

Cardiac Beliefs



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One of the main drivers for the first development of the Heart Manual was the realisation that patient beliefs about their heart attack (or cardiac beliefs) can have a major impact on individual recovery, both physical and psychological.

Since the initial introduction of the Heart Manual there has also been systematic research and a build up of evidence to support the impact of health beliefs on emotional health and coping with chronic illness, including heart disease ((Auer et al., 2016; Winfriend et al., 2017; Foxwell et al. 2013).

There is now evidence that it is possible to influence recovery outcomes post MI or revascularisation by changing person's beliefs, notably by addressing false or inaccurate beliefs such as cardiac misconceptions or perceptions of personal control, changability or consequence (Sigurdardottir et al. 2017). More research needs to be carried out to identify the most effective method e.g., counselling, educational or cognitive behavioural (Goulding et al. 2010), however The Heart Manual programme uses a combination of these methods. Our research outcomes and ongoing patient feedback data support the focus on addressing cardiac misconceptions to improve psychological and physical well-being in this population (Ranaldi et al 2018)

As mentioned in the HM training, the way people think about illness is fairly consistent whether we are considering a minor ailment such as a cold, or more serious conditions such as heart disease or cancer.

Faulty beliefs or cardiac misconceptions are also very common. Our experience of working in cardiac rehabilitation shows us that they tend to follow a pattern. For example, many people have misconceptions regarding: the cause and consequence of coronary heart disease; the extent to which the disease can be managed, and the timeline of the disease. Also many people have dismissed cardiac symptoms and misidentified them as non cardiac, e.g., symptoms of indigestion. Vice versa, others may mistakenly attribute non cardiac symptoms to a cardiac problem. Addressing cardiac beliefs therefore is an important step in reassuring cardiac patients and guiding individuals to cope and successfully self manage their condition.

Cognitive behavioural theory describes how people's thoughts and perceptions influence their behaviour. This can explain why someone changes their behaviour (actions), even if their thoughts (cognitions) are based on mistaken beliefs or misconceptions. For example, if a patient mistakenly believes they are continually at risk of sudden death because of their diagnosis of coronary heart disease, they may try to reduce their chance of this happening by changing their behaviour. This is usually resting and being careful not to 'overdo things'. They may give up enjoyable things, such as playing boisterous games with grandchildren, sporting activities, or they may take early retirement unnecessarily. Patients are often aware that they could do these things and may want to do them, but regard them as too risky. This can lead to a poor quality of life and even depression. Families often have the same misconceptions and perpetuate this unhelpful behaviour.

Patients who believe that they are very ill tend to monitor bodily sensations more closely than they did before in an attempt to spot and avert any new problems. Feelings of fatigue, breathlessness on exercise, or minor non-cardiac sensations from the chest, may be interpreted as a further deterioration in health. This often leads to a reduction in social and physical activity and an increased preoccupation with symptoms. This can become a vicious circle, especially if the patient becomes so unfit that they develop increasing symptoms of fatigue or angina.

Faulty attributions may lead to some activities being dropped whilst others are maintained or increased. For example, if a patient regards their work as the main cause of stress, and stress as the main cause of the heart attack, the obvious thing to do is to stop working. They may not regard smoking as dangerous as stress. Indeed they may regard the stress of trying to quit and the domestic rows it causes as more dangerous than smoking and therefore continue to smoke.

