We are watching you!
Type D personality is associated with greater blood pressure, heart rate and hormone responses in socially stressful situations
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Introduction
➢ Acute mental stress, such as public speaking
   Activation of:
   • Cardiovascular system: ↑ heart rate (HR) & ↑ blood pressure (BP)
   • Stress hormone release: ↑ cortisol

➢ Large cardiovascular reactions to stress have been associated with high blood pressure and cardiovascular disease development.

➢ Personality is linked to how we interpret stressful situations so therefore how our body responds.

Fig 1. Components of Type D Personality

Social Inhibition (SI)
Linked to ...

High blood pressure
Heart disease

➢ Mixed evidence between Type D personality and stress reactions. Potentially due to:
   Amount of social evaluation during the stress

Purpose and Aims
➢ Compare the cardiovascular and cortisol responses in Type D and non-Type D individuals under conditions of high or low social evaluative stress to see if this provides the link to high blood pressure and heart disease.

Method
2300 University students Type D Questionnaire (DS14)

Non-social or Social Stress Condition

Table 1. Participants characteristics

<table>
<thead>
<tr>
<th></th>
<th>Non-social Stress</th>
<th>Social Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Type D</td>
<td>Non-Type D</td>
</tr>
<tr>
<td></td>
<td>Mean (SD)/N (%)</td>
<td>Mean (SD)/N (%)</td>
</tr>
<tr>
<td>Number (n=130)</td>
<td>31 (24)</td>
<td>30 (23)</td>
</tr>
<tr>
<td>Gender (females)</td>
<td>18 (58)</td>
<td>14 (47)</td>
</tr>
<tr>
<td>Age (years)</td>
<td>21.5 (2.41)</td>
<td>19.9 (1.53)</td>
</tr>
</tbody>
</table>

Results
➢ Stress tasks caused significant increase in BP and HR

<table>
<thead>
<tr>
<th></th>
<th>Rest</th>
<th>Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systolic BP (mmHg)</td>
<td>103.9 (9.49)</td>
<td>118.8 (15.13)</td>
</tr>
<tr>
<td>Diastolic BP (mmHg)</td>
<td>55.6 (5.67)</td>
<td>55.6 (7.50)</td>
</tr>
<tr>
<td>HR (bpm)</td>
<td>65.1 (10.31)</td>
<td>78.4 (14.66)</td>
</tr>
</tbody>
</table>

Fig 2. Systolic BP:
Type D individuals in the social stress condition had the greatest response, with lower responses in non-social condition

Fig 3. Diastolic BP:
Type D individuals in the social stress condition had the greatest response, with lower responses in non-social condition

Fig 4. Heart rate:
Type D individuals in the social stress condition had the greatest response, with lower responses in non-social condition

Fig 5. Cortisol:
Only group to increase their stress hormone levels were the Type D individuals in the social condition

Discussion
➢ Type D individuals in social stress condition:
   • Greatest blood pressure and heart rate responses
   • Only group to increase their cortisol levels

Why do Type D individuals have the greatest reactions to social stress??

Social Inhibition
Hiding emotions in social situations = ↑ physical reactions of the body

Negative Affect
↑ intensity of negative emotions in social situations = ↑ hiding of emotions

Given that most stressors in life include social aspects:
   e.g. public speaking, job interviews
The exaggerated BP, HR and cortisol responses in Type D individuals under these conditions

➢ Future research: Help reduce stress through interventions

References

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