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Personality characteristics of mountaineers – review of the literature

Mariusz Sołtysik[1], Maria Flakus[2], Robert Pudlo[1]

[1] Medical University of Silesia in Katowice,
Clinical Department of Psychiatry in Tarnowskie Gory
[2] University of Silesia in Katowice, Institute of Psychology

Summary

The following paper presents the existing body of research on personality traits (within the framework of personality trait theory and Marvin Zuckerman's sensation seeking theory) of individuals engaging in high-risk sports, especially mountaineering and alpinism. In the review, two perspectives of theoretical analysis were taken into consideration: a psychological (concerning reflections on non-pathological personality characteristics of mountaineers) and a psychopathological one (concerning research on hypothetically pathological dimensions of the following traits). In both psychological and psychopathological perspective, the importance of sensation/stimulation seeking (understood as one of the personality dimensions) and deficiency of trait anxiety were analyzed. Both determinants can be linked with type T personality. In addition, numerous studies suggest that traits such as neuroticism, extraversion and conscientiousness may play important role in personality regulation of mountaineers. The presented reflection was supplemented by early reports referring to possible psychopathological traits, which may hypothetically indicate some personality disorders. The authors highlight the limitations of previous studies and point out possible directions of future research, in particular – necessity of including motivational factors, associated with engaging in high-risk sport activities.

Key words: personality, personality disorders, mountaineering

Introduction

Interest in reasons because of which individuals engage in activities related to the 'adrenaline rush', as this phenomenon is commonly called, can be discerned in media as well as in scientific literature. Among the numerous approaches resorted to in psychology and psychiatry in order to study high-risk sports and extreme sports, a particular interest in personality-related factors can be distinguished, as

they are regarded as an influence on being motivated or predisposed to engage in these activities.

One of the best-known high-risk sports is mountaineering, particularly alpinism and Himalayan mountaineering. Since the 1960s, numerous researchers have pondered the question what drives individuals to this activity and where to look for factors inducing them to take risks associated with climbing the highest peaks – and frequently paying for it with one's health or even life [1–3]. The mountaineers themselves have thought about this question as well, a fact that becomes apparent in their memoirs and notes [3].

In research, two approaches can be distinguished. The first one focuses on determining personality profiles of individuals who engage in this sport which distinguish them from those who decide in favor of other sports. These differences are quite frequently described as dissimilarities in the prevalence of certain personality traits, and in the majority of cases researchers do not regard them as resulting from psychopathological factors. Therefore, this approach can be described as a psychological perspective. This group of research is dominated by quantitative research. The second direction of research – which is far less frequently resorted to in empirical studies – focuses on the assessment of the severity of psychopathological aspects in mountaineers' personality traits. Studies – mainly qualitative – conducted from this perspective attempt to answer the question whether the group of individuals engaging in mountaineering exhibit psychopathological traits that could potentially be associated with this activity. Because of the strong overtones of a clinical component, this approach can be described as a psychopathological perspective.

Aim and method

This article attempts to provide an outline of personality research (from the psychological and the psychopathological perspectives) pertaining to individuals who engage in high mountain climbing. In order to accomplish that, we reviewed the research papers indexed in two full-text databases: PubMed and EBSCO. During the data collection the following keywords were used: 'mountaineering', 'alpinism', 'personality', 'personality disorder'. At this stage, the search area also included studies with the key word: 'high-risk sports' and 'risk taking'. However, the article cites only those in which part of the study group were climbers. It allowed to collect literature mainly in English, referring to the subject under study. Additionally, in the research review presented below, it was decided to present non-indexed publications in Polish. It was justified by the important scientific significance of these works, as well as the need to take into account the Polish cultural perspective in research on alpinists and mountaineers.

