Personality characteristics in mountaineers and BASE jumpers – are they really crazy?

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CRAZY

From the 16th Century
...originally meant ‘to break in pieces, shatter’

...Mad, especially as manifested in wild or aggressive behavior

Medico-legal definition
...mental illness of such a severe nature that a person cannot distinguish fantasy from reality, cannot conduct her/his affairs due to psychosis, or is subject to uncontrollable impulsive behavior.
Break into pieces, shatter
wild behaviour, fantasy from reality
Stage 1

Determining accident and fatality rates experience and personality characteristics in a group of climbers and BASE jumpers

## MORTALITY

<table>
<thead>
<tr>
<th>Death Rate (10yrs)</th>
<th>Mental Illness</th>
<th>BASE Js (68)</th>
<th>Climbers (49)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10%</td>
<td>0.04%/ jump 1.7%/ year 17%</td>
<td>4.3%/ &gt;7K 8%/ 5 years 16%</td>
<td></td>
</tr>
</tbody>
</table>
TCI

Temperament

1. N.S. (Activating/Exploratory)
2. H.A. (Inhibitory/Aversion to risk)
3. R.D. (Maintaining/positive rewards)
4. P. (perseverance/ resistance to extinction)
Character

1. S.D. (Autonomy/ willpower)

2. C. (Integral part of humanity/society)

3. S.T. (Connectedness to universe/nature)
<table>
<thead>
<tr>
<th></th>
<th>Normal (181)</th>
<th>BASE Js (68)</th>
<th>Climbers (49)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS</td>
<td>19.0(5.8)</td>
<td>22.8(5.7)*</td>
<td>21.6(5.2)*</td>
</tr>
<tr>
<td>HA</td>
<td>12.4(6.9)</td>
<td>7.9(6.3)**</td>
<td>9.06(4.7)**</td>
</tr>
<tr>
<td>RD</td>
<td>22.1(6.1)</td>
<td>18.1(6.8)*</td>
<td>19.9(6.2) *</td>
</tr>
<tr>
<td>P</td>
<td>31.3(11.5)</td>
<td>28.1(8.3)</td>
<td>27.4(8.0)</td>
</tr>
<tr>
<td>SD</td>
<td>32(7.0)</td>
<td>33.4(6.7)*</td>
<td>35.5(5.0)*</td>
</tr>
<tr>
<td>C</td>
<td>33.6(6.7)</td>
<td>33.7(5.6)</td>
<td>34.1(4.6)</td>
</tr>
<tr>
<td>ST</td>
<td>28.9(9.74)</td>
<td>18.8(10.5)**</td>
<td>17.4(10.4)**</td>
</tr>
</tbody>
</table>

(* = p < 0.05, ** = p < 0.001)
Stage 2

Personality characteristics (TCI), experience and physiological stress responses (alpha amylase and cortisol) to BASE jumping at a single event, on Bridge Day 2014
TCI – BASE J vs Controls (77)

<table>
<thead>
<tr>
<th>TCI dimension</th>
<th>Mean T-score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novelty Seeking (NS)</td>
<td>56.3</td>
<td>11.5</td>
</tr>
<tr>
<td>Harm Avoidance (HA)</td>
<td>43.6</td>
<td>9.2</td>
</tr>
<tr>
<td>Reward Dependence (RD)</td>
<td>45.4</td>
<td>9.3</td>
</tr>
<tr>
<td>Persistence (PS)</td>
<td>52.9</td>
<td>8.5</td>
</tr>
<tr>
<td>Self-directedness (SD)</td>
<td>54.8</td>
<td>9.3</td>
</tr>
<tr>
<td>Cooperativeness (CO)</td>
<td>52.5</td>
<td>9.2</td>
</tr>
<tr>
<td>Self-Transcendence (ST)</td>
<td>42.7</td>
<td>11.6</td>
</tr>
</tbody>
</table>
Class 1 [36.4%] – “masterful” (NS, ha, SD)
Fearless self-confidence, highly experienced (lots of jumps) and low sympathetic arousal (alpha-amylase)

Class 2 [33.7%] – “trustful” (ha, SD, CO)
Relaxed, collegial, trusting with intermediate experience and low HPA reactivity (low cortisol pre-jump)

Class 3 [29.9%] – “courageous” (HA, sd, st, P)
Anxious but determined with little experience and high sympathetic arousal (alpha-amylase)
CONCLUSION

BASE Jumpers highly resilient – self-directed, persistent and risk-taking

Heterogeneous in their motives and stress reactivity in the HPA and sympathetic stress systems

High anxiety (HA) and social detachment (rd) – high cortisol reactivity

Persistence (P) high alpha amylase
EXPERTS CALL IT THE DEATH ZONE.
CLIMBERS CALL IT BEING ALIVE.