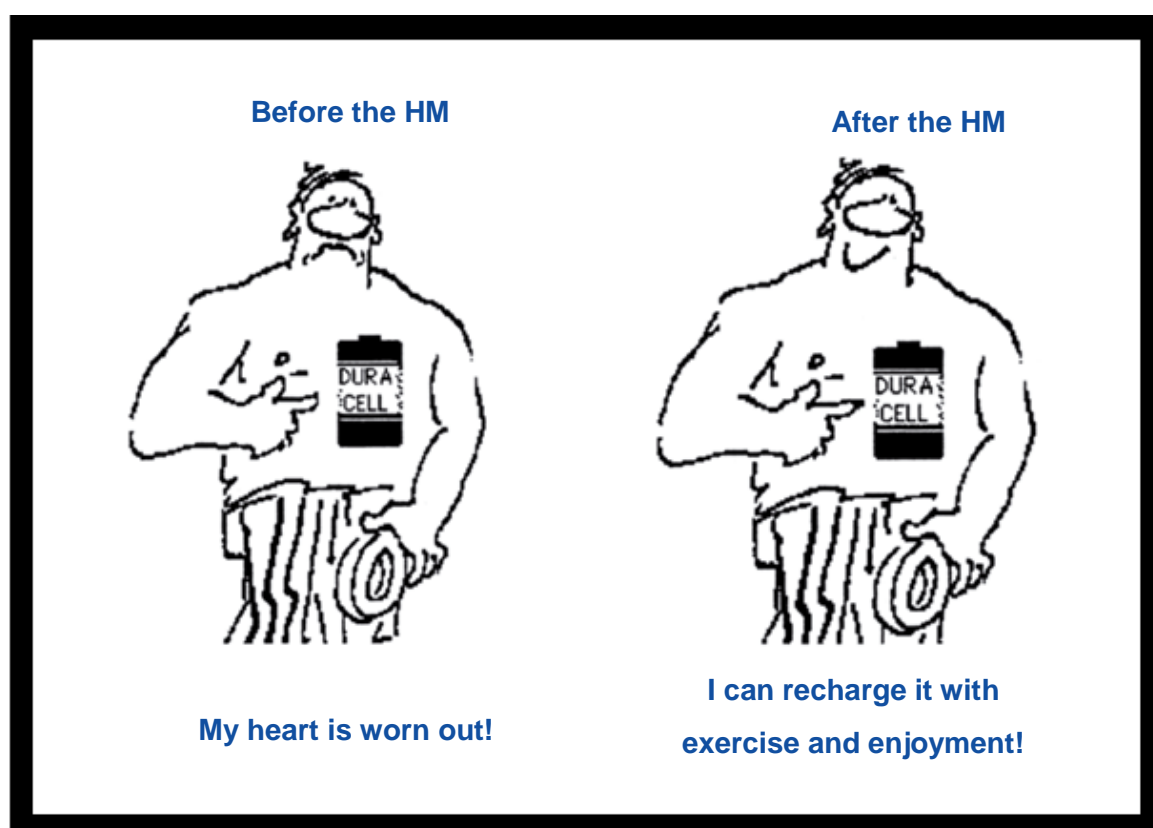
Of course, avoiding stress often has other consequences. For example, giving up work may lead to financial problems and a perceived loss of power within the family and feelings of guilt at the family's deteriorating circumstances.

Where possible, the role of the facilitator is to spot the patient's unhelpful thoughts and coping attempts and try to help change them to more useful ones. This is called a cognitive (thoughts) behavioural (actions) approach.

Re-framing

How do we go about this? Well, to take the first belief that heart attacks are caused by the heart being worn out by work, stress or worry. In developing the Heart Manual material with small groups of patients it became obvious that many of them regarded their hearts as being rather like batteries. They believe that you are born with enough charge to get through a normal life, but if you live too fast or if you over use the battery, it runs down too quickly and the heart attack is the first sign that there is very little left. If you believe this, the obvious thing to do is to economise by slowing right down and avoiding anything that might use it up.

If you want to change a person's idea it is no good simply contradicting them, this often strengthens the belief the person has. The best way to do it is to graft a new idea onto one that the person already holds – this is called re-framing. In this case, the battery idea can be re-framed as: 'Your heart may be like a battery but it is a rechargeable one.'



We spent a year working with small groups of patients to find out how to do this. The result is the Heart Manual and its relaxation programme. The research showed that

the HM reduced invalidism, anxiety and depression and that those patients who had used the HM rated themselves as much more recovered than those who had the control treatment.

Other cardiac misconceptions

'Part of my heart is dead now'

'The scar may burst'

Answer: Point out that scar tissue is not dead and it is stronger than normal tissue. Ask them if they have any other scars, tell them it is just like that. Only a small part of the surface of the heart was affected (if true). The rest of the heart quickly takes over. The heart is the strongest muscle in the body. The heart could pump for 20 lifetimes if necessary. The problem is in the arteries, not the heart. Within a few weeks the heart will be pumping as well as before the MI, unless you are avoiding activity.

