



## An overview of supporting literature.

Difficulties with cardiac related anxiety are estimated to affect over 30% of people who attend cardiac clinics (Kuhl et al., 2006; Mampuya, 2012; Pogosova et al., 2015). Persistent difficulties with cardiac related anxiety in cardiac patients increases the likelihood of suboptimal rehabilitation outcomes (Pogosova et al., 2015).

When psychological interventions are built into cardiac rehabilitation programmes to address stress and anxiety a significant improvement in rehabilitation outcomes is seen, compared to when psychological treatment components are not included (Blumenthal et al., 2016). The provision of evidence-based psychological treatments informed by Cognitive Behavioural Therapy (CBT) is understood to optimise physical rehabilitation outcomes by removing barriers to exercise (Mampuya, 2012). CBT is a highly effective treatment for health anxiety in cardiac patients and patients attending other medical specialties, with lasting benefit over five years (Tyrer et al., 2017). Addressing cardiac related anxiety using CBT has been shown to improve quality of life and reduce cardiac related symptoms in patients following a period of cardiac ill health, leading to the consensus that CBT is an effective treatment to address anxiety in cardiac patients and should be considered a core aspect of standard clinical care (Reavell et al., 2018). Indeed, guidelines issued by the American Heart Association recommends that psychological interventions to address cardiac related anxiety should constitute a standard component of rehabilitation following a period of cardiac ill health (Leon et al., 2005).

Unfortunately, access to evidence-based psychological treatments to address cardiac related anxiety remains limited and psychological treatment programmes to address cardiac anxiety are not routinely available to patients (Mampuya, 2012; Messerli-Bürky et al., 2012).

Video-based psychological treatment programmes are one way of addressing this barrier to access and evidence suggests that internet-based CBT (where content is split into weekly sessions and delivered online) achieves large effect



sizes for a range of different psychological health difficulties. Internet-based CBT has been found in large meta-analyses to be effective, acceptable, and practical across a range of anxiety disorders (Andrews et al., 2018).

Recent studies of internet-based CBT specifically developed to address cardiac anxiety have found significant improvements in cardiac anxiety compared to a ‘treatment as usual’ group, both following completion of the programme and at 12-months following programme completion (Thesen et al., 2022). Similar improvements were observed upon health-related quality of life (Thesen et al., 2022). In a different study, internet-delivered CBT for cardiac patients found significant improvements in generalised anxiety, levels of physical activity and cardiac related anxiety (Schneider et al., 2020), adding to existing literature supporting the use of internet-based CBT programmes to improving the clinical outcomes of cardiac patients (Kuhl et al., 2006).

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