Anxiety and Depression

Anxiety

Depression

Psychological Measures and the Heart Manual

Anxiety and Depression

Emotional upset

Emotional upset is a common response for a patient who is newly diagnosed with a heart condition. Partners, friends and family may suffer considerable upset too. The Heart Manual programme recognises this and is designed to help the cardiac patient and others cope with stress, anxiety and depression. Depression is prevalent among 20% of people with a chronic physical health problem. Those with a chronic physical health problem, such as coronary heart disease are two to three times more likely to be depressed than people who are in good physical health (National Institute for Health and Clinical Excellence, 2009).

COVID-19

Mental health challenges, including anxiety and depression, increased as a result of the COVID-19 pandemic and its associated isolation practices (O'Neil et al., 2020). Findings of a recent audit highlighted that the Heart Manual Programme provided psychological support and reassurance to patients throughout this difficult time.

Implications of psychological distress for CHD patients

There are many reasons why anxiety and depression should be treated seriously. Those who have both depression and a chronic physical health problem are more likely to have greater functional impairment than if they had depression or a physical health problem alone (National Institute for Health and Clinical Excellence, 2009). Psychological distress is associated with early mortality among cardiac patients (Kachur et al., 2016; Lee & Singh, 2020; Stewart et al., 2017), low return to work (O'Neil, Sanderson & Oldenburg, 2010), health related quality of life (Huffman, Celano & Januzzi, 2010) and emergency hospital admissions (Guthrie et al., 2016). In severe cases patients may attempt suicide.

Anxiety

What is anxiety?

Anxiety is a healthy, normal reaction to a threat or danger. This reaction is good in the right place at the right time.

Anxiety can be manifested in these ways:

Physiological	Cognitive	Emotional	Behavioural
• Feelings of sickness/nausea • Rapid heartbeat • Dizziness • Feeling faint • Breathlessness • Choking feelings • Cold, clammy hands and feet • Cold sweats • Rapid breathing • Drymouth • Tense/sore muscles • Headaches • Increased need to use the toilet	• Difficulty concentrating • Inability to make decisions • Worrying thoughts	• Loss of confidence • Feeling you are going mad • Feeling you have a serious illness • Feeling bad tempered	• Nagging • Always rushing • Flaring up • Increased substance use • Change in eating patterns

People may not have all these symptoms but these are some of the ways they can be affected.

The right time for anxiety

Anxiety is also called the 'fight or flight response' (Cannon 1929); it is one of our in-built mechanisms to help us escape from danger.

For example imagine you are crossing the road, a speeding car appears to be heading straight for you. Your immediate thoughts are that you are in danger. Your brain sends a message via the hypothalamic – pituitary – adrenal (HPA) axis that you are in danger. The stress hormones, which include adrenaline, then flood your body.

This causes:

- The blood supply to be directed away from the stomach to the muscles, which are needed to run away from danger

- The heart to beat faster to allow you to escape

- Breathing to get deeper to supply more oxygen to the brain

- Saliva production to stop

- Small veins in the hands and feet to close to allow more blood to the main muscles

- Sweat to be produced to cool you down as you run

- Muscles to tense up ready for the exertion

All these responses aid you to get out of the immediate danger.

The wrong time for anxiety

The wrong time is when there is no physical danger to escape from. However, thinking that you are in danger will activate the same HPA response and produce the same physical symptoms. In turn these unpleasant symptoms may prompt further 'danger thoughts' and even more physical effects. If you are in this anxious state you become hyper vigilant and highly sensitive to bodily sensations. It is easy then to become trapped in a vicious circle of:

Danger thoughts and unpleasant symptoms

Danger
Thoughts

Unpleasant
Symptoms
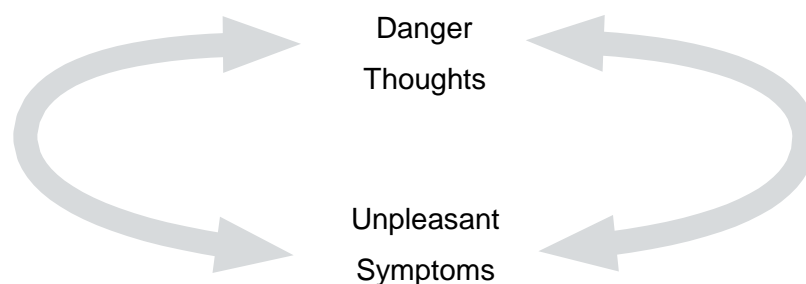
Different kinds of anxiety

Panic attack

For some people the vicious circle goes round faster and faster, increasing the anxiety rapidly, with the physical symptoms appearing worse by the minute. This is known as a panic attack.

