

# ALONE AMIDST THE SNOW

**A**sst. Prof. Agnieszka Skorupa from the University of Silesia discusses the psychological consequences of a prolonged stay at a polar station.



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**As a psychologist, you went to Spitsbergen to study more closely how polar expeditioners work. What made you take an interest in this subject?**

AGNIESZKA SKORUPA: They live in extreme conditions, so they are physically and mentally overburdened. In science, polar conditions are referred to as “isolated, confined, and extreme,” or ICE. Such an extreme environment is isolated, both socially and physically. Social isolation means that there is a limit to one’s ability to meet one’s need for contact with other people. Physical isolation, in turn, means that you live in restricted spaces and you may be temporarily prevented from leaving the premises of the polar station by weather conditions, including temperature changes, difficulty moving in the field during polar nights, or, in such regions as Spitsbergen, the threat posed by polar bears.

**How do those conditions affect the mental health of explorers?**

First and foremost, we are affected by the solar cycle. In our daily routine, we are accustomed to the circadian rhythm typical of the temperate zone, where Poland lies. Polar days and polar nights disturb the secretion of hormones produced by the pituitary gland and the thyroid, which may disrupt the sleep-wake cycle.

Consequently, the body’s capacity to regenerate gets worse, there may be feelings of anxiety and low mood. However, we can’t say that every polar expeditioner on Spitsbergen will suffer from depression or sleep disorders during the polar winter. Various scientific studies demonstrate that the rate of mental disorders among those working at polar stations ranges from 0.3% to 5%, which is close to, or maybe even somewhat below the average for the general population. Also, we should remember that there are three groups of polar expeditioners: “over-winterers,” or those who stay for a whole year, summer expeditioners, who go to polar stations for the period from June to September, and participants of temporary research expeditions that may last 1 or 2 weeks or a month. Each of these groups will be affected by a different set of factors.

**Let’s focus on those who spend the winter.**

They have especially numerous stereotypes surrounding them, related to how polar stations work. Many people are convinced that the stations are freezing cold, dangers lurk around every corner, and the explorers live in extreme isolation or dash through the snow in a sled pulled by sled dogs. The reality helps dispel these old and somewhat romantic images. These days, explorers prepare carefully for expeditions, and





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they are recruited and trained by experts. Although they leave for a year, the consequences of the physical or physiological discomfort experienced by the expeditioners are kept to a minimum, because the station is well-prepared. Still, however, factors such as the polar night and day, polar bears, crevasses, and harsh weather conditions make work and life more difficult. Likewise, we can't eliminate issues resulting from natural group dynamics. All groups, not only those working in polar conditions, go through certain stages of development. At the beginning, there is usually the "forming" stage, where the group members establish relations, get to know one another. They want to put their best foot forward, because they aren't sure what the rules are. This is followed by the "storming" stage, where the group members decide they can't be polite all the time, they have their own distinctive opinions and views they want to highlight, and this leads to conflicts. Once they go through this stage and accept the fact that everyone is different, they lay down new rules in a process referred to as the "norming" stage and start working together effectively, which means entering the "performing" stage. As I said, this is typical of every group. However, group dynamics are especially important at a polar station, because they are coupled with isolation.

**What mental characteristics does one need to have to decide to stay at a polar station for so long?**

We would very much like to have a clear answer to this question, because we could say: these are the traits one needs, because such people will prove themselves well out there. But that's impossible, because there's no single personality or temperament, so it is hard to distinguish the traits that guarantee the same level of effectiveness throughout the year. Moreover, a healthy team is a diverse team, which means that sending people all with very similar traits that impact on individual adaptation does not necessarily translate into the effectiveness of the entire group.

**So whom will do you discourage from going on a polar expedition?**

In recruitment, there is the "select in" approach and the "select out" approach. In polar research, we know less about who we want to recruit (that's "select in"), but we can say more about who we don't want ("select out"). We look for stable and level-headed individuals who are mentally and physically in good health. Individuals who are very neurotic, extremely disagreeable or susceptible to low moods are unlikely to be recruited for a job at a polar station. Whether someone is an extrovert or an introvert is of secondary importance, because people can satisfy the need for contact with other people in different ways. It would seem that those open to new experiences prove themselves better. However, very high openness is not necessarily recommended. It is related to cognitive curiosity, the need to be active, whereas a job at a polar station, fascinating though it is, involves a repertoire of jobs and tasks that is rather limited.

**How do polar explorers cope with being away from their families and friends?**

The Internet has changed this greatly. Aside from incidents of extreme weather conditions and sporadic system failures, access to the Internet is available all day. Those who live at the station feel that although they have left their loved ones at home, they can still keep in touch with them, for example using Skype. This lessens the sense of isolation. At the same time, the Internet brings them close to the problems their families face at home, but these problems are beyond their control. That may result in a feeling of helplessness.

