

THE EXPERIENCE OF FEAR IN HIGH-RISK SPORT

Mark E. MIESEL*¹ & Justus R. POTGIETER**

*Adventure Peaks Expeditions, Colorado Springs, United States of America

**Department of Sport Science, Stellenbosch University, Stellenbosch
Republic of South Africa

ABSTRACT

The purpose of this study was to investigate the experience of fear as described by athletes who participate in physically dangerous sports. A phenomenological research design was employed. The data were obtained from extensive interviews with twelve participants representing six countries: South Africa, Namibia, Zimbabwe, The Czech Republic, The United States and Canada. Participants were high level competitors in gymnastics, white-water kayaking, ski racing and rock climbing. An additional quantitative measure, Zuckerman's Sensation Seeking Scale, was used to complement the interview findings. The results were presented in the delineation of 26 meaning cluster groups and seven themes. High-risk sport participants indicated frequent experiences with "peak" and "ultimate" athletic moments including physiological changes during all stages of participation. The athletes used a variety of mental strategies to cope with perceived danger that included an increase in focus on technical aspects, imagery and denial.

Key words: High-risk sport; Fear; High-level competitors; Phenomenology.

INTRODUCTION

The topic of fear in sports has been greatly ignored. Many researchers make reference to fear when discussing anxiety, but fail to make a clear distinction between the two terms. When Freud (1924) described a specific reaction, such as escape combined with a sense of terror in the presence of a specific object, he used the word *furcht* (fear). He believed anxiety was separate from fear and was created from the submergence of unconscious sexual desires. According to Freud, anxiety is an attempt to control instinctive energy by using personal defence mechanisms. Other authors have noted the importance of threatening stimuli in their definitions of fear versus anxiety (Cattell & Scheier, 1961; Izard, 1972; Lynch *et al.*, 1973). Hackfort and Schwenkmezger (1989) describe individuals in situations of fear as having awareness of the threatening stimuli. Persons who are experiencing anxiety are unaware of the threatening stimuli. Epstein (1972) focuses on the ability to avoid conflict as a means of comparing anxiety to fear. In situations of fear, the perceived threat is known and can therefore cause a specific action. Anxiety alone cannot produce specific avoidance behaviours.

In the current study, the term fear refers specifically to the fear of physical injury. An extensive review of the literature produced only one article directly related to fear of physical

¹ This article is derived from the first author's doctoral dissertation submitted to Stellenbosch University.

injury in sport. Athletes confront dangerous circumstances on a regular basis. Some respond to these situations with calmness, certainty, and confidence. Others panic or lose focus causing a decline in performance or increased risk of injury. The purpose of this study was to gain insight and understanding on fear from the individual perspective of high-risk sport participants. A secondary objective was analysis of the personality dimension *sensation-seeking* (Zuckerman, 1979) as it relates to high-risk sport participation.

PURPOSE OF THE RESEARCH

The primary intention with this research was to understand the existential qualities of fear and to comprehend the meaning of the sport experience as it is perceived by participants in four high-risk sport codes namely, ski racing, rock-climbing, white-water kayaking and gymnastics. Thus, the overall question created was "what is the high-risk athlete's experience of *embracing fear*?"

METHOD

Participants

The participants were eight (n=8) male and four (n=4) female athletes in four different high-risk sports. The athletes participated in downhill ski racing, rock-climbing, white-water kayaking and gymnastics.

TABLE 1. RESEARCH PARTICIPANTS

Sport	Level	Sex	Age	Nationality
Ski racing	International	M	31	USA
	International	F	32	Canada
	National	M	27	USA
Rock-climbing	National	F	33	Namibia
	National	M	36	South Africa
	National	M	34	South Africa
Kayaking	World #1	F	42	Czech Rep.
	National	F	28	Zimbabwe
	World #1	M	42	USA
Gymnastics	Olympian	M	26	USA
	International	M	16	South Africa
	International	M	18	South Africa

The athletes were from six nations. Four of the participants were South African, four from the United States of America, one Namibian, one from Zimbabwe, one Canadian, and one from the Czech Republic. The athletes ranged in age from 16 to 42 with a mean age of 30.5 years. All participants had attained mastery of their sport and previously represented their countries at a national level. One participant was a national champion, one an Olympian, and

two were world champions in their respective sports. The athletes had varying degrees of education and socio-economic histories. The participants were referred by friends, colleagues and sport contacts.