As the danger thoughts produce more and more symptoms, people may feel their heart pounding, may believe they are having a heart attack, feel like they are about to faint, feel the need to escape (from what exactly, they may not know), and have a sense of impending doom. They feel they may pass out or die or that they are going mad.

However, in a panic attack, they will not die and they will not faint. A panic attack cannot damage their health. It will stop within a few minutes or within the hour. People simply run out of the adrenaline needed to sustain the panic attack.

Panic attacks may appear to come from nowhere for no apparent reason, as people may not be aware of the thoughts that trigger them. There are a number of ways to control and prevent attacks: these may involve relaxation, breathing retraining and challenging the danger thoughts.

Anxiety state

For some people the anxiety never reaches the level of a panic attack. They may feel tense and anxious most of the time. This is called anxiety state. People in an anxiety state may have a number of symptoms which may change according to different situations. Individuals may have different experiences of the various symptoms. This state can also lead to a change in behaviours such as sexual activity, eating, alcohol use, and smoking. People may sleep badly and be unable to concentrate on pleasurable activities. There may experience ongoing aches and pains.

Phobias

For some people the anxiety is focused on specific objects or activities, such as going out (agoraphobia), being in lifts or other enclosed spaces, animals, or eating in

public. This kind of anxiety is known as a phobia. Exposure to these feared objects or situation leads to anxiety or a panic attack.

Avoiding the source of the anxiety will make matters worse. There are cognitive behavioural techniques available that are very successful in curing or reducing the phobic anxiety: these include relaxation techniques and challenging negative thoughts. Both these techniques are part of the Heart Manual Programme and can be used to deal with the anxiety that may follow a cardiac event or CHD diagnosis.

Screening for anxiety

The Hospital Anxiety and Depression scale (HADS) (Zigmond and Snaith, 1983) is currently used to screen for anxiety. Moderate or severe scores should be referred to a clinical psychologist or other relevant health professional who can provide a full diagnostic consultation. Anxiety disorders are common and are often unrecognised and untreated, but there is no single validated diagnostic screening tool that is recommended by NICE (2011) (National Institute of Health and Clinical Excellence 2011).

Although not as widely used as HADS, some health professionals use the Cardiac Anxiety Questionnaire (CAQ) (Eifert et al., 2000) which is designed to measure heart-focused anxiety (HFA). It is a 18-item self-report inventory scored on a 5-point Likert scale ranging from 0 (never) to 4 (always). It measures fear of heart sensations, avoidance of physical activity due to fear of eliciting heart symptoms, and monitoring/attention of heart-related sensations. The CAQ has been found to be a reliable and valid instrument to assess cardiac anxiety (van Beek et al., 2012).

Depression

What is depression?

Depression can be manifested in 4 main ways:

Physiological	Cognitive	Emotional	Behavioural
• Low energy • Changes of weight	• Thinking negatively about oneself, others, the future and the world • Poor concentration • Suicidal thoughts	• Feeling irritable • Feelings of guilt • Feeling worthless • Feeling uncared for • Lack of interest in what life has to offer • Feelings of loss and failure	• Crying • Not looking after appearance • Poor sleep patterns • Lack of exercise • Reduced sex drive • Avoiding other people

How do people become depressed?

How does low mood develop into depression? A cognitive-behavioural explanation highlights the importance of negative thinking. This type of thinking prolongs the low mood we can experience when faced with stressful life challenges such as an MI or being diagnosed with a cardiac condition.

