

# EXPLORING THE LEVEL OF ANXIETY AMONG THE 19<sup>TH</sup> INDIAN EXPEDITIONERS STATIONED IN ANTARCTICA DURING WINTER

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## ABSTRACT

*The vast ice lands of Antarctica have always been a source of interest and intrigue for social and behavioural scientists all over the world. With its extremely harsh environmental conditions, working can be an extremely anxiety and stress prone experience. The present study explores the anxiety level, if any among the 19<sup>th</sup> Indian Expeditioners stationed in Antarctica during winter. The results of the study indicated low level of anxiety among the respondents.*

*Keywords: Anxiety; Antarctica*

## INTRODUCTION

The infinite cold and dry land of Antarctica has a long history of exploration. Since its discovery and the signing of the Antarctic Treaty System, there has been continuous human presence on the ice in the form of isolated research stations, many of which are occupied throughout the entire year (Tisch, 2005). Despite the harsh climate and barren environment, Antarctica has been a constant focus of research in different fields of natural sciences and in recent times this focus has shifted to include social and behavioral research in its realm. There are no permanent or indigenous inhabitants of Antarctica (Tisch, 2005). And the human inhabitants found in this continent are scientists who are stationed there and belong to different countries and culture. This scenario has a great potential for the social and behavioral scientists to study the psychology and adaptation process of personnel living and working in such harsh conditions.

Personnel stationed in Antarctica are required to stay in stations developed in such a way so as to protect them from the outside harsh environment. Although this is done to ensure that the personnel's receive a measure of physical comfort and to insure a continuous tear round presence on the ice, the men and women while adapting to their environment face stressors in the form of isolation, confinement and environment (ICE) (Palinkas, 2003). Winter-over crews often experience some level of tension or conflict with external organizations and agencies, usually due to interference with established station routines, delays in the arrival of replacement personnel or supplies, or problems with communication which result from the disruption at times by environmental conditions and the frequent misinterpretation of the meaning or intent of certain

messages (Palinkas, 2003). Isolation from the outside world leads to confinement which hinders the privacy of the personnel's and may lead to interpersonal conflicts with the crew, frustration and anxiety (Palinkas, 2003).

Living in such close conditions has led to winter-over crew members to report that the isolation and confinement are more difficult to live with than the extreme environmental conditions (Palinkas, 2003). This is attributed to the separation from usual sources of support and the relative difficulty in obtaining emotional support from other station members. When examined within the social and environmental context of an Antarctic micro culture, the perceived absence of social support during the winter-over period may be seen as contributing to a condition known as the "winter-over syndrome" (Strange and Youngman, 1971 *cited in* Palinkas, 2003). This syndrome is characterized by varying degrees of depression; irritability and hostility; insomnia; and cognitive impairment, including difficulty in concentration and memory, absentmindedness, and the occurrence of mild hypnotic states known as "long-eye" or the "Antarctic stare." These symptoms have been observed to increase over time, peaking at mid-winter, and then declining during the third quarter of winter-over duty, only to increase again at the end of the winter-over period.

The personnel stationed can also develop psychiatric disorders and depressive symptoms due to long term of residence in a non indigenous environment (Palinkas, Glogower, Dembert, Hansen & Smullen, 2004). Anxiety is one of the most common reactions to any change in the environment of an individual and normal amount of anxiety is also essential for the survival as it triggers flight/ fight response of an individual and can help him or her in the time of danger. This type of anxiety can be managed by the individual if the levels are normal but abnormal form of anxiety can disrupt the social, occupation and personal life of an individual (Rector, Bordeau, Kitchen & Massiah, 2005). Anxiety is characterized by occurrence of sudden tension, fear, worry about any situation or task and the individual certain physiological reactions in the form of difficulty in breathing, palpitations, dilation of pupils, sweating (Rector, Bordeau, Kitchen & Massiah, 2005).

In most of the available literature in polar psychology, focus has been placed on the development of depressive symptoms and mood disorders, but the development of anxiety is one of the most initial reactions and if not taken care at the initial stage can lead to severe psychiatric symptoms. Hence this study highlights the anxiety levels of the expeditioners.

