

**Peer-reviewed academic journal**

**Innovative Issues and Approaches in  
Social Sciences**

**IIASS – VOL. 10, NO. 3, SEPTEMBER 2017**

## **Innovative Issues and Approaches in Social Sciences**

IIASS is a double blind peer review academic journal published 3 times yearly (January, May, September) covering different social sciences: political science, sociology, economy, public administration, law, management, communication science, psychology and education.

| 2

IIASS has started as a Sldip – Slovenian Association for Innovative Political Science journal and is now being published in the name of CEOs d.o.o. by Založba Vega (publishing house).

### **Typeset**

This journal was typeset in 11 pt. Arial, Italic, Bold, and Bold Italic; the headlines were typeset in 14 pt. Arial, Bold

### **Abstracting and Indexing services**

COBISS, International Political Science Abstracts, CSA Worldwide Political Science Abstracts, CSA Sociological Abstracts, PAIS International, DOAJ.

### **Publication Data:**

CEOs d.o.o.

Innovative issues and approaches in social sciences

ISSN 1855-0541

**Additional information:** [www.iiass.com](http://www.iiass.com)

## PHYSICAL COURAGE IN HIGH- AND NON-RISK ATHLETES

Črtomir Bitenc<sup>1</sup>, Maša Serec<sup>2</sup>

| 57

### Abstract

Even though stimulation and sensation seeking, which are typical for high-risk athletes, have been closely linked to high physical courage, little is known about physical courage of high-risk athletes. The purpose of this study was to examine physical courage among high- and non-risk athletes. The convenience sampling was used to reach both groups of the athletes. An anonymous online questionnaire was sent to the Faculty of Sport, several sport clubs and online sport forums in Slovenia. A total of 101 high-risk and 79 non-risk athletes filled out The Physical Courage Questionnaire and The Social Desirability Scale. In addition, important demographic characteristics were obtained. Results showed that high-risk athletes have a higher level of physical courage ( $F=6.304$ ,  $p=0.013$ ), and that male athletes are physically more courageous than female athletes ( $F=4.353$ ,  $p=0.038$ ). The interaction between gender and the risk of a given sport discipline had a significant effect on physical courage ( $F=4.936$ ,  $p=0.028$ ): in the non-risk athlete group female athletes reported being less physically courageous than male athletes, whereas high-risk female athletes scored similarly high on the physical courage scale as high-risk male athletes. Implications and limitations of the research study are discussed.

**Keywords:** athletes; high-risk athletes; high-risk sports; gender differences; physical courage

**DOI:** <http://dx.doi.org/10.12959/issn.1855-0541.IIASS-2017-no3-art4>

---

<sup>1</sup> asst. Črtomir Bitenc, BA psychology, works as development - research associate at University Rehabilitation Institute, Republic of Slovenia. E-mail: [crtomir.bitenc@ir-rs.si](mailto:crtomir.bitenc@ir-rs.si) (corresponding author)

<sup>2</sup> Ph.d. Maša Serec, psychology, works at Ministry of Health of the Republic of Slovenia, Public Health Directorate, Ljubljana, Slovenia. E-mail: [masa.serec@gov.si](mailto:masa.serec@gov.si)

## **Introduction**

### **Physical courage**

Physical courage is a virtue that has been a topic of human thought since the Antiquity. Primarily, it was understood as a characteristic of a good soldier and was attributed mostly to male population (Lopez, O'Byrne, & Petersen, 2003). Later it was seen as a predisposition for self-confident and appropriate behaviour in fear arousing situations (Rorty, 1988).

Most recent definitions distinguish physical courage from moral and psychological courage, and describe it as voluntarily confronting a risky situation despite the fear arising from possible negative outcomes of the situation, such as severe physical injuries or even death (Lopez, et al., 2003; Putman, 2001; Rate, 2010). However, it is not clear yet, whether the courage is a characteristic of the person or a characteristic of the action. Some argue that courage is a stable personality trait (Peterson & Seligman, 2004; Shelp, 1984), others see it as an acute state (Goldberg & Simon, 1982; Rate, Clarke, Lindsay, & Sternberg, 2007) and some believe that both is possible (Lopez et al., 2010; Norton & Weiss, 2009; Pury & Starkey, 2010). Regardless of the definition, physical courage seems to have always been universally valued.