There are a number of models of depression; one such psychological theory is based on cognitive theory (Beck 1970; Beck 1976). Beck maintained that depressed people have a style of thinking or schema that is based on negative beliefs. This way of thinking may have been triggered by stressful life events in the past. Often the outlook of the depressed individual is very inflexible and fixated on the negative. This overall negative perception of the world usually relates to oneself, events, the future and other people. With this negative thinking in place it is hard to think 'outside the box' in a positive way. People start thinking in an automatically negative way. The depressed outlook on life is sustained by the constant production of these 'automatic negative thoughts'. Also the individual is more likely to remember negative events than positive ones (Bower 1981). The problem of negative thinking is further maintained by behaviour such as avoiding others and possible physical symptoms such as low energy.
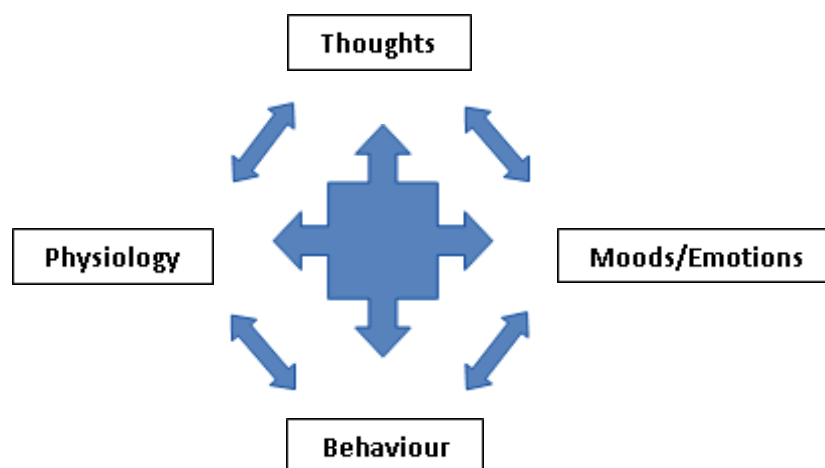

Figure 1 Cognitive Behavioural Model of Depression and Anxiety

For example, a person has had an MI or CHD diagnosis: this event has been appraised as a threat and this may be a trigger for a negative reaction. As a result

many later events are interpreted negatively which in turn brings about more low mood and depressive behaviour and physical symptoms which can lead into a cycle of further negative thinking, low mood, maladaptive behaviour and worrying symptoms (see Figure 1).

Using the Heart Manual to help with low mood or depression

Challenging negative thoughts

The Heart Manual is based on the cognitive behavioural approach which aims to help the patient challenge their negative thinking and behaviour. The Heart Manual makes this easier by exploring misconceptions via a quiz in the manual, suggesting positive thoughts to memorise and practise, e.g., 'Most people make a full recovery after a heart attack', 'My heart is not worn out', 'After a heart attack many people become stronger, fitter, and happier than they have been for years'. The manual also details how a person can identify and tackle negative thoughts (in part three of the manual). Also of course, your input as a facilitator is important. If the patient is reporting low mood and other worries, encourage the patient to take a note of these worries and discuss these with you.

Changing behaviour

Goal-setting and pacing includes planning for pleasurable activities such as hobbies and social activities. Engaging with other people and hobbies is an important way to lift mood and avoid depression. Therefore, remind the patient to plan for the good things in life when filling out the weekly record sheets in the manual.

Physical activity

The Heart Manual programme includes goal setting and pacing which supports the patient to increase physical activity. There is evidence that physical activity is beneficial in reducing depression. However, overall the levels of intensity and duration needed are unclear (Belverderi et al. 2018). Exercise training programmes with cardiac patients have produced significant improvements in depressive symptoms (Zheng et al., 2018). One meta-analysis concluded that individuals should at least undertake the minimum levels of daily exercise and energy expenditure (Barbour et al. 2007).

The key message is that exercise can be beneficial for both physical and psychological well-being. Patients should therefore be encouraged to build up their physical activity.

Measuring and managing depression

It is sometimes difficult to assess depression because of the overlap with the symptoms of acute myocardial infarction. For example fatigue, anhedonia, disturbed sleep, appetite disruption, and poor concentration may be a normal reaction to an MI, or the experience of being in hospital (National Institute for Health and Clinical Excellence 2009).

Background

After a heart attack, many if not most, people suffer from anxiety and low mood (depression). This can be true for their families as well. The reactions are quite understandable and, for the majority, short lived. However it is important to identify those people whose depression and anxiety does not lift. They may benefit from further support and/or psychological or medical intervention.

Administration

Patients will be more willing to fill out questionnaires if you tell them what they are for and what they mean. It is useful to remind people of the instructions because they don't always read them. In particular, mention the time period over which the questionnaire is to be scored. For example 'Read each item and place a tick in the box opposite the reply which comes closest to how you have been feeling in the past week'.