'My arteries are all blocked up'

Answer: Not true, usually only one or two small patches are affected.

'My heart is worn out'

'Like an old person's now'

'Very little "juice" left'

Answer: You can't wear a heart out because exercise makes it stronger, just like any other muscle.

'If you've had one you'll have more until one kills you'

'Heart disease is always fatal'

Answer: The majority of people never have more than one. Many people, especially if they stop smoking and make changes, live a normal life span and die of something

else entirely. Lots of people have coronary artery disease. Your next door neighbour probably has it but they are worse off because they don't know. A whole series of heart attacks is very unusual. Each day that passes makes it less likely.

'Stress and excitement kill'

'Stress can kill'

'Shocks can cause heart attacks'

'Sex is dangerous after MI'

Answer: Point out that heart attacks after acute stress or sex are very rare. Normal levels of excitement are good for you. People have worn heart monitors during sex, which is no more stressful than cutting the grass or walking up two flights of stairs. It is good exercise and the pleasure reduces stress.

There are many more of these cardiac misconceptions and many more answers. Studying the Heart Manual and being familiar with the advice it gives will enable you to re-frame most of the patient's (and their families) worries.

'My work could kill me'

'My family could kill me'

Answer: Another belief that prevents patients getting on with life is that it was their work or stress in the family that caused the heart attack. If these patients continue to believe this then they may try to cope by withdrawing emotionally from the family or their partner, giving up work, or not putting their usual level of effort in if they do go back to work. Doing this often leads the family to believe that the patient is 'still not right' or to feel rejected. If they avoid work they feel guilty and miserable.

This is where the relaxation and stress management is so useful; it can help the patient to feel that they can now control this stress so that it doesn't get to them and therefore is not dangerous any more.

Misconceptions relating to revascularisation

People who have had revascularisation may overestimate its benefits. Rothberg et al (2010) found that patients over estimate the benefits of PCI in stable angina, as such, patients mistakenly think that PCI in stable angina lowers the risk of heart attack or associated mortality. According to the study, patients do not realise that PCI in stable angina does not reduce risk of MI or mortality, where there is a fixed obstruction and stable symptoms. By contrast, in the setting of acute coronary syndrome in which a cholesterol plaque ruptures and the artery is acutely occluded by thrombus, PCI offers a clear benefit over medical therapy in terms of mortality and reinfarction. This confusion suggests that the benefits of the revascularisation are neither well explained nor understood.

Revascularisation misconceptions can make lifestyle change more difficult to achieve. For example, people will be less motivated to change if they believe are cured or 'fixed' from the revascularisation. For the same reason they may also have less incentive to take medication on a regular basis.

'I'm fixed'

'Now I've had my angioplasty I can go on as I have before, I don't need to make any lifestyle changes'

'I don't see the point of taking this medication now I've had this procedure'

Answer: It's important to look after your arteries so they do not get blocked or narrowed in the future. Taking any prescribed medication regularly and making lifestyle changes will help lower your risk of having any future problems.

Plus if the patient previously had angina it is important to highlight: having your arteries fixed does not guarantee you for the rest of your life but the majority of people who help themselves, by changing some of the things they do, get rid of angina for good.

Some questions you can ask to help identify cardiac misconceptions:

- Would you like to tell me, in your own words what happened?

- What do you think caused your heart attack?
- What do you think is the most important change you can make to reduce your future risk?
- What do you know about heart disease?
- What did your consultant recommend that you do to get better now that you are home?
- What do your family think caused your heart attack?
- What concerns you the most about what's happened?

Behaviour and the Heart Manual programme

One of the key aims of the Heart Manual programme is to promote behaviour that will help the patient manage their coronary heart disease and bring about both physical and psychological improvements. Behaviour change may be a large component of the person's rehabilitation particularly if they have a number of risk factors to address.