Research design

The qualitative method of phenomenology was implemented in the current study. In order to explicate the existential phenomenon of "fear", it was necessary to adopt a research method inclusive of the subjective reality of human experience. According to Farber (1966), phenomenology is a process-oriented discipline with its goal the uncovering of the essential features of consciousness as opposed to measuring factual content. The phenomenological researcher focuses on depicting the experience from the individual's perspective through an in-depth interview. The key components of phenomenological methodology as described by Giorgi (1970) include: (1) concern with the foundation aspects of the phenomenon; (2) concern with the qualitative dimension of human experience; (3) explication of the phenomenon within the context in which it appears; (4) concern with investigating intentional relations; (5) fidelity to the phenomenon as it is lived; and (6) presence of an involved scientist.

Procedures for acquisition of data

A participant release agreement between the researcher and the participant was signed prior to the interview. Eleven main aspects outlined by Kvale (1996) were used as a guide for an effective qualitative interview. The participants were provided with a list of the interview questions to facilitate the interview process. The participants were asked to select the desired location, time and setting for the interview. Each interview lasted 1-2 hours. The interview was conducted face-to-face and tape recorded for later transcription. An open-ended approach was used, allowing the participants to expound on ideas and add spontaneous and creative input.

Attention was given to the reliability and validity of the findings. The overall validity of findings was determined by the researcher's ability to remain neutral, honest and credible. A measure of confirmability was applied by means of a peer review to ensure internal validity. The review consisted of an analysis of the basic meaning unit clusters and subsequent agreement with the researcher in terms of the delineation of themes. The researcher and peer had an agreement rate of 80%. A follow-up interview supported internal consistency reliability. All participants were in agreement that the textural-structural synthesis matched their unique experience of "embracing fear".

A quantitative measure, Zuckerman's *Sensation Seeking Scale (SSS)* (Zuckerman *et al.*, 1964), was applied with the intention to complement the core interview information. The questionnaire was distributed before the interview where adequate time was allowed to answer 40 multiple choice items. The SSS consists of five sub-themes: Thrill and Adventure Seeking Scale (TA); Experience Seeking Scale (ES); Disinhibition Scale (DS); Boredom Susceptibility Scale (BS); and General Scale (GS). The sub-scales TA and the GS are particularly relevant to the focus in this study.

Analysis of data

The major procedures applied included epoch, phenomenological reduction, eidetic variation, and synthesis. *Epoch* is a process of suspending past beliefs, or setting aside one's usual assumptions about life (Ihde, 1977). The challenge here is to view the phenomenon with an openness and freshness, allowing it to spontaneously reveal itself in an uncontaminated, pure form. According to Husserl (1964) *phenomenological reduction* consists of five distinct phases: bracketing, horizontalisation, delimiting, clustering of basic units, and formulating a fundamental-textural description (themes). The latter provides content used to determine the "essence" of the phenomenon. *Eidetic variation* is a process of observing the phenomenon from different perspectives and also incorporates recognising the salient qualities from the clusters of basic meaning units and creating core themes. The grouping of core themes from creative analysis of the basic meaning units is referred to as the fundamental-structural description. *Synthesis* involves combining the core textural and structural elements into one statement which is comprehensive and explicates the whole of the experience.

RESULTS

Twenty-six basic meaning units or clusters emerged using verbatim quotes extracted from the participant interviews. The meaning CLUSTERS are as follows:

1. Use of motivational self-talk in fearful situations
2. Sensation of flowing easily through athletic movements
3. Vivid recall of fearful experience
4. Focus on technical aspects of sport to compensate for fear
5. Sense of time is altered
6. Denial about intrinsic dangers of sport
7. Focus on relaxation to cope with fear
8. Absence of fear during peak performances
9. Heightened arousal precedes participation in high-risk sport
10. Absence of pain or discomfort during participation in high-risk sport
11. Sport participation brings great satisfaction to the athlete
12. Physiological changes occur during participation
13. Total absorption into activity
14. Alterations in visual perspective
15. Alterations in auditory perspective
16. A feeling of high or euphoria
17. Perceive sport participation as contributing to personal growth
18. Experience is different than participation in other sports
19. Concerned about others' perceptions of the sport
20. Recognition of subtle aspects as dangerous
21. Difficulty regaining confidence after highly fearful situation in sport
22. Experience had spiritual element
23. Deep connection and emergence with equipment or environment
24. The use of visualisation to cope with fear
25. Motivated by personal need for stimulation and change
26. Demonstrated creative capacity in life outside of sport