Some people deliberate for a long time before deciding on their response, or they may look to you for clarification of some items. In this case suggest that their first, or gut, reaction is fine. If they can't decide, ask them to choose the item nearest to how they feel.

If people mark more than one score for any item, simply taken the highest (or worst) scored response.

The Hospital Anxiety and Depression Scale (HADS) (Zigmond and Snaith 1983)

This is a 14 item scale which measures anxiety and depression (Figure 2). It yields two separate scores, one for anxiety and one for depression. It is specifically designed to be used with people who are physically ill.

The HADS is protected by copyright and is available to order on license from GL assessment (www.gl-assessment.co.uk). Check within your department first as it may be that it already has permission to use the HADS scale.

Scoring

The HADS yields two scores, one for depression and one for anxiety (Figure 2). Each item is scored from 0-3. Items 1,3,5,7,9,11 and 13 are totalled to obtain the anxiety

score. Items 2, 4,6,8,10,12 and 14 are totalled to obtain the depression score. Do not add these scores together.
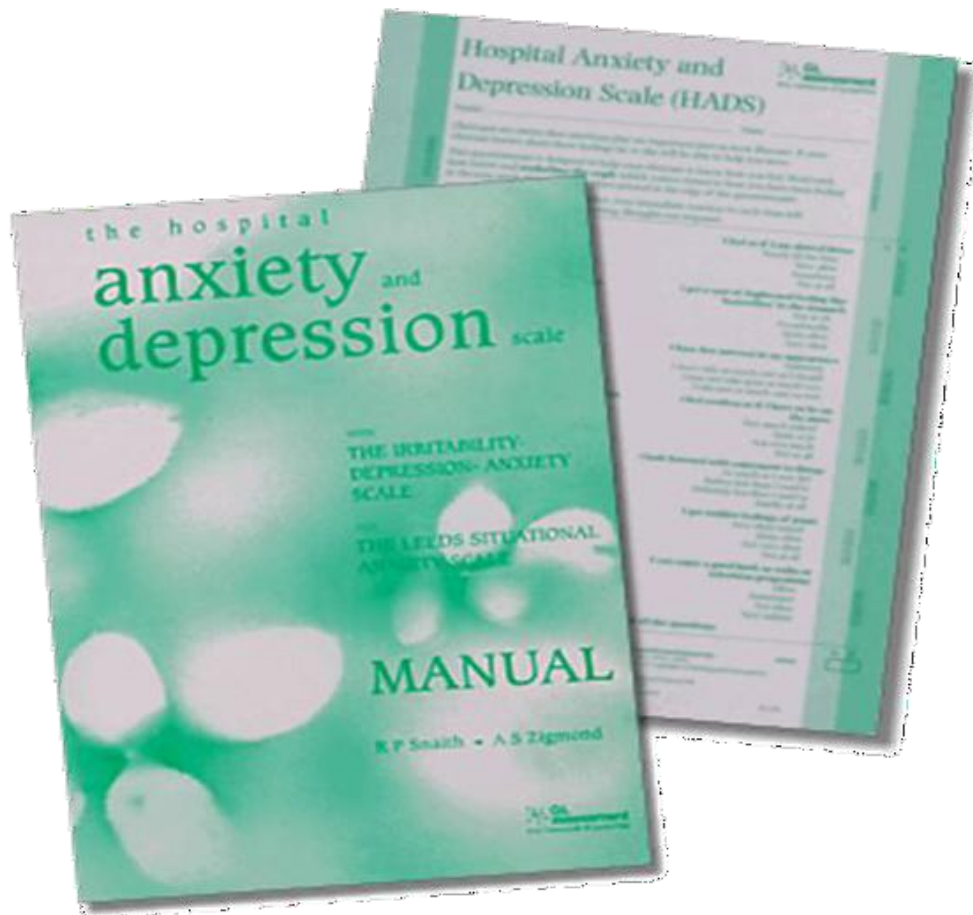

Figure 2 Hospital Anxiety and Depression Scale (Zigmond and Snaith 1983)

Interpreting the scores

A higher score indicates greater anxiety and depression.

Cut-offs

Anxiety or Depression Score	'Caseness'
< 8	Normal
8-10	Mild
11-21	Moderate to severe

Providing feedback of scores to patients

None of the questionnaires you are likely to use with the Heart Manual are difficult to score or interpret. Therefore it is possible to score up questionnaires on the spot and tell the patient what it means.