Encouraging patients to approach activities they may be avoiding is known as a technique called behavioural activation. The paced approach advocated in the Heart Manual supports this as it encourage patients to initiate action, despite feelings of low mood and counteracts the natural feeling to withdraw or avoid an activity (Addis et al. 2004). The goal setting and pacing elements of the Heart Manual programme are discussed in the Health Behaviour Change chapter. However, it is important to recognise the powerful influence people's cognitions have on how well they can manage their condition in addition to behavioural approaches alone.

Beliefs & the Heart Manual Programme

Beliefs/cognitions about health and illness can determine how we behave and also how we cope psychologically.

Levanthal's Self-Regulation Model (Leventhal et al. 1980) provides a framework to understand how people make sense of illness and proposes two types of processes; cognitive and emotional responses which influence how a person copes with the illness.

The cognitive response (which are known as illness representations) is formed from the knowledge an individual has about an illness or from their own experience of the illness.

The emotional response may be directly from the initial perception of the symptom or as a result of the illness representations.

It is interesting to know that we tend to think about health and illness according to a consistent pattern. According to Levanthal's model of illness representations (Leventhal et al. 1980) there are five clear domains underpinning the way we make sense of illness. These fall into the following areas:

1. **Identity** - What is the illness
2. **Cause** - What caused the illness?
3. **Timeline** - How long will it last? Is it chronic or acute
4. **Consequences** - What will happen to me? How will this affect my life?
5. **Curability or controllability** - Is the illness curable or can it be controlled?

The overall model is illustrated in Figure 1. Here is an example of how the model is operationalised for a person we know has experienced cardiac symptoms that are later diagnosed as a heart attack:

A person experiences illness stimuli, for example, symptoms, which are chest pain, racing heart, sweating. These symptoms trigger thoughts about the symptoms in terms of ‘what do these mean or represent?’ For example:

1. “What is it? A heart attack?” **(Identity)**
2. “What has caused this? Smoking, stress?” **(Cause)**
3. “How long is this pain going to go on for?” **(Timeline)**
4. “Am I going to die?” **(Consequence)**
5. “Can I get this treated with medication or other treatment?” **(Curability or controllability)**

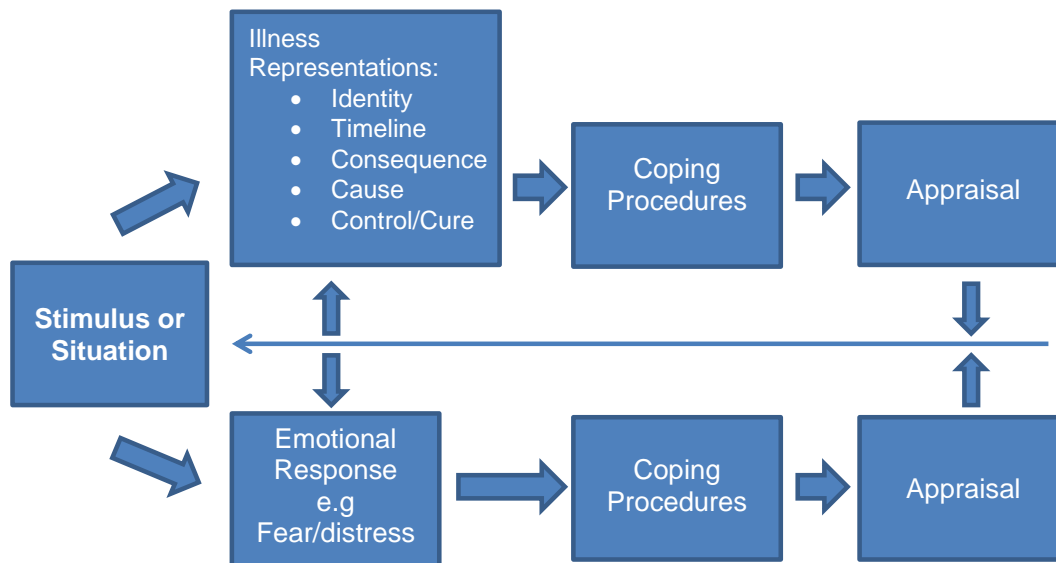


Figure 1 Leventhal’s Self Regulation Model

The illness representation will then initiate a coping response, for example, seeking medical attention or taking medication.