Personality characteristics of high mountain climbers and mountaineers – a psychological perspective

Sensation seeking in high mountain climbers

Many studies link engaging in high-risk sports with sensation seeking – a personality construct introduced to psychology by Marvin Zuckerman. The term refers to a need for diverse, intense and complex experiences mirrored by a behavioral tendency toward activities which provide such a level of stimulation. According to Zuckerman, sensation seeking can be understood as a cluster of four components (see Figure 1). [4, 5]

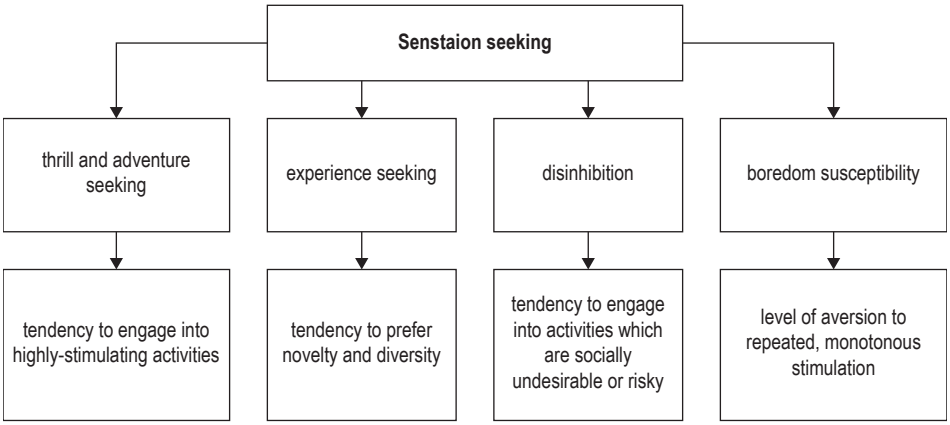

Figure 1. **Components of sensation seeking (own elaboration) [4, 5]**

The theoretical model presented above is reflected in the factor structure of the psychometric tool used to measure sensation seeking, *the Sensation Seeking Scale* (SSS-V). In this tool, we may obtain both general result, reflecting the general need for stimulation, and four detailed dimensions (subscales).

Bearing in mind that sensation seeking is generally regarded as a personality-related dimension, it can be assumed that individuals engaging in high-risk sports exhibit a higher prevalence of this trait than those who prefer more conventional activities. This thesis is corroborated by the results of numerous quantitative studies (in which the SSS-V was used) on individuals engaging in extreme sports, e.g., parachutists, rally drivers, high mountain climbers, and enthusiasts of downhill mountain biking, gliding, and free-diving[1] [6–10].

Studies comparing high mountain climbers and alpinists with selected control groups point to similar differences. A study by Fowler et al. [11] compares high

[1] Free-diving – diving which relies on divers' ability to hold their breath. In contradistinction to traditional diving, this activity's characteristic feature is the lack of scuba gear.

mountain climbers and individuals interested in taking up this activity shortly ($N = 27$) with a group of students not interested in mountaineering ($N = 32$). The results have demonstrated that the control group exhibited a lower level of sensation seeking (the difference was statistically significant at the level of $p < 0.05$) and a lower score in tendencies toward seeking thrill and adventures (the difference was statistically significant at the level of $p < 0.001$).

Independent studies by Robinson [12], in which data of professional rock climbers ($N = 30$) were compared with normative data ($N = 377$ for the SS-V and $N = 253$ for *the Trait Anxiety Inventory*), have shown a higher level of sensation seeking and its two components, thrill and adventure seeking as well as experience seeking, in the study group (both differences were statistically significant at the level of $p < 0.001$). This study has also shown a lower level of trait anxiety (measured using *the Trait Anxiety Inventory* – TAI) in rock climbers (the difference was statistically significant at the level of $p < 0.01$) [12]. These results look similar to those gathered by Levenson [13] in another study on rock climbers ($N = 18$) which has additionally demonstrated a lower level of disinhibition in these climbers than in the general group (the difference was statistically significant at the level of $p < 0.05$).

Interesting results have been obtained by Freixenet [7]. Freixenet's research was conducted among four groups: (1) a Himalaya expedition ($N = 27$), (2) mountain climbers and skiers ($N = 72$), (3) subjects engaging in sports not associated with climbing ($N = 221$), and (4) subjects who did not engage in any sports and constituted the control group ($N = 54$). As expected, the control group showed a statistically significant lower level of sensation seeking and components related to it (i.e., thrill and adventure seeking as well as experience seeking) than the other groups. Statistically significant differences were also found between the climbers and the group of individuals who did not engage in risky sports; the former group consistently scored higher in a general tendency toward sensation seeking, thrill and adventure seeking, and experience seeking (all differences were statistically significant at the level of $p < 0.05$) [7].