An example of feedback could be: *'Your score on the anxiety scale has come down quite a lot since my last visit. In fact your anxiety score is not much higher than normal now. That seems to fit with your comments today that you are feeling calmer. Your depression score is still a bit high, and you've said that you are still feeling a bit tearful and miserable. Most people do feel down after a heart attack and most get better within a few weeks. It's still early days for you. We'll keep an eye on how you're feeling for the next few weeks'.*

If their scores seem inconsistent with what the person is reporting, this can be a useful way of opening up a discussion.

For example: *'You have said that you're feeling fine and have had no problems since your heart attack. However your scores on these questionnaires suggest that you have been feeling a bit wound up and low. The questionnaires might be wrong, what do you make of it?'*

What to do when depression is persistent or severe

Although it is not unusual to experience psychological distress after a cardiac event, persistent anxiety or depression should not be considered
a normal response. Anti-depressant medication is recommended for those with
a straight forward diagnosis of depression, however a number of anti-depressant medications may be contra-indicated with cardiac patients. It is therefore suggested that those with moderate to severe depression are referred to those who can administer cognitive behavioural therapy, e.g., a clinical psychologist.

The National Service Framework for Coronary Heart Disease (Department of Health 2000) and NICE (2011) recommend the Hospital Anxiety and Depression Scale. NICE (2009), together with the NICE (2009) on depression in adults with a chronic disease also suggest the following screening questions to ask

*'During the last month have you often been bothered by feeling down, depressed or hopeless?' ***

*'During the last month have you often been bothered by having little interest or pleasure in doing things?' ***

SIGN 148 (Scottish Intercollegiate Guidelines Network 2016) suggest that it is particularly important that all those with coronary heart disease are screened with a validated tool e.g., HADS.

It is also important that you are familiar with the policies and procedures for referral for anxiety and depression within your own cardiac rehabilitation department as these may vary according to region. For example, in addition to moderate or severe anxiety or depression, some departments may recommend that a patient scoring at the high end of the mild range of anxiety and depression scores (e.g., a score of 9) are also referred for further intervention.

Anti-depressants are not recommended for the initial treatment of mild depression unless the depression complicates the health problem (NICE 2009) as the benefits do not outweigh the risks. Those who have a history of depression may benefit from medication in the presence of mild depression symptoms.

If a patient has significant language or communication difficulties, e.g., sensory impairments or learning disability, the 'Distress Thermometer' may be considered (Roth et al. 1998). Distress has been defined as an adjustment disorder with or without additional comorbid depression/anxiety (F 43) in the International Classification of Diseases, 10th edition (ICD-10) (World Health Organisation 2010). The Distress Thermometer measure uses a visual analogue and therefore may also be useful for those from minority groups where English is not the first language and there are language difficulties. The measure uses a single item question 'How distressed have you been during the past week on a scale of 0 to 10?' to be answered on a vertical scale of 0 to 10, onto which the patient places a mark (see

Figure 3 below). A score of 4 or more indicates a significant level of distress that warrants further investigation. However, other studies have indicated that a cut off of 6 or more is more consistent with HADS (National Institute for Health and Clinical Excellence 2011).

Figure 3 Distress thermometer

Some people may wonder why we don't use the distress scale all the time rather than the HADS. There are a number of reasons:

1. Most of the studies to date involving the Heart Manual have used the HADS, therefore it makes sense to use this to allow for meaningful comparisons of outcomes between areas and at different time points.

2. The HADS is also recommended and used in national audits, NACR (National Audit for Cardiac Rehabilitation) and QIS (Quality Improvement Scotland).

3. The distress scale may be good at ruling out depression or anxiety but may be poor at confirming diagnosis (Mitchell 2007)

4. HADS shown to be good at assessing symptom severity and caseness for anxiety and depression in a review of 747 papers (Bjelland et al. 2002)

5. The HADS scale does not include somatic items; this avoids confounding with the possible symptoms experienced by cardiac patients shortly after an MI or revascularisation.

* Note that the recommended questions on depression in the NICE guideline (National Institute for Health and Clinical Excellence 2009) are also the first two screening items in the Patient Health Questionnaire (PHQ-9), which the American Heart Association recommends be used for screening, referral, and treatment of depression and coronary heart disease (Lichtman et al. 2008).

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