**Those who work at the stations are both men and women. Do they differ in terms of their mental characteristics?**

For a long time, there was a prevailing belief that male teams and female teams differ in terms of how they work. The first teams that went to live in extreme conditions were composed only of men, and it was believed such teams worked best. Today, we have male teams, female teams, and mixed teams. Studies show that the

## ACADEMIA POLES AT THE POLES

presence of women can calm down the atmosphere and facilitate communication, not only in terms of tasks but also ordinary, everyday issues. However, there can be sexual tension. Studies carried out at major stations such, for example the US McMurdo station, show an increase in comments regarding women and sexuality that may be considered offensive or upsetting. Most members of the staff go to polar stations without their partners or as singles, and they stay with members of the same sex for the whole year. Arrival of a member of the opposite sex changes the group dynamics. Of course, this is a problem not only for polar expeditioners but also for soldiers on military missions or any long-term expeditions characterized by isolation.

**You conducted your study among expeditioners spending the winter, over a period of one year.**

Yes, but I myself did not stay at the station for the whole year. I didn't want the explorers to feel uncomfortable, because I was part of their team yet was watching their behavior carefully. I met with the participants of the expedition before they left. Those who agreed to participate in the study filled out questionnaires once a month and submitted them via the Internet. I went to Spitsbergen at the end of their expedition and conducted in-depth interviews with the group members.

**What did you want to find out?**

I tried to capture to what extent various problems, stress, and potential discomfort resulted from the extreme environment, and to what degree they stem from what happens between people everywhere. After all, a group doesn't need to be staying in an extreme environment to go through a stage of conflict. I created a complex model, because we studied the behavior of people who had specific characteristics yet also were going through various mental states, which were influenced by external conditions, such as the occurrence of polar night, and intergroup factors. I tried to take account of all these components and I wanted to find out if any of them would prove more important for the adaptation of humans to the polar conditions.

**Did you find such a factor?**

The study showed that the Big Five personality traits are not significantly related to whether someone successfully adapts to isolated, confined, and extreme environments. That is fascinating, because the best adapted individuals turned out to range from an extreme introvert to an extrovert, from a neurotic to a very calm person, from a disagreeable individual to a very agreeable person. In other words, we can't hope to use psychological tests to determine a specific personality type and say that such people should definitely go to a polar station.

Also, there was moderate evidence to support the existence of the "polar syndrome," or the hypothesized

emergence of conflicts and low moods during the polar night, caused by the fact that it is cold and dark and the explorers can't leave the station. It turned out there was more evidence in support of a "third-quarter syndrome," whereby the participants of a mission, regardless of how long it takes, tend to mentally divide it in half. On the one hand, they feel that lasting through the first half is a success. On the other one, their mind tells them, "There is still the second half left to go, and that's a long time." For that reason, conflicts occur more frequently in the third quarter, and the moods may be low as well. The final stage of the mission is also interesting, because it also leads to tensions. The participants are happy that the mission is over, but they feel anxious about returning home. In addition, they have to answer for the tasks they undertook to perform.

**We're talking about threats, conflicts, and problems. Are there any moments of happiness?**

Those who listen to my lectures usually feel horrified, because I talk about all these negative things. But I do so to make sure people are aware of what may happen. Of course, there are also positive results of polar expeditions, and they even greatly outnumber the negative ones! If you ask the polar explorers from the PAS Institute of Geophysics, they will tell you that their self-confidence and self-efficacy goes up after an expedition. They've experienced quite an adventure, and this gives them social approval. They've done something extraordinary, so they feel special. Most polar explorers adapt to the conditions at a polar station very well, they come back without traumas or injuries. They feel stronger, because they've done something extraordinary or they've faced their fears and overcome difficulties. Moreover, the environment that we stereotypically perceive as a potential source of extreme experiences is in fact very rewarding. The participants of my study named contact with nature and the beauty of the environment as their most important experiences from the stay on Spitsbergen.

**Did you experience anything that ran counter to your stereotypical beliefs?**

I was especially surprised by the fact that I could drink coffee from a coffee machine! I'm glad I went there. Before I went to the polar station, I read plenty of scientific publications and polar books. I watched films from expeditions, but what I discovered there was not what I'd expected. Such an experience is extremely valuable to a researcher: to see things as they truly are. I saw the beauty of that place, a very good station. Above all, I met great people. The station is not a psychology lab. It's a place of work with completely normal people who were brave enough to take on this great challenge.

INTERVIEW BY ANNA ZAWADZKA