In the context of these results, an interesting suggestion concerning personality-related mechanisms responsible for seeking intensive stimulation, exemplified, e.g., by high mountain climbing, has been brought forward by Gray [1] in the qualitative analysis of mountaineers. He examined experienced alpinists associated under mountaineering organizations ($N = 28$), climbing instructors ($N = 28$), rock climbers ($N = 39$), people interested in mountain sports activities ($N = 45$), and people not interested in climbing ($N = 11$). According to Gray, alpinists exhibit a relatively lower susceptibility to punishment and a concurrent high need for reward. [1] Similar suggestions can also be found in other studies where differences in the avoidance of arousal between groups of people preferring risky and safe sports were observed [14]. Gray also found that leading, experienced, and very successful Himalayan mountaineers exhibit a more conservative and critical attitude and show more tranquility and assertiveness, but also more stubbornness [1].

Although research has rather regularly demonstrated a higher level of sensation seeking (including its two components, i.e., thrill and adventure seeking as well as experience seeking) in high mountain climbers, in a few cases differences with regard

to susceptibility to boredom have been reported as well. However, there are certain premises suggesting that this trait might be essential to outlining differences within the rather heterogeneous group of climbers (e.g., with regard to climbing experience and risk-taking). For example, in Breivik's research [10], a comparison between members of a Mount Everest expedition ($N = 7$) and professional climbers who did not participated in this expedition ($N = 38$) was made. Susceptibility to boredom was the only dimension of sensation seeking where differences between these two groups were found; members of the Everest expedition scored higher in this regard (the difference was statistically significant at the level of $p < 0.05$).

Personalities of high mountain climbers in the context of trait theory

Trait theory is another theoretical framework within which personalities of individuals engaging in high-risk sports, including high mountain climbers, are studied [15]. One of the first studies of alpinists' personalities was Lester's qualitative research [16, 17] conducted on members of a Mount Everest expedition ($N = 17$). The study took place before the expedition. The researcher used qualitative methods (psychological interview and observation) and test methods (Rorschach test and Thematic Apperception Test). In this study, such personality traits as nonconformity (understood as a tendency to question existing rules and transgressing limits) and striving for independence and self-sufficiency were found in alpinists' personalities. Moreover, Lester described alpinists as spontaneous and self-assured but at the same time as aloof in relations with other people.

Slightly different conclusions have been drawn in qualitative studies on Italian mountaineers, since a rather low level of self-esteem was pointed at [18]. The study was conducted using analogous research methods as in the Lester's study. This seems at odds with the results previously obtained by Lester [16, 17], as they pointed to a rather high level of self-confidence in alpinists. At the same time, an enhanced level of ambitiousness (understood as the need to achieve and fulfill own ambitions) in the study group was also highlighted by the study's author [18].

Differences in results obtained by Lester [16, 17] and Rossi [18] may be caused by the nature of the sample. In Lester's research, it was a group of climbers who had more experience in climbing in the Himalayas. In Rossi's research, the research group was rather young climbers, presumably with less experience.

Similar discrepancies with regard to individuals engaging in high-risk sports can be found in research within the framework of the Big Five model. The majority of research on individuals engaging in extreme sports shows that traits such as neuroticism, extraversion and conscientiousness can constitute variables serving as predispositions to practicing extreme sports [19–24]. Most of the research carried out in this paradigm uses two tools – the NEO-FFI and the NEO-PI-R personality inventories. They were designed to study: (a) five personality metafactors (also called second-order factors; both the NEO-FFI and the NEO-PI-R provide the possibility to analyze these results) and (b) detailed features (the testing is possible by using the NEO-PI-R test), whose conceptualization is shown in Figure 2.