Additionally, studies show that physically courageous people, such as parachute jumpers, distinguished soldiers and detonators, are persistent in their actions and physiologically recover sooner from a demanding or dangerous situation, in which they perform courageous actions (Cox, Hallam, O'Connor, & Rachman, 1983; McMillan & Rachman, 1988; O'Connor, Hallam, & Rachman, 1985; Rachman, 1984, 2004). Moreover, the comparison between distinguished and non-distinguished soldiers showed that the former are physiologically more relaxed in stressful situations despite the fact that the subjective assessment of the experienced fear intensity was similar to the non-distinguished soldiers (Cox, et al., 1983; O'Connor, et al., 1985). Using fMRI, neurobiologists (Nili, Goldberg, Weizman, & Dudai, 2010) were able to find neurological correlates of the courageous behaviour. Their results emphasise the importance of a high sgACC (subgenual anterior cingulate cortex) activity in successful efforts to overcome ongoing fear. Authors conclude that there is a possibility of manipulating the brain activity to overcome fear and act courageously.

### **High-risk sports**

The main characteristic of high-risk sports is the high possibility of suffering severe injuries or even death during the activity (Breivik, 1995). The engagement in high-risk sports may therefore be considered as a courageous action, because it means to perform an action opposed to that promoted by the ongoing fear (Rachman, 2004). As obvious as it may seem, this association hasn't been tested yet.

Most researchers (Chirivella & Martínez, 1994; Cronin, 1991; Kerr, 1991; Rossi & Cereatti, 1993) dealing with high-risk sports found that high-risk athletes have a high need for stimulation, usually show a lower level of avoiding stimuli and have a desire for pleasant and intense feelings.

In a study on non-athletes, low-risk athletes and high-risk athletes, the latter showed highest levels of personality maturity and sensation seeking (Kajtna & Tušak, 2004). Personal maturity includes characteristics, such as conscientiousness, tidiness, accuracy, reliability, diligence and patience. High-risk athletes seem to be fully aware of the potential hazards and risks of their activity. Furthermore, they are able to adequately assess the risks of dealing with their sports (Zuckerman, 1994). It was found that high-risk athletes are characterized by high emotional stability, low inhibition and anxiety and that they experience low levels of stage fright. They are also considered to be open towards the outside world, sociable and extroverted (Tušak & Burnik, 2001).

In a study on high-risk athletes' lifestyle (Kavčič, 2006) they came to the conclusion that the major factor for engaging in high-risk sports is their prominent confidence in their own abilities. Moreover, he found that one of their most important values is health; dealing with high-risk sports therefore does not reflect athletes' indifference for their health and life. This indicates that the opinion of the general public about the blind and irrational exposure of high-risk athletes to danger (Rauter, 2008) is greatly mistaken.

In the only study to investigate courage in association with high-risk sports (Brymer & Oades, 2009), high-risk athletes reported high fear and extreme amounts of stress before and during their activity, which they manage to overcome successfully and proceed with the activity. They recognize and understand the risk and danger of their activity, and they overcome their fear by using their skills, technical knowledge and self-confidence. The participants also stressed that the adrenaline addiction can be fatal, because it has negative consequences on their focus and concentration, and could consequently cause serious injuries or even death. Although these findings are immensely interesting, it should be

noted that the authors of the study used a phenomenological method via unstructured interviews and that no measurement of physical courage in high-risk athletes was therefore possible.

The purpose of our study is to examine the trait of physical courage among high- and low-risk athletes. As high-risk sports demand at least some degree of overcoming the fear of possible negative outcomes, we expect high-risk athletes to be physically more courageous. Moreover, as courage positively correlates with masculinity (Muris, Mayer, & Schubert, 2010; Stets & Burke, 2000), we expect male participants to achieve higher scores on physical courage scale than females.

## **Methods**

### **Study design and Participants**

The convenience sampling was used to reach the athletes. An anonymous online questionnaire was sent to the Faculty of Sport, several sport clubs and online sport forums in Slovenia.

