Houge Mackenzie, 2015, p. 131).

The Malaysian government has used BASE jumping events to actively improve tourist–host interactions and host attitudes towards extreme sports and international tourists. These interactions have resulted in hosts developing a deeper understanding of BASE jumping participant motivations, and a realization that participants are ordinary people (Tengku Adlin, Chairman of the Sabah Tourism Board, personal communication, November 2008; in Brymer & Houge Mackenzie, 2015, p. 131). Due to local community benefits, the Malaysian government now considers extreme tourism an integral part of their adventure tourism offerings (ranging from soft, medium, hard, to extreme) (TengkuAdlin, Chairman of the Sabah Tourism Board, personal communication, November 2008; in Brymer & Houge Mackenzie, 2015). According to Gary Cunningham, the Merdekaevent organizer, host–tourist interactions are promoted to instigate new ways of thinking in local communities (personal communication, July 2013; in Brymer & Houge Mackenzie, 2015). Based on Malaysia's success, other countries in Asia, the USA, Europe, and the Middle East have developed similar BASE jumping tourism initiatives.

Mountaineering tourism has also positively impacted remote communities that are normally inaccessible for mainstream tourists. These benefits include improvements in infrastructure, education, health and economic growth, as well as the increased exchange of ideas, and worldviews. Mountaineering in Nepal is directly responsible for social and community enhancement programs that transform hosts socially, economically, and psychologically (Sharma, 2009; in Brymer & Houge Mackenzie, 2015, p. 132). Hence, extreme sports, such as mountaineering, offer transformation opportunities for host communities beyond standard economic indicators (Brymer & Houge Mackenzie, 2015, p. 132).

Conclusion

Extreme sport or high-risk sport is one of the fastest-growing areas of sporting activities in this century, and because of its nature, it has piqued the interest of the media all over the world. The different reports also show that extreme sports participants have been considerably exceeded over the past two decades. However, in the context of sports science, its definition must be completely clear and linguistically accurate, and free of media-suggested terminology (Cohen et al., 2018).

Sports differ in terms of activity duration and intensity leading to different interaction effects on behavior. For example, a mountaineering trip might take weeks, exposing the individual to prolonged periods of environmental uncertainty, whereas other sports such as BASE jumping, might only take seconds. Another finding, questioning the idea that action and adventure sports (AAS) are synonymous with youth sports or subcultures, is that participants represent a broad demographic, including males and females of various age ranges and education and income levels (Creyer, Ross, & Evers, 2003; in Immonen et al., 2017). Each sport has its unique history and development patterns (Wheaton, 2008; in Immonen et al., 2017). One potential difficulty in categorizing a specific sport, or a group of sports as a single entity (i.e., as 'extreme'), could be that distinguishing characteristic of participation styles and the role of the interactions between individual characteristics of participants and varying performance environments are overlooked (Immonen et al., 2017).

Motivation is thus a complex process involving both cognitive and implicit processes which play a part in the potential survival value of the human-nature process (Schweitzer, Glab & Brymer, 2018, p. 2). The body is the source, medium, and outcome for the thrill and pleasure. The body is often put at considerable risk in extreme sport. Extreme level activities involve higher skill, focus, and risk. References to the importance of mastery and skills suggest that the experience of taking part in extreme sport requires discipline and structured learning. It demands commitment and it calls for considerable investment of resources such as time and energy as well as money on the part of the participant (Willig, 2008, p. 696).

While studying extreme sport, scholars have shed light on various theories such as lifeworld approach, noema and noesis (Schweitzer & Brymer 2017). In the context of nature human relationship, Schweitzer, Glab & Brymer (2018) have discussed on several theories such as Biophilia, Attention restoration theory (ATR), Stress reduction theory (SRT), Place attachment theory and Psychoanalytic theory developed by various scholars. Apart from these theories, Hungenberg et al. (2014) with Brymer (2010) have discussed on various motivational concepts such as sensation seeking, edgework, big 'T' and small 't' and platue experiences. Eudaimonia and hedonism, humility and courage, wellbeing and wellness, forgetting of the self and overcoming fear of death including four C's model (Challenge, Confidence, Commitment and Control) are also part of the study carried out by Houge Mackenzie and Brymer (2018), Brymer (2009), Brymer and Grey (2009), Brymer and Oades (2009), Booth and Thorp (2007), Clough et al. (2016).