These twenty-six meaning cluster units were further delineated resulting in the emergence of seven major themes in this study. The following are the THEMES or core findings:

1. High-risk sport participants use a variety of mental strategies to cope with the intrinsic dangers of the sport.
2. Participants in high-risk sports report having “peak” experiences and “ultimate” athletic moments.
3. High-risk athletes have misconceptions and denial about the intrinsic danger of the activities.
4. Participants in high-risk sports undergo physiological changes before and during the activities.
5. The experience is satisfying and contributes to the overall personal growth of the participant.
6. High-risk athletes express the need for stimulation, change and creativity.
7. High-risk athletes view their sport as being unique and misunderstood by the general population.

Sensation Seeking Scale form V (SSS)

To complement the information collected from the core interviews, the participants were administered a quantitative instrument, the *Sensation Seeking Scale form V* (SSS). Sensation seeking is described as the willingness to take physical, social or psychological risks for the pure sake of experience (Zuckerman, 1979). The results obtained from the SSS supported the core interview findings. All of the participants scored above the mean on *Thrill and Adventure Seeking* (TA), demonstrating an overall willingness to take physical risks. Ski racers had the highest overall sensation seeking scores as indicated by the *General Scale* (GS) and the highest TA scores. The climbers and kayakers in this sample were very similar on all the SSS sub-scales and had moderate overall sensation seeking tendencies and above average TA scores. Gymnasts had the lowest general SS scores in this sample. However, TA scores were still above the mean for gymnasts.

An interesting note on *sensation seeking* is that although all participants scored above the mean on TA, the overall measure for general SS tendencies was average. This indicates that although high-risk sport participants may be more willing to take physical risks, they are not necessarily more willing to take psychological or social risks.

DISCUSSION

Unique findings in the research

In the delineation of the second theme, subtle differences began to emerge between the current research and previous known studies on fear. Previous research has supported the notion that athletes experience “peak” moments in sport (Orlick, 1995). The occurrence of “peak” athletic moments among the participants in this study was high. All participants reported at least one “peak” moment in their athletic career with seven participants having multiple “peak” athletic moments. Two of the participants reported having these “peak” or “ultimate” moments on a regular basis. Alessi (1994) found that an important aspect of

“peak” experience in sport is the absence of fear or anxiety during the moment. Theme two of the current study supports this finding.

These results indicate a possible correlation between perceived “danger” and the occurrence of “peak” athletic moments. The current research found differences in the perspective of “fear” between high-risk athletes and athletes who participate in low or moderate-risk sports. High-risk athletes have a complicated perspective on “fear”. Although this population engages in inherently dangerous activity, they also tend to express overt denial of the danger. Is this denial really a failure to recognise the risks involved? Perhaps it is a built-in coping mechanism allowing the continued engagement in dangerous activities. Future research could potentially reveal the validity of either hypothesis.

A second unique finding emerged in the delineation of theme six. Athletes involved in high-risk sport express the need for stimulation, change, and creativity. In a classroom study, Pufal-Struzik (1996) found that students who had higher sensation-seeking tendencies were more creative in problem-solving tasks. The current study found a potential correlation between sensation seeking and creativity in athletics. Eleven of the twelve participants in the current study expressed an in-depth investment and interest in creative activities beyond sport. The high-risk sport participants practised music, art, sculpture, poetry and other creative writing tendencies. One participant, a white water kayaker brought a personal portfolio of his artwork to the interview. These findings indicate a potential relationship between creativity and high-risk sport. Eysenck (1956) provides a framework for understanding this relationship. In his theory on extroversion, Eysenck (1956) proposed that extroverted individuals had decreased sensitivity in the brain and an increased tolerance for pain and external stimuli. Furthermore, extroverts compensate by expressing themselves through overt channels. Creative tendencies can be perceived as expression of oneself through overt means. Thus, the potential relationship between creativity and high-risk sport participation is further substantiated.

An additional finding in the current research emerged in the delineation of theme seven. High-risk athletes perceive their sport as being unique and misunderstood by the general population. It is apparent that the element of “fear” inherent in the activity separates high-risk athletes from other sport participants. Athletes in the current study expressed disappointment when asked about the perceived public perception of their respective sports. They described their disciplines as being continually labelled and negatively stereotyped. Generally, participants were concerned about the “narrow” public perception of high-risk sport. These feelings were incongruent with personal descriptions of their respective sports as dynamic, vivacious, diverse and exciting. Ten of the twelve participants reported feelings of disappointment, sadness, and frustration regarding the discrepancy between public and personal perception regarding high-risk sport.