The inclusion criterion for high-risk athletes was their current engagement in one of the high-risk sports. High-risk sports were selected according to the literature review. Tomlinson (1996) divided high-risk sports into air (e.g. paragliding), land (e.g. climbing) and water sports (e.g. apnea diving). Stropnik (1997) categorized high-risk sports into i) direct death and danger challenging activities with no mistakes allowed (e.g. mountaineering); ii) entertaining and pleasure-giving borderline, unexpected, unpredictable and exciting activities (e.g. snowboarding); and iii) long lasting activities demanding endurance (e.g. ultra-marathon cycling). Breivik (1995) listed high-risk sports as follows: mountaineering, extreme kayaking, diving, ski jumping, downhill skiing, skydiving, paragliding, mountain biking, caving, snowboarding, motocross, car racing, motorboat racing and sledge racing.

The inclusion criterion for non-risk athletes was their current engagement in a non-risk sport. Non-risk sports were defined as all sports which were not selected as risk sports. A total of 180 athletes filled out the questionnaire. All participants have met the inclusion criteria. 125 were men (69%) and 55 were women (31%). The age of participants was between 18 and 51 years ( $M = 25.7$ ,  $SD = 6.73$ ). 101 (56%) were high-risk athletes and 79 (44%) were non-risk athletes.

## **Instruments and Measures**

### **Demographic and sports characteristics**

We devised questions to obtain information about the subjects' gender, age, sport they engage in, weekly amount of trainings (in hours) and

subjective risk assessment of their sport (from 1 – not dangerous at all to 10 – very dangerous).

The Physical Courage Questionnaire (Kristan, Petronio, Ulčar, Voljavec, & Zgaga, 2009). This questionnaire was developed in Slovenia to measure the expression of physical courage as defined by Woodard (Woodard & Pury, 2007), namely as a relatively stable personality trait of willingness to carry out actions which may be physically threatening. The questionnaire measures physical courage and not similar constructs, such as adventurism, altruism or the tendency towards risk behaviours. It consists of 30 items, which subjects assess on the 5-point Likert scale (from 1 – not true at all to 5 – totally true). Example items: “If I saw a child holding a lighted firecracker for too long, I would pull it out of his or her hands and throw it away”; “I would donate an internal organ or part of it despite the fact that the surgery may result in serious complications”; “Even though firewalking may be painful, I would take part”. The sum of all items indicates the extent to which the individual is prepared to confront the health- and/or life-threatening situations. Authors (Kristan, et al., 2009) reported a high reliability of the questionnaire; Cronbach’s Alpha was 0.86. The reliability of the questionnaire in our study was similarly high; Cronbach’s Alpha was 0.81.

### **The Social Desirability Scale (SDS) (Crowne & Marlowe, 1960)**

As physical courage is a universally cherished and highly desirable human virtue, we controlled for the possibility of the respondents overestimating their courage. The SDS scale was translated to Slovene for the purpose of her thesis by Renko (2008). It measures the tendency of thinking and behaving in a socially desirable manner. The scale consists of 33 items, such as “I never hesitate to go out of my way to help someone in trouble.” and “I like to gossip at times”. Respondents give “yes-no” answers with regards to whether they agree or disagree with the given statement. A sum of all 33 items represents the individual’s need for social approval. The scale has a high reliability; internal consistency was 0.88, and test-retest reliability (one-month interval) was 0.89, as reported by authors (Crowne & Marlowe, 1960).

### **Statistical analysis**

The analysis of covariance (ANCOVA) was used to establish possible effects of gender, age and risk of the sport on physical courage and social desirability. The Pearson’s correlation coefficient ( $r$ ) was calculated to test the correlation between physical courage and the tendency to give socially desirable answers. All analyses were done with statistical software SPSS 19.

**Results**

First, we categorized the participants to high- and non-risk athletes according to the high-risk sports categorizations from the literature (Breivik, 1995; Stropnik, 1997; Tomlinson, 1996). The categorization is presented in Table 1.