Within the above backdrop this study has the following objective:

- To administer and ascertain anxiety levels among the expeditioners.

## METHOD

**Sample:** A total number of 17 subjects participated in this study. The respondents, for this study, belonged to the 19<sup>th</sup> Indian Scientific Expedition (2000-2001) who stayed in Indian base at Antarctic on the winter over duty. All the subjects were provided with Sinha's Comprehensive Anxiety test for the purpose of extracting relevant information from the subjects.

**Tools:** Sinha's Comprehensive Anxiety Test was provided to the subjects. The description of the tool is presented below:

- *Sinha's Comprehensive Anxiety Test (SCAT):* SCAT developed by Sinha & Sinha (1995), consisted of total number of 90 items to be responded as either yes or no on each items. The scoring of the items were done as per SCAT manual's direction, where only yes answer scored 1 each and answers of no were eliminated or scores zero and then all the scores were to be added to form a comprehensive anxiety scores.

**Procedure:** The test was administered after people had settled down at the Indian base and had been allotted their duties and responsibilities. One test was administered at a time with detailed explanation provided. Informed consent was taken from each subject. A self-chosen code was decided by respondents and a separate file was maintained by the investigator for each participant. Further, the investigator maintained a personal observation dairy. Also, confidentiality of their response was assured.

## RESULTS

The results of the study are presented in appropriate tables and figures for the winter-over sample. The data was analyzed using correlation analysis, mean and percentage wise distribution.

**Demographic Profile:** The mean on the personal information concerning the subjects from the winter-over sample is presented in the table number 1. The table depicts the average age of the group, which is found to be 40.08 years. Further, 12.5% of the sample were found to have completed Post Graduate and above education in various faculties. Similarly, 12.5% of the subjects were found to be educated up to higher secondary and equal percentage of sample reported to be educated till class 10<sup>th</sup> & below. In addition, 29.2% of the sample was graduates in various streams of education and 33.3% were diploma holders in different discipline (Table 1).

**Table 1: Characteristics of Sample**

Characteristics of Sample	Winter Team (N= 17)
Age (in Mean)	40.08 years
<b>Educational Qualification</b>	
Post Graduate & above	12.5%
Graduate	29.2%
Diploma	33.3%
Higher Secondary	12.5%
10 <sup>th</sup> & below	12.5%

**Anxiety Profile:** The results anxiety profiles are presented in table 2. The result depicts the mean score of 12.82 for the anxiety scale. The anxiety score is found to be low thus indicating low level of anxiety among the respondents.

**Table 2: Anxiety Scores of the Respondents**

Scales	M	SD
Anxiety	12.82	3.82

## DISCUSSION

The results of the study indicate that the subjects experienced low level of anxiety which can be attributed to a variety of factors, and each of the factors are more or less similar with regards to their personal profile. The extreme climatic condition of Antarctica precludes evacuation during winter. Problem may arise due to the adjustment needs in those conditions. The results clearly points out that each member is exposed to some amount of stress, however, at minimal level. This may be due to the fact that the subjects were exposed to the extreme conditions for a longer duration, in turn, helping them to adjust to the climatic conditions prevailing at Antarctic. It has been reported earlier that prolonged isolation and hazardous environment act as stressors for precipitating psychiatric problems (Gunderson, 1974; Palinkas, 1992). However, being isolated at the Antarctica for almost a year might have helped the subjects to make an adjustment to the conditions prevailing there, thus experiencing low level of anxiety.

Low level of anxiety also indicates that the subjects were getting adequate emotional and social support from their crew members. This result seems to disclose the fact that the subjects adjusted the extreme living conditions and support was adequately met. Furthermore, it may be also be assumed that the subjects had already adjusted to the demanding and hazardous conditions of the Antarctica before the assessment was undertaken.

In the present study, no serious mental or physical ailments were reported. This also supports the above notion that the subjects were able to cope with the hazardous and demanding conditions of the Antarctica. Once the adjustment is of optimal level, the experience of stress is supposed to be low. Perhaps, proper emotional support by other members of the expedition also played an important role in adjustment to the monotonous conditions prevailing at the Antarctica.

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