However, there are some doubts as to their relationship with engaging in these sports. For example, research conducted by Vollrath et al. [20, 21] has demonstrated that individuals with a higher level of extraversion are more eager to take greater risks

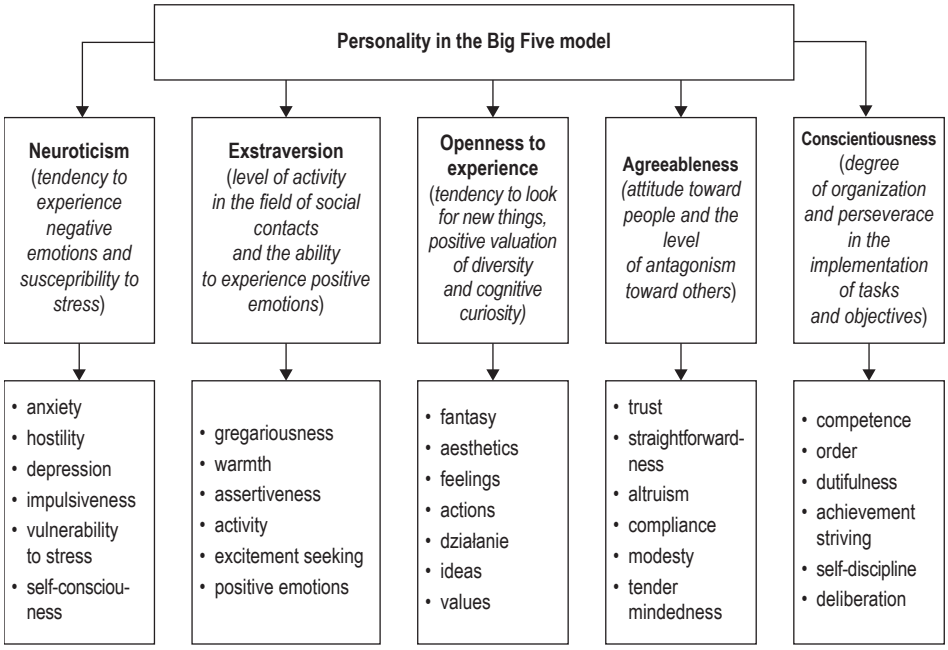

Figure 2. **Personality traits in the Big Five model (own elaboration)**

(these correlations were, however, very low, between 0.11 and 0.12, statistically significant at $p < 0.01$ and $p < 0.001$). Similar results have been obtained in a meta-analysis by Clarke and Robertson [22]. This seems at odds with results of previous studies in which a lower level of extraversion (specifically, one of its dimensions – positive emotionality) was associated with a higher willingness to take risks (correlation coefficient was – 0.22, statistically significant at $p < 0.05$) [23, 24].

Castanier et al. [25], in their study conducted on a group of 302 extreme athletes, explain these discrepancies by pointing out that extraversion can fulfill different functions in this relationship. On the one hand, positive affectivity, which often coexists with this trait, can cause extroverts to less frequently engage in risky behavior (in the sense of 'blowing off one's steam' or acting out). On the other hand, extraverts often need a high level of stimulation, which paradoxically could lead them to engage in higher-risk activities [25].

Similar doubts are caused by the nature of the relationship between neuroticism and risk-taking. Some studies point to a positive relation between them, i.e., a higher level of neuroticism is linked to a higher tendency to risky behavior [20, 22]. How-

ever, in other studies this relation was more complex, and some components of neuroticism were negatively linked to risk-taking. For instance, in studies by Sleasman, a lower level of depressiveness was linked to a higher tendency to take risks [26]. This demonstrates that regardless of the fact how many neuroticism-related traits may be conducible to seeking risky behavior, e.g., to lower tension or distress, some more detailed characteristics can constitute factors linked to lowering the tendency toward the above-mentioned forms of behavior [25, 27].

The least questionable is the relationship between conscientiousness and risk-taking. In the majority of studies, a higher level of the former trait has been associated with a lower tendency to engage in risky behavior [20–22].

Typology of people taking risks in the context of the personality traits of the Big Five

In the context of the research results depicted above, Castanier et al. [25] posits that a typology of certain personality traits can be created in order to determine which combination of traits such as extraversion, neuroticism and conscientiousness could predispose individuals to engage in more or less risky behavior. In a study on 302 males engaging in high-risk sports (downhill, high mountain climbing, high mountain skiing, paragliding, and parachuting), Castanier et al. have demonstrated that individuals who more frequently take risks are characterized by a lower level of conscientiousness, a high level of extraversion and/or by a high level of neuroticism (an impulsive, hedonistic and insecure type). On the other hand, individuals who less often engage in risky behavior have been described as characterized by a high level of conscientiousness and a low or high level of extraversion (a skeptical, subjective and entrepreneurial type). Individuals with such a personality constellation less frequently engaged in high-risk activities and reported less injuries and accidents. The classification of personality types and their characteristics has been presented in Table 1 [25].