IMPLICATIONS FOR FUTURE RESEARCH

The results of this study are a stepping-stone for numerous potential research topics. Among the most promising areas is further analysis between creativity and high-risk sport. Creativity proved to be a definitive characteristic of high-risk athletes as found in theme six. The creative choices of the athletes, however, were illustrated outside of the scope of sport. Future research could examine the direct relationship between creativity and sport. Another

possibility is the examination of creative coaching techniques in coping with fear among athletes. What is the relationship between IQ, creativity and high-risk behaviour?

A second suggestion for future research could address the use of cognitive strategies in high-risk sports. A unique contribution in the current study was the use of specific cognitive strategies in fearful situations as delineated in theme one. This strategy involves converting one's focus from the danger of the moment to the technical aspect of converting a skill. For example, a rock climber will cognitively map or visualise a route while climbing, thus deflecting personal focus away from the inherent danger of falling. Downhill skiers and white water kayakers used similar cognitive mapping strategies. Future research could examine the relationship between cognitive strategies and coping with fear.

A third area for potential research concerns public perception of high-risk sport participation. The use of a traditional, quantitative method may be useful in this area. For example, a simple survey could compare opinions on high-risk sport between participants and non-participants.

REFERENCES

- ALESSI, L. (1994). "Breakaway into the zone": A phenomenological investigation from the athlete's perspective. Unpublished doctoral dissertation. Detroit, MI: The Union Institute.
- CATTELL, R.B. & SCHEIER, J.H. (1961). *The meaning and measurement of neuroticism and anxiety*. New York, NJ: Arnold.
- EPSTEIN, S. (1972). The nature of anxiety with emphasis on its relationship to expectancy. In C.D. Spielberger (Ed.), *Anxiety*, 2 (292-338). London: Academic Press.
- EYSENCK, H.J. (1956). The inheritance of extroversion-introversion. *Acta Psychologica*, 12: 95-110.
- FARBER, M. (1966). *The aims of phenomenology: The motives, methods, and impact of Husserl's thought*. New York, NJ: Harper & Row.
- FREUD, S. (1924). *The economic problem of masochism*. London: Hogarth Press.
- GIORGI, A. (1970). *Psychology as a human science: A phenomenologically based approach*. New York, NJ: Harper & Row.
- HACKFORTH, D. & SCHWENKMEZGER, P. (1989). Measuring anxiety in sports: Perspectives and problems. In D. Hackfort & C.D. Spielberger (Eds.), *Anxiety in sports: An international perspective* (55-74). Washington, DC: Hemisphere.
- HUSSERL, E. (1964). *The idea of phenomenology*. The Hague (Netherlands): Nijhoff.
- IHDE, D. (1977). *Experimental phenomenology*. New York, NJ: Paragon.
- IZARD, C.E. (1972). Anxiety: A variable combination of interacting fundamental emotions. In C.D. Spielberger (Ed.), *Current trends in theory and research*, 2 (55-106). New York: Academic Press.
- KVALE, S. (1996). The qualitative research interview: A phenomenological and hermeneutical mode of understanding. *Journal of Phenomenological Psychology*, 14(2): 171-196.
- LYNCH, S.; WATTS, W.A. & CALLOWAY, C. (1973). Appropriateness of anxiety and drive for affiliation. *Journal of Research in Personality*, 7: 71-77.
- ORLICK, T. (1995). *In pursuit of excellence: How to win in sport and life through mental training*. Champaign, IL: Leisure Press.

- PUFAL-STRUZIK, I. (1996). Demand for stimulation in young people with different levels of creativity. *High Abilities Studies*, 7(2): 145-150.
- ZUCKERMAN, M.; KOLIN, E.A.; PRICE, L. & ZOOB, J. (1964). Development of a sensation-seeking scale. *Journal of Consulting Psychology*, 28: 477-482.
- ZUCKERMAN, M. (1979). *Sensation seeking: Beyond the optimal level of arousal*. Hillsdale, NJ: Erlbaum.

Prof. Justus R. Potgieter: Department of Sport Science, Stellenbosch University, Private Bag X1, Matieland, Stellenbosch 7602, Republic of South Africa. Tel.: +27 (0)21 808 4915, Fax.: +27 (0)21 808 4817, E-mail: jrp@sun.ac.za

(Subject editor: Prof. B.J.M. Steyn)