Extreme sports are also more exposed to natural and extraordinary physical and mental difficulties such as speed, depth, or natural forces. Furthermore, a poor outcome is more likely to result in the participant's injury or death than a successful one in a popular sport. As a result, it is proposed that incidences are the distinguishing elements that distinguish extreme sports from other activities such as adventure sport, alternative sport, and so on. The extreme sport participants directly relate their experiences to positive personal changes.

In the positive psychology literature, wellbeing has generally been approached from two distinct perspectives: hedonism and eudaimonia. Hedonic well-being consists of pleasure, positive emotions, and avoidance of pain (e.g., Waterman, Schwartz & Conti, 2008; in Houge Mackenzie & Brymer, 2018). Conversely, Eudaimonic wellbeing encompasses meaning, purpose, optimal functioning, self-realization, and flourishing (Huppert & So, 2013; Ryan & Deci, 2011; in Houge Mackenzie, 2018). While connecting these approaches, Huta and Ryan (2010; in Houge Mackenzie & Brymer, 2018) argued that the pursuit of eudaimonic wellbeing results in more complete and meaningful life and fosters a more stable and enduring hedonism happiness. Eudaimonic benefits have been shown to stem directly from the immediate satisfaction of basic psychological needs for autonomy, competence, and relatedness (Ryan, Huta, & Deci, 2013; in Houge Mackenzie & Brymer, 2018). As a result, the study found that extreme sports had a considerable positive influence on all aspects of an individual's life. Overall, this study has refocused attention on the parts of extreme sport comprising the larger field, recognizing the elements extreme sport scholarship remain nuanced and worthy of research. Extreme sport as motivation leads to travel, to be in place, to meet people, to be participant of an activity, to interact with nature and expecting the outcome of risk and uncertainty with plateau experience. This is niche market and niche tourism.

References

Adams, T.E., Holland, J., & Ellis, C.(2015). *Autoethnography: Understanding Qualitative Research,* New York: Oxford University Press.

Booth, D., & Thorpe, H. (2007). *Berkshire Encyclopedia of Extreme Sports*. Berkshire Publishing Group.

Breivik, G.(2010).Trends in adventure sports in a post -modern society, *Sports in Society*,13 (2), 260-273 doi:10.1080/17430430903522970

Brotherton, B.(2010). *Researching Hospitality and Tourism*, London: Sage.

Brymer, E. & Gray, T. (2009). Dancing with nature: Rythm and Harmony in extreme sport participation. *Journal of Adventure Education and Outdoor Learning,* 9 (2),135-149.

Brymer, E. & Feletti, F.(2019). Beyond risk: The importance of adventure in the everyday lifeof young people. *Annals of Leisure Research* ,1-18.doi:10.1080/1174 5398.2019.1659837

Brymer, E. & Schweitzer, R. (2017). *Phenomenology and the Extreme Sport Experience,* London: Routledge.

Brymer, E.& Schweitzer, R.(2012).Extreme sports are good for your health: A phenomenological understanding of fear and anxiety in extreme sport. *Journal of Health Psychology*,18(4), 477-487.doi:10.1177/1359105312446770

Brymer, E. (2005). *Extreme dude: A phenomenological exploration into the extreme sport experience.* An Unpublished Ph.D Dissertation, Submitted to the University of Wollongong, Wollongong,http://ro.uow.edu.au/theses/379

Brymer, E. (2009). Extreme sports as a facilitator of eccentricity and positive life changes. *World Leasure Journal*, 1,47-53.