Researchers have explained these results in the context of specific functions fulfilled by certain personality traits. Taking risks by individuals with an impulsive personality type can be explained by sensation seeking and a lack of the ability to delay gratification. This results in seeking forms of behavior which grant immediate pleasure and neglecting potential future consequences and risks associated with them. At the same time, seeking highly-stimulating, risky activities can also constitute an escape from difficulties experienced in life. In this case, gradually increasing stimuli (i.e., deciding to take increasingly more risk) in order to feel relief and enhanced well-being can constitute potentially addictive behavior and become the only way to achieve gratification and affect regulation [25].

Orientation toward experiencing positive emotions can also be observed in individuals with a hedonistic personality type, however, in this case, the emphasis is rather to be put on seeking positive emotions instead of – as in the case of impulsive types – on escaping from negative affects. Thus, hedonists are inclined to seek intensive levels of stimulation in order to fulfill their desires which are mostly linked to preferring more stimulation [25].

The origin of risk-seeking in individuals with an insecure personality type, characterized by high neuroticism, a low level of extraversion and conscientiousness, seems less clear. Presumably, it can be attributed to interpersonal restraints and a high level of negative emotionality, a characteristic feature of this combination of traits [25].

Table 1. **A typology of individuals who do/do not take risks in extreme sports [25]**

Type	Neuroticism	Extraversion	Conscientiousness	Risk-taking
Impulsive	high	high	low	high
Hedonistic	low	high	low	
Insecure	high	low	low	
Skeptical	low	low	high	low
Subjective	high	low	high	
Entrepreneurial	low	high	high	

A personality-related characteristic of high mountain climbers and alpinist – a psychopathological perspective

Type T personality

Taking into consideration the combinations of different traits, predominantly with regard to sensation seeking and impulsiveness, the term Type T personality has been defined and introduced. It is characterized by a need for diverse, intensive and complex experiences as well as by a tendency to engage in behavior providing a high level of stimulation [28]. Traits associated with a Type T personality can have positive (e.g., enthusiasm when taking recreational risk) as well as negative (e.g., socially unaccepted behavior) consequences for the individual [28, 29].

Personality profiles of high mountain climbers

Zdzisław Ryn's qualitative research seems relevant in the psychopathological context. Ryn conducted a study on 20 male alpinists who temporarily stayed at approx. 7,000 m a.s.l. and 10 female alpinists who climbed above 4,000 m a.s.l. The psychiatric interview was accompanied by the 16PF Cattell's Questionnaire. Ryn distinguished two personality profiles of the alpinists.

The first one, a schizoid-psychasthenic profile (the most common one), was characterized by interpersonal withdrawal exemplified by a lack of need for contact with other people, mysteriousness, aloofness, avoiding interpersonal contacts, eccentricity, and unconventionality. The study subjects showed emotional sensitivity as well as difficulties with keeping discipline and conforming to societal norms. This, in turn, was associated with dysphoria, aggression in situations when other individuals were being perceived as intrusive, and difficulties in showing emotions, which resulted in a tendency to indulge in fantasies and daydreaming.

The second profile (asthenic-neurotic) was characterized by avoiding contact despite the need for interpersonal relations, fear of having one's feelings offended, and emotional sensitivity. Characteristic traits of this group were shyness, neurotic behavior and neurotic symptoms (neurasthenia, forms of phobia, depressive episodes, and psychosomatic symptoms) which occurred when being judged and were compensated by a need for self-affirmation and high ambitions [3, 30].

The possibility that certain traits having a potentially psychopathological dimension are present in mountaineers has been pointed out by Breivik [10] who conducted a study on Norse members of a 1985 Mount Everest expedition. In his research, like Ryn, he used the personality scale created by Cattell. The climbers scored very high with regard to:

- ego strength – factor C+, relating to emotional stability and the ability to adapt in emotionally burdensome situations;
- dominance – factor E+, denoting a tendency to assertive and independent behaviors;
- openness to change – factor Q1+, understood as willingness to critical thinking;
- self-reliance – factor Q2+, related to preference of making independent decisions and actions;
- abstractedness – factor M+, similar to creativity and tied to negligence in relation to everyday matters.