At the same time, the person will be responding emotionally to the stimuli/chest pain e.g., fear or worry. The emotional representation will influence the type of coping behaviour for managing the emotion. This may involve expressing ones feelings, e.g., telling others how they feel scared or suppressing – “I’m alright, it’s nothing”.

The self-regulation component of the model involves the coping behaviour and the appraisal of that coping behaviour: the person reflects on whether or not the adopted coping behaviour was successful or not and changes or ‘regulates’ this accordingly.

Coping

The Heart Manual and supporting effective coping

There is scope to intervene at all stages in order to help somebody cope successfully with a diagnosis of illness. The Heart Manual, with the assistance of the facilitator, can help the patient interpret symptoms more accurately and help the patient cope with a CHD diagnosis.

In the illness representation stage, accurate information on what coronary heart disease is, what caused it, what are the consequences, that it is a chronic disease, and that it is not curable but is controllable – all will help the patient cope more effectively.

At the coping stage, patients can be helped in a number of ways through goal-setting, challenging negative thoughts and relaxation exercises to help with the anxiety or low mood as a result of the emotional response (see the Anxiety & Depression chapter where this is discussed in more detail).

The facilitator can also help at the appraisal stage when reviewing the efforts and targets. Interventions based on this model have been shown to be effective.

Stress

Stress can be described as a transactional process (Lazarus and Folkman 1987) where a person is faced with a stressor e.g. a life event such as a heart attack. The

person appraises this situation as a threat that they either have the resources to cope with it or not. If the person perceives that they cannot cope with the threat then stress occurs. The Heart Manual programme can help the person have a more positive appraisal of their situation and support them to cope with it. Stress management is part of the weekly programme, starting with introduction to relaxation in weeks one and two and further ways of dealing with stress from week three onwards. Please see the chapter on relaxation for reducing stress in this training resource.

Relationships

Social support in the form of friends, family and work colleagues is an important influence on coping with stress and illness. However, it is the quality of the social support that is important. In other words, individuals need to be satisfied with the support they receive in order to benefit. At times it may be difficult for partners and families to understand what a patient who has had an MI or recent diagnosis of a CHD condition is going through, both psychologically and physically. Also, partners and families may have their own beliefs and misconceptions which may help or hinder the way a patient cope.

For example, at the coping stage of Levanthal's model, a partner or member of the family may want to 'wrap the patient up in cotton wool'. By doing so they discourage the patient to actively cope with their CHD and reduce risk factors, in the many ways outlined in the Heart Manual. For this reason, partners and families should be encouraged to read the manual as hopefully this will reassure them and address misconceptions that they hold.

References

Engel, G.L. 1977. The need for a new medical model: a challenge for biomedicine. *Science*, 196(4286), pp. 129-136.

Figueiras, M.J., Maroco, J., Caeiro, R. (2015). The relationship between illness perceptions and cardiac misconceptions after Myocardial Infarction. *Psychology, Health & Medicine*, 20(5), pp. 570-581.

Foxwell, R., Morley, C. and Frizelle, D., 2013. Illness perceptions, mood and quality of life: A systematic review of coronary heart disease patients. *Journal of Psychosomatic Research*, 75(3), pp.211-222.

Goulding, L., Furze, G. and Birks, Y., 2010. Randomized controlled trials of interventions to change maladaptive illness beliefs in people with coronary heart disease: systematic review. *Journal of advanced nursing*, 66(5), pp.946-961.

Auer, Auer, C.J., Glombiewski, J.A., Doering, B.K. Winkler, A., Laferton, J.A., Broadbent, E., and Rief, W. 2016. Patients' Expectations Predict Surgery Outcomes: A Meta-Analysis. *Int.J. Behav. Med*, 23(49), pp. 49-62.

Winfried Rief, W., Shedden-Mora, M.C., Laferton, J.A.C., Auer, C., Petrie, K.J., Salzmann, S., Schedlowski, M., and Moosdorf, R. 2017. Preoperative optimization of patient expectations improves long-term outcome in heart surgery patients: results of the randomized controlled PSY-HEART trial. *BMC Medicine*, 15(4), pp.2-13.

Lazarus, R.S. and Folkman, S. 1987. Transactional theory and research on