Brymer, E. (2010). Risk taking in extreme sports: A phenomenological perspective. *Annals of Leisure Research*, 13(1-2), 218-238. doi:10.1080/11745398.2010.9686845

Byrmer, E. G. (2009). The role of extreme sports in lifestyle enhancement and wellness. In *Proceedings of the 26th ACHPER International Conference: Creating Active Futures*, 8-10 July 2009, Queensland University of technology, Brisbane, Queensland.

Brymer, E., Downey, G.,& Gray, T. (2009). Extreme sport as a precursor to environmental sustainability. *Journal of Sport & Tourism*,14 (2-3),193-204.

Brymer, E. & Houge Mackenzie,S.(2015).The impact of extreme sports on host communities' psychological growth and development. In Reisinger, Y (Ed.), *Transformational Tourism: Host Perspectives* (pp.129-140),Cab International.

Brymer, E., Cuddihy, T.F., & Sharma-Brymer, V. (2010).The role of nature- based experiences in the development and maintainable of wellness. *Asia-Pasific Journal of Health, Sport and Physical Education.*1(2), 21-28.

Brymer, E. & Oades, L.(2009).Extreme sports: A positive transformation in courage and humility. *Journal of Humanistic Psychology*, 49(1), 114-126.

Brymer, E., & Gray, T. (2009). Dancing with nature: rhythm and harmony in extreme sport participation. *Journal of Adventure Education & Outdoor Learning, 9(2), 135–149.* doi:10.1080/14729670903116912

Buckley, R. (25 February,2015). Autoethnography helps analyse emotions. *Frontiers in Psychology*, 6.doi:10.3389/fpsyg.2015.00209

Buckley, R. C. (16 December, 2015). Adventure Thrills are Addictive. *Frontiers in Psychology*, 6. doi:10.3389/fpsyg.2015.01915

Buckley, R. C. (2018). To Analyze Thrill, Define Extreme Sports. *Frontiers in Psychology,* 9. doi:10.3389/fpsyg.2018.01216

Capocchi, A., Vallone, C., Pierotti, M., Amaduzzi, A. (2019). Overtourism: A literature review to assess implications and future perspectives. *Sustainability*, 11(12), 3303. doi:10.3390/su11123303

Castanier, C., Scanff, C. L., & Woodman, T. (2010). Who Takes Risks in High-Risk Sports? A Typological Personality Approach. *Research Quarterly for Exercise and Sport*, 81(4), 478–484.

Clough, P., Houge Mackenzie, S., Mallabon, L., & Brymer, E. (2016). Adventurous Physical activity environments: A mainstream intervention for mental health. *Sports Medicine*, 46(7), 963-967.doi:10.1007/s40279-016.0503-3

Coakley, J. (2011). Youth Sports: What Counts as ''Positive Development?. *Journal of Sport and Social Issues*, 35(3), 306–324. doi:10.1177/0193723511417311

Celsi, R.L., Rose, R.L. & Leigh, T.W.(1993).An exploration of high-risk leisure consumption through skydiving. *Journal of Consumer Research*, 20,1-23.

Cohen, R., Baluch, B., & Duffy, L. J. (2018). Defining Extreme Sport: Conceptions and Misconceptions. *Frontiers in Psychology*, 9. doi:10.3389/fpsyg.2018.01974

Collins, L., & Brymer, E. (2018). Understanding nature sports: a participant centred perspective and its implications for the design and facilitating of learning and performance. *Annals of Leisure Research*, 1–16. doi:10.1080/11745398.2018.1525302

Craig, P.(2008) Sport and modernity: An introduction to the sociology of sport.In Craig, P. & Beedie, P. (Eds.) *Sociology of Sport* (pp.8-26),Learning Matters.