They also scored very low with regard to:

- superego – factor G-, associated with a small sense of commitment and avoiding compliance with the rules;
- vigilance – factor L-, referring to the low level of trust and the ability to establish friendly relationships with others;
- apprehension – factor O-, meaning the inability to feel confident and cheerful;
- perfectionism – factor Q3-, related to low self-discipline and the low level of the ability to defer impulses;
- tension – factor Q4-, meaning the low degree of relaxation and peace;
- sensitivity – factor I-, referring to the low degree of succumbing to unrealistic fears [10].

In other studies, however, Breivik [31, 32] found that high mountain climbers are in general more emotionally stable than individuals who engage in sky diving or parachuting but far more introverted. Additionally, Breivik distinguished between two types of Himalayan mountaineers. The first one was described as more introverted, sensitive and with a relatively significant component of tension and fear. The second one, according to Breivik, is exemplified by independent climbers with a low sense of guilt and fear [31, 32].

Some suggestions regarding the two personality types described by Breivik (similar to those distinguished by Ryn) can be found in other research as well. Thus for

instance, in Jackson's research [33] it has been found that leading mountaineers are on the one hand aloof in their behavior, socially shy and secretive, but on the other hand they think in an abstract way, tend to dominate, are impulsive, goal-oriented, endowed with imagination, open to new experience, and self-assured. A study on 22 members of a 1983 Italian K2 expedition has produced similar results. These mountaineers scored higher with regard to parameters such as remaining aloof and being goal-oriented and more relaxed [34].

Evidence for the existence of Breivik's second type can also be found in other research. Vanek and Hosek [35] conducted a study on 13 Czechoslovakian climbers. They scored high with regard to domination, were goal-oriented, practical, alert, secretive, self-reliant but also relaxed, self-assured, independent, and did not show fear. A similar personality profile of climbers was also found in another study. The study subjects showed a lower level of fear, emotional stability, a strong sense of reality, success, independence, and assertiveness [36].

Problems and limitations of the previous studies

Possible reasons for discrepancies in previous studies

Previous studies on mountain climbers seem to throw some light on the issue of personality traits characteristic for this group. On the basis of research conducted in the paradigm of sensation seeking theory and on type T personality, one can conclude that climbers have high demand for stimulation and actively seek strong sensations [7, 11–13], having lower susceptibility to punishment and higher susceptibility to rewards [1, 14]. At the same time, there are many indications that traits such as: high level of extraversion (associated with high level of stimulation and less susceptibility to relieve stress), high levels of some components of neuroticism and low level of conscientiousness are of great importance in this group [19–27].

However, the results of research conducted on groups of elite mountaineers seem to be more heterogeneous compared to studies conducted on more general groups. For example, in both Ryn [3, 30] and Breivik's [31, 32] research two climber subtypes have been distinguished, which seemed different in terms of such components as self-confidence, emotional stability and extraversion. Once they appeared as emotionally stable extroverts, other times as introverts who were uncertain of themselves.

Similar differences can be explained in two ways. On the one hand, it can be assumed that the group of mountain climbers is strongly diverse. This diversity manifests itself in the style of climbing (e.g., alpine, winter, team vs. individual). Therefore, we may assume that different types of climbing will be associated with other personality traits. Another factor that may be behind the contradiction of the results is the level of climbing experience. Unfortunately, most of the available research does not seem to raise this thread, rarely controlling those factors.

In the context of the great diversity with regard to research results, it also seems apparent to take into account personal relationships and cultural affiliation of mountaineers participating in Himalayan expeditions. This suggestion is corroborated by

Monasteri et al. [37] who have found that mountaineers exhibit very diverse personality profiles. A number of factors potentially influencing the emergence of these differences has been provided, i.e., personal environment, social pressure, changing popularity, media interest, and commercialization of high mountain climbing.

Theoretical limitations of previously conducted research

From the perspective of sensation seeking theory, research on alpinists' personalities (as well as on individuals engaging in other high-risk sports) seems to limit the question of motivation to engaging in such activities. Some researchers point out that looking for differences with regard to sensation seeking in individuals who engage in risky sports and those who do not to some degree constitutes a tautology. Numerous assertions used in popular instruments to measure this construct directly refer to engaging in high-risk sports and taking pleasure in these activities [38–41]. To some extent, this raises questions whether the method of studying sensation seeking is appropriate. The legitimacy of this remark is corroborated by researchers who do not inquire into issues related to extreme sports [42].