Table 1: Categorization of participants' sports according to the risk

High-risk sports	Non-risk sports
Apnea Diving	Aerobics
Canoeing	American Football
Caving	Archery
Climbing	Athletics – Running
Hang Gliding	Athletics – Triple Jump
Ice Cross Downhill	Basketball
Kite-boarding	Bossaball
Mountain biking – Cross Country	Dance – Cheerleading
Mountain biking – Downhill	Dance – Standard Dances
Mountain biking – Free ride	Fitness
Mountaineering	Football
Paragliding	Handball
Rock Climbing	Ice Hockey
Sea Kayaking	Inline Hockey
Ski Jumping	Lacrosse
Snowboarding	Martial Arts – Boxing
Sport Climbing	Martial Arts – Capoeira
Super-motocross	Martial Arts – Karate
White-water Canoeing	Martial Arts – Kickboxing
White-water Kayaking	Martial Arts – Savate
	Martial Arts – Taekwondo
	Martial Arts – Thai boxing
	Road Cycling
	Shooting
	Short track Speed Skating
	Skiing
	Table Tennis
	Triathlon
	Volleyball

Source: Authors' work

As seen from the Table 1, respondents were engaging in 20 different high-risk sport disciplines and 29 different non-risk sport disciplines. The subgroups of high- and non-risk athletes were heterogeneous according to the gender ( $\chi^2=14.96, p=.000$ ) and the age ( $t=-6.07$ ;

$p=.000$ ). There were significantly less female athletes in the high-risk group ( $N=19$ ; 23%) compared to the non-risk group ( $N=36$ ; 46 %). High-risk athletes were significantly older, with the average age of 28.0 ( $\pm 7.46$ ) years, than non-risk athletes, with the average age of 22.7 ( $\pm 4.07$ ) years.

Table 2: Age, physical courage and social desirability according to gender and risk of the athletes' sport

		<i>N</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
<b>Age</b>						
Non-risk athletes	male	43	19	37	23.51	4.306
	female	36	18	33	21.71	3.586
	total	79	18	37	22.69	4.071
High-risk athletes	male	82	18	51	28.15	7.664
	female	19	20	45	27.26	6.640
	total	101	18	51	27.98	7.459
<b>Physical courage</b>						
Non-risk athletes	male	43	82	140	113.77	12.474
	female	36	66	137	102.22	16.687
	total	79	66	140	108.51	15.564
High-risk athletes	male	82	77	143	114.73	13.164
	female	19	89	140	113.84	13.829
	total	101	77	143	114.56	13.225
<b>Social desirability</b>						
Non-risk athletes	male	43	6	30	14.12	4.382
	female	36	3	27	13.83	4.808
	total	79	3	30	13.99	4.553
High-risk athletes	male	82	5	25	13.77	4.167
	female	19	6	24	14.37	4.810
	total	101	5	25	13.88	4.276

Source: Authors' work

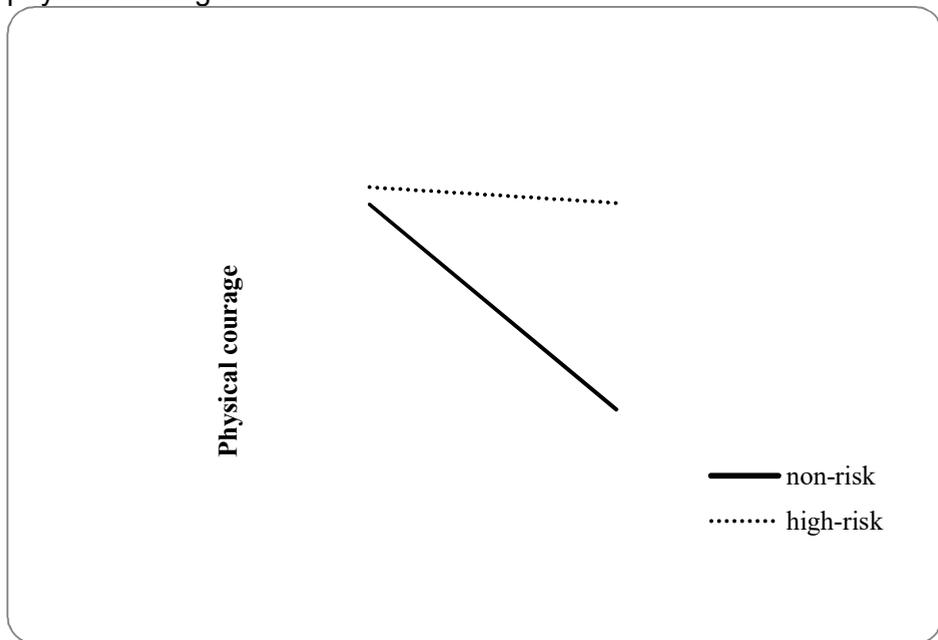
As seen from the Table 2, the highest physical courage score was reported by male high-risk athletes and the lowest by non-risk female athletes.

ANCOVA was conducted to examine the effects of gender, risk of a given sport discipline and age on physical courage. Simple main effects analysis showed that male athletes were physically braver than female athletes,  $F(1,175)=6.304$ ,  $p=.013$ ), and that high-risk athletes were physically braver than non-risk athletes,  $F(1,175)=4.353$ ,  $p=.038$ . Age had no effect on physical courage,  $F(1,175)=1.556$ ,  $p=.214$ . A significant

interaction effect between gender and risk of a given sport discipline on physical courage was found,  $F(1,175)=4.936$ ,  $p=.028$  (Figure 1).

With regards to social desirability, results were similar across all groups (Table 2). No significant effects of gender, risk of the sport and age occur on social desirability,  $F(1,175)=.093$ ,  $p=.761$ ;  $F(1,175)=.050$ ,  $p=.823$ ; and  $F(1,175)=.998$ ,  $p=.319$ , respectively. There was no gender-risk of the sport interaction effect on social desirability,  $F(1,175)=.307$ ,  $p=.580$ . Additionally, no correlation was found between physical courage and sociable desirability,  $r=-.02$ ,  $p=.837$ .

Figure 1: The interaction effect of gender and risk of a sport discipline on physical courage



Source: Authors' work

As seen from Figure 1, in the non-risk athlete group female athletes reported being less physically courageous than male athletes, whereas high-risk female athletes scored similarly high on the physical courage scale as high-risk male athletes.

## **Discussion**

### **Methodological considerations**

In this study on physical courage in athletes, we have managed to successfully overcome certain limitations of previous studies in this field. We have managed to get a relatively large sample of high-risk athletes engaging in diverse risk sport activities. Moreover, unlike some previous studies, our sample of high-risk athletes also included women, which allowed us to test for possible gender differences in physical courage. Unlike many studies that have examined physical courage using qualitative methods, a quantitative psychometric questionnaire was used in our study, and this allowed us to test the associations between physical courage and other characteristics, such as gender, age and the risk associated with different sport disciplines. Another advantage of this study is that we have controlled for the participants' tendency to give socially desirable answers. Evans and White (1981), for example, found a tendency in their participants to present themselves in accordance with their (stereotypical) gender ideas. Our results, however, revealed no differences according to gender, age and risk of a given sport discipline in social desirability among respondents. Moreover, since no significant association in reporting about physical courage and social desirability was found, we can safely rule out any possible interference of social desirability on our results.

Still, our study has some limitations. The sampling of the athletes was neither random nor systematic, because it is not possible to define the whole population of the athletes. We therefore chose the convenient sampling by contacting sport clubs, online forums and institutions, such as the Faculty of Sports, where different types of athletes can be found. Consequently, the two subgroups of high- and non-risk athletes were heterogeneous with regards to gender and age. This could be the consequence of the convenient sampling bias, but it could also be a genuine reflection of the state of events in high-risk athlete population. It may be that men are more likely to engage in high-risk sports than women, and that people start to engage in high-risk sports a bit later in their lives. Further research is needed to solve this question. Another limitation of our study is the use of the Questionnaire of the Physical Courage. The instrument is relatively new and has not yet been properly validated and standardized, but it is currently the only one available in Slovene language.

### **High-risk sports and physical courage**

As anticipated, the results of our study confirmed that high-risk athletes are physically braver than non-risk athletes (Table 2). Still, from these results it is not possible to conclude, whether high-risk athletes were already physically brave before they started with a risk sport discipline or whether their engagement in high-risk sports promoted or enhanced their courage. According to the model of the subjective experience of courage (Hannah, Sweeney, & Lester, 2007), an individual's self-reflection, the assessment of behaviour as courageous and the recognition of the importance of the action, which occur after the courageous action, strengthen those positive states, values, and beliefs, which will encourage the individual to act courageously in similar situations in the future.

Hannah et al. (2007) believe that individuals with higher emotional stability, a trait characteristic for high-risk athletes (Kajtna & Tušak, 2004; Slivnik, 2003; Tušak & Burnik, 2001) are more self-confident, and consequently more successful in overcoming their fear. It could be that high-risk athletes are physically braver because of their high self-efficacy and sense of their own competence.

The risk associated with a given sport discipline and gender showed an interactional effect on physical courage. As presented in Figure 1, only in the case of non-risk athletes did women report of being physically less courageous than men. In high-risk sports, on the other hand, female athletes seem to be equally courageous as male athletes. As masculinity positively correlates with physical courage (Muris, et al., 2010; Stets & Burke, 2000), it could be that high-risk female athletes are more masculine than non-risk female athletes. Future studies should address this question.

The applicable finding of our study is that high-risk athletes should function well in the working conditions where there is a high risk of physical injury, such as fire fighting, police, military, emergency medical units etc. In these environments they could adequately meet their needs for stimulation, while their physically courageous acts would be of great benefit for the society.

## **Conclusion**

Physical courage is a concept that falls within a very recent psychology branch; namely positive psychology. Thus, it is not surprising that it has not yet been extensively researched. In the present article we have tried to indicate the possibilities in the applicable directions of the physical courage research. On the other hand, this area has still many theoretical deficiencies, especially the lack of a universal and high quality psychometric instrument to measure physical courage.

By confirming yet another positive characteristic of high-risk athletes, we hopefully helped to diminish their stigmatization as adrenaline addicts, fate-challengers or even mentally ill people, which seems to be the general public's opinion about them (Rautar, 2008).

## **Acknowledgements**

We would like to thank all participating athletes.

## **Resources**

- Breivik, G. (1995). *Personality, sensation seeking and arousal in high risk sports*. Oslo: The Norwegian University of Sport and Physical education.
- Brymer, E., & Oades, L. G. (2009). Extreme Sports. *Journal of Humanistic Psychology, 49*(1), 114-126.
- Chirivella, E. C., & Martínez, L. M. (1994). The sensation of risk and motivational tendencies in sports: An empirical study. *Personality and Individual Differences, 16*(5), 777-786.
- Cox, D., Hallam, R., O'Connor, K., & Rachman, S. (1983). An experimental analysis of fearlessness and courage. *British Journal of Psychology, 74*(1), 107-117.
- Cronin, C. (1991). Sensation seeking among mountain climbers. *Personality and Individual Differences, 12*(6), 653-654.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349-354.
- Goldberg, C., & Simon, J. (1982). Toward a Psychology of Courage: Implications for the Change (Healing) Process. *Journal for Contemporary Psychotherapy, 13*(2), 107-128.
- Hannah, S. T., Sweeney, P. J., & Lester, P. B. (2007). Toward a courageous mindset: The subjective act and experience of courage. *The Journal of Positive Psychology, 2*(2), 129-135.
- Kajtna, T., & Tušak, M. (2004). Psychological profile of high risk sports athletes. *Psihološka Obzorja/Horizons of Psychology, 13*(1), 85-102.