Davidson, L. (2008). Tragedy in the adventure playground: Media representations of mountaineering accidents in New Zealand. *Leisure Studies*, 27 (1),3-19.http://do.doi.org/10.1080/02614360701240972

Ellis, C., Adams, T. E., & Bochner, A. P. (2010). Autoethnography: An Overview. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 12(1). https://doi.org/10.17169/fqs-12.1.1589

Figoeroa-Domecq, C. & Segovia-Perez, M. (2020). Application of a gender perspective in tourism research: A theoretical and practical approach. *Journal of Tourism Analysis*, DOI:10.1108JTA.02.2019-0009

Filep, S. Klint, L. M., Dominey-Howes, D, & DeLacy,T. (2013).Discovering what matters in a perfect day: A study of well- being of adventure. In Taylor,S., Varley, P.,& Johnston, T.(Eds.) *Adventure Tourism: Meanings, Experience and Learning* (pp.33-46), London: Routledge.

Gilchrist, P., & Wheaton, B. (2017). The social benefits of informal and lifestyle sports: a research agenda. *International Journal of Sport Policy and Politics*, 9(1), 1–10. doi:10.1080/19406940.2017.1293132

Giorgi, A. (1997). The theory, practice,and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology*, 28 (2),235-260.

Gomez, A. T., & Rao, A. (2016). Adventure and Extreme Sports. *Medical Clinics of North America*, 100(2), 371–391. doi:10.1016/j.mcna.2015.09.009

Grant, M.J. & Booth, A. (2009). A typology of reviews: An analysis of 14 review types and associated methodologies. *Health Information and libraries Journal,* 26, 91-108.

Helms, M. (1984). Factors Affecting Evaluations of Risks and Hazards in Mountaineering. *Journal of Experiential Education*, 7(3), 22–24. doi:10.1177/105382598400700306

Shahabi, Z., & Rassi, F. (2015). Husserl's phenomenology and two terms of Noema and Noesis. *International Letters of Social and Humanistic Sciences.* 53, 29-34. https://doi.org/10.18052/www.scipress.com/ILSHS.53.29

Holden, A. (2008). *Environment and Tourism* (2nd ed.). London: Routledge.

Houge Mackenzie, S. (2015). Mountaineering tourism experience and the protective frame. In Musa, G.,Higham,J.,& Thompson-Carr,A. (Eds.) *Mountaineering Tourism* (pp.186-197),New York:Routledge

Houge Mackenzie, S., & Brymer, E. (2018).Conceptualizing adventurous nature sport: A positive psychology perspective. *Annals of Leisure Research*, 1–13. doi:10 .1080/11745398.2018.1483733

Hungenberg, E., Goulding, J., & Daly, S. (2014). An examination of sociological factors predicting skiers' skill, participation frequency, and spending behaviour. *Journal of Sport and Tourism*, 18(4), 313-336.

Immonen, T., Brymer, E., Orth, D., Davids, K., Feletti, F., Liukkonen, J., & Jaakkola, T. (2017). Understanding Action and Adventure Sports Participation—An Ecological Dynamics Perspective. *Sports Medicine - Open*, 3(1). doi:10.1186/ s40798-017-0084-1.

Kakkori, L. (2009). Hermeneutics and phenomenology problems when applying hermeneutic phenomenological method in educational qualitative research, *Paideusis*, 18(2), 19-27. http://dx.doi.org/10.7202/1072329ar.

Krein, K. (2008). Sport, nature and worldmaking. *Sport, Ethics and Philosophy*, 2(3), 285–301. doi:10.1080/17511320802475713

Kunwar,R.R. (2013).Sport tourism: Understanding the concept, recognizing the value. *The Gaze Journal of Tourism and Hospitality*.5(1),13-42.

Laurendeau, J. (2008). "Gendered Risk Regimes": A theoretical consideration of edgework and gender. *Sociology of Sport Journal*, 25(3), 293-309. doi:10.1123/ ssj.25.3.293

Lyng, S. (1990). Edgework: A Social Psychological Analysis of Voluntary Risk Taking. *American Journal of Sociology*, 95(4), 851–886. doi:10.1086/229379

Maphanga, P.M. & Henama, U.S.(2019).The tourism impact of Ebola in Africa: Lessons on crisis management. African *Journal of Hospitality, Tourism and Leisure*,8(3),1-13.