Although sensation seeking can partially explain the tendency toward taking risks, it is expedient to point out that – so far – research has pointed to the fact that only a low level of variance has been explained by means of this model [43, 44]. The potential reason for this could be the fact that the construct of sensation seeking does not take into account other dimensions of motivation which may constitute the basis for seeking stimulation through high-risk sports (e.g., striving for mastery, motivation to achievement, need for competition, overcoming fear and one's own weaknesses) [38–41]. This thought is also present in qualitative and theoretical reflections on the essence of alpinism and high mountain climbing *in genere*. Referring to the role of competition in alpinism, Ryn points out that the (intrinsic) motivation to overcome own weaknesses is the primary type of motivation in this context; in contradistinction to external competition which might be considered the leading one at first glance. According to Ryn, the former motivation is rooted in alpinists' personality traits inducing them to "struggle with oneself" and to overcome personal limitations. Ryn even compares high mountain climbing to a "fight for a sense of self-worth" [2].

Motivation to engage risk and its functions as possible research direction

It is expedient to point out that risky behavior, including extreme sports, can fulfill a variety of functions. It can be resorted to in the context of affect regulation (e.g., avoiding or reducing negative emotional tension, and inducing positive affects [45, 46]. On the other hand, some researchers suggest that risky behavior can be particularly attractive to individuals with a constitutionally higher level of fear (resulting, e.g., from personality structure or individual characterology). From this perspective, risk-taking provides the opportunity to experience and control the intensity of fear by means of exposing oneself to fear-inducing situations [47–50].

Bearing this in mind, it is expedient to consider additional factors conditioning risk-related activities (including high mountain climbing) which go beyond the tendency toward sensation seeking. A potential factor are self-regulation strategies intentionally resorted to by individuals in order to mitigate the consequences of a negative affect or to avoid it. For instance, in research by Castanier's et al. [27] it has been studied whether high mountain climbing might constitute a method for reducing fear-related tension. In a study group of 105 high mountain climbers, a drop in fear levels after the climbing activity could be observed. This was related to the extent to which self-regulating strategies were resorted to with the purpose of avoiding situations causing increased tension. The more a person was prone to use such a strategy, the more the level of fear dropped after practicing this sport. These results suggest that individuals engaging in high mountain climbing in order to avoid or reduce negative affects derive important emotional benefits from this sport. It has to be pointed out that this is not linked to an automatic increase of positive affectivity, since it did not change regardless of the self-regulating strategies resorted to [27].

Ryn [49, 50] also mentions the role of self-regulating strategies in high mountain climbing and points to two possible tendencies which potentially could constitute motivations to practice this sport. The first one is a strategy aiming at arousing a positive emotional state which increases the level of psychological integration and enhances sharpness and clarity of the experience, as a result of which it is perceived as pleasure. The second strategy aims at avoiding negative emotional states induced by day-to-day duties and a subjective level of frustration. Ryn's conversations with alpinists have demonstrated that the latter strategy was predominantly resorted to by subjects reporting neurosis-related problems in everyday life (e.g.,. anxiety, uneasiness, fear, psychosomatic symptoms) [49, 50].

Ryn's qualitative analysis [2] as well as quantitative research by Castanier et al. [27] have shown that self-regulating strategies constitute an important factor determining whether individuals engage in high mountain climbing and in extreme sports in general. In addition to this, it can be observed in both studies that strategies aiming at avoiding negative affects or inducing positive affects are employed as orthogonal methods of regulating emotional reactions and are not always related to each other. This leads to the assumption that individuals with a different configuration of personality traits could exhibit tendencies toward different self-regulating strategies. Taking into account the similarities between an evasive approach to tension regulation and acting out mechanisms as well as Ryn's observations [2] regarding the relationship between this form of self-regulation and psychopathological symptoms, a potentially interesting direction for further analysis could be an inquiry into psychopathological mechanisms in alpinists.

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Address: Maria Flakus
Faculty of Social Sciences
Institute of Psychology
University of Silesia in Katowice
40-126 Katowice, Grażyńskiego Street 53
e-mail: maria.flakus@us.edu.pl