- Kavčič, M. (2006). Extreme Sports - Sociological discussion on risk and dangers of extreme sports. *Družboslovne razprave/Sociological debates*, XXII(52).
- Kerr, J. H. (1991). Arousal-seeking in risk sport participants. *Personality and Individual Differences*, 12(6), 613-616.
- Kristan, L., Petronio, S., Ulčar, A., Voljavec, A., & Zgaga, S. (2009). The Physical Courage Questionnaire. University in Ljubljana, Faculty of Arts, Department of Psychology.
- Lopez, S. J., O'Byrne, K. K., & Petersen, S. (2003). Profiling courage *Positive psychological assessment: A handbook of models and measures* (pp. 185-197). Washington, DC: American Psychological Association; US.
- Lopez, S. J., Rasmussen, H. N., Skorupski, W. P., Koetting, K., Petersen, S. E., & Yang, Y. (2010). *Folk Conceptualizations of Courage*. Washington, DC: American Psychological Association.
- McMillan, T. M., & Rachman, S. J. (1988). Fearlessness and courage in paratroopers undergoing training. *Personality and Individual Differences*, 9(2), 373-378.
- Muris, P., Mayer, B., & Schubert, T. (2010). "You might belong in Gryffindor": Children's courage and its relationships to anxiety symptoms, Big Five personality traits, and sex roles. *Child Psychiatry and Human Development*, 41(2), 204-213.
- Nili, U., Goldberg, H., Weizman, A., & Dudai, Y. (2010). Fear Thou Not: Activity of Frontal and Temporal Circuits in Moments of Real-Life Courage. *Neuron*, 66(6), 949-962.
- Norton, P. J., & Weiss, B. J. (2009). The Role of Courage on Behavioral Approach in a Fear-Eliciting Situation: A Proof-of-Concept Pilot Study. *Journal of Anxiety Disorders*, 23(2), 212-217.
- O'Connor, K., Hallam, R., & Rachman, S. (1985). Fearlessness and courage: A replication experiment. *British Journal of Psychology*, 76(2), 187-197.
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. Washington, DC: American Psychological Association, Oxford University Press.
- Pury, C. L. S., & Starkey, C. B. (2010). *Is Courage an Accolade or a Process? A Fundamental Question for Courage Research*. Washington, DC: American Psychological Association.
- Putman, D. (2001). The Emotions of Courage. *Journal of Social Philosophy*, 32(4), 463-470.
- Rachman, S. (1984). Fear and courage. *Behavior Therapy*, 15(1), 109-120.
- Rachman, S. (2004). Fear and Courage: A Psychological Perspective. *Social Research*, 71(1), 149-176.

- Rate, C. R. (2010). Defining the features of courage: A search for meaning *The psychology of courage: Modern research on an ancient virtue* (pp. 47-66). Washington, DC: American Psychological Association; US.
- Rate, C. R., Clarke, J. A., Lindsay, D. R., & Sternberg, R. J. (2007). Implicit theories of courage. *The Journal of Positive Psychology, 2*( 2), 80-98.
- Rauter, S. (2008, 31 August 2011). The general public opinion about extreme sports or athletes. Retrieved from <http://keda.blog.siol.net/2008/09/18/mnenje-ljudi-o-ekstremnih-sportih/>
- Renko, A. (2008). *Some personality features of bloggers*. University of Ljubljana, Ljubljana.
- Rorty, A. O. (1988). *Mind in action: Essays in the philosophy of mind*. Boston, MA: Beacon Press; US.
- Rossi, B., & Cereatti, L. (1993). The sensation seeking in mountain athletes as assessed by Zuckerman's Sensation Seeking Scale. *International Journal of Sport Psychology, 24*(4), 417-431.
- Shelp, E. E. ( 1984). Courage: A neglected virtue in the patient-physician relationship. *Social Science & Medicine, 18*, 351-360.
- Slivnik, B. Č. (2003). *Personality and motivation of the downhill mountain biking competitors*. University in Ljubljana, Ljubljana.
- Stets, J. E., & Burke, P. J. (Eds.). (2000). *Femininity/Masculinity*. New York: Macmillan.
- Stropnik, D. (1997). *Extreme sports in modern Slovenian press*. University in Ljubljana, Ljubljana.
- Tomlinson, J. (1996). *The ultimate encyclopedia of extreme sports*. London: Carlton.
- Tušak, M., & Burnik, S. (2001). *Personality of climbers*. Ljubljana: Faculty of Sports.
- Woodard, C. R., & Pury, C. L. (2007). The construct of courage: Categorization and measurement. *Consulting Psychology Journal: Practice and Research, 59*(2), 135-147.
- Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. New York, NY: Cambridge University Press; US.