Monasterio,E. & Brymer, E. (2015).Mountaineering personality and risk. In Musa, G., Higham, J.H., & Thompson-Carr,A.(Eds.) *Mountaineering Tourism* (pp.198-210), New York: Routledge.

Puchan, H. (2004). Living "extreme": Adventure sports, media and commercialisation. *Journal of Communication Management*, 9(2), 171–178. doi:10.1108/13632540510621588

Pettigrew, S. (2000). Ethnography and Grounded Theory: a Happy Marriage? *ACR North American Advances*.

Rassi, F., & Shahabi, Z. (2015).Husserl's phenomenology and two terms of Noema and Noesis. *International Letters of Social and Humanistic Sciences*, 53, 29-34.

Repko, A.F. (2012). Interdisciplinary research: *Process and Theory,* London: Sage.

Saxena, K., & Dey, A. (2010). Treks'n rapids: Identifying motivational factors for adventure sports. *Journal of Economics and Business Administration*, 2(2), 172-178.

Scheyvens, R.A., Movono, A., & Auckram, S. (2021). Pacific peoples and the pandemic: exploringmultiplewell-beingsofpeopleintourism-dependentcommunities.*Journal of Sustainable Tourism*. DOI: 10.1080/09669582.2021.1970757

Smith,M.& Puczkó, L.(2009). *Health and Wellness Tourism*, Oxford: Butterworth-Heinemann.

Schweitzer, R. D., Glab, H., & Brymer, E. (2018). The Human–Nature Experience: A Phenomenological-Psychoanalytic Perspective. *Frontiers in Psychology*, 9. doi:10.3389/fpsyg.2018.00969

Sparks, A.C. (2000). Autoethnography and narratives of self: Reflections on criteria in action. *Sociology of Sport Journal*, 17, 21-43

Sutton, J. (Janaury,2018). Adventure is an important part of being human. *The Psychologist*,31,60-61

Thorpe, H. (2016). Action Sports, Social Media, and New Technologies: Towards a Research Agenda. *Communication & Sport*, 5(5), 554–578. doi:10.1177/2167479516638125

Thorpe, H., & Rinehart, R. (2010). Alternative sport and affect: non-representational theory examined. *Sport in Society*, 13(7-8), 1268–1291. doi:10.1080/17430431003780278

Thorpe, H., & Wheaton, B. (2011). "Generation X Games", Action Sports and the Olympic Movement: Understanding the Cultural Politics of Incorporation. *Sociology*, 45(5), 830–847. doi:10.1177/0038038511413427

Turner, C., McClure, R., & Pirozzo, S. (2004). Injury and risk-taking behavior-A systematic review. *Accident Analysis & Prevention*, 36(1), 93–101. doi:10.1016/s0001-4575(02)00131-8

Van Bottenburg, M., & Salome, L. (2010). The indoorisation of outdoor sports: an exploration of the rise of lifestyle sports in artificial settings. *Leisure Studies*, 29(2), 143–160. doi:10.1080/02614360903261479

Van Heezik, Y., & Brymer, E. (2018). Nature as a commodity: What's good for human health might not be good for ecosystem health. *Frontiers in Psychology*, 9. doi:10.3389/fpsyg.2018.01673

Van Rheenen, D., Cernianu, S., & Sobry, C. (2016). Defining sport tourism: A content analysis of an evolving epistemology. *Journal of Sport & Tourism*, 21 (2), 75-93. d oi:10.1080/14775085.2016.1229212

Willig, C. (2008). A phenomenological investigation of the experience of taking part in 'Extreme Sports'. *Journal of Health Psychology*, 13(5), 690-702. doi:10.1177/1359105307082459

Williams, P. (2010) Educational tourism: Understanding the concept, Recognizing the value. Retrieved from http://www.insight.org.uk/articleitem. aspx?title=Educational%20Tourism:%20Understanding%20the%20 Concept,%20Recognizing%20the%20Value.