

# FOCUS ON RESEARCH

## **NEGATIVE AFFECTIVITY, SOCIAL INHIBITION, PROSPECTIVE THINKING AND ROLE AND GOAL INVESTMENT IN CARDIAC DISEASE: PROGNOSTIC IMPLICATIONS**

### **Researchers**

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### **Aim**

Type D personality (the combination of high negative affectivity (persistent low mood) and high social inhibition) is predictive of poor clinical outcome and psychological distress in patients with cardiac disease. However, the mechanisms by which Type D affects health are unknown. The current project had three key aims:

- (1) To investigate the stability and prevalence of Type D in the UK
- (2) To investigate if Type D predicts outcome in post-myocardial infarction (MI) patients
- (3) To investigate potential mechanisms which explain how Type D causes ill-health.

### **Project Outline/Methodology**

Five studies were conducted. In Studies 1-3, healthy participants completed measures of Type D personality, health-related behaviour, social support and neuroticism. In Study 4, healthy participants completed an experimental stressor with cardiovascular monitoring. Study 5 was a prospective study in which 131 MI patients completed measures of personality, illness cognitions and outcome (quality of life, disability, mood and medication adherence) at two time points, 3-5 days post-MI, then again 3 months later.

### **Key Results**

One in 3 Scottish MI patients were found to have a Type D personality. In addition, Type D was predictive of adherence to medication, quality of life, and disability in post-MI patients after controlling for mood, demographics, and clinical factors. Five possible mechanisms (health-related behaviour, medication adherence, social support, cardiovascular reactivity, and illness perceptions) by which Type D may lead to adverse outcome in cardiac patients were identified.

### **Conclusions**

This is the first study to demonstrate that Type D personality is an important construct in MI patients from the UK, with 1 in 3 patients found to have a

Type D personality. Furthermore, Type D was found to be a stable predictor of post-MI outcome, even after controlling for established demographic and clinical risk factors. The relationship between Type D and adverse outcome may be explained in the following ways; Type D individuals (i) perform fewer health-related behaviours (e.g. exercise, eating healthily); (ii) experience lower levels of social support; (iii) exhibit heightened cardiovascular reactivity in response to stress; (iv) are less likely to take their medication, and (v) possess maladaptive illness perceptions, ie they tend to believe that their illness will last longer and have more serious consequences compared to non-Type D patients.

### **What does this study add to the field?**

Although previous research has identified an important role for Type D in the prognosis of cardiac patients this is the first study to identify a relationship between Type and post-MI medication adherence and disability. In addition, we have uncovered five possible mechanisms to explain the established link between Type D and poor cardiac outcome.

### **Implications for Practice or Policy**

By identifying the possible mechanisms which may be responsible for the link between Type D and poor prognosis it may be possible to identify how this risk factor can be modified. This is key to informing intervention trials in order to enhance secondary prevention in these high-risk patients.

### **Where to next?**

Evidence is accumulating that Type D is an important risk factor in patients with cardiac disease. Further research is therefore warranted to identify the mechanisms responsible for the toxic effect of Type D on health. To this end, the patients in this study will be followed up at 2 years in order to assess the long-term impact of Type D on post-MI outcome, and the underlying mechanisms of effect.

### **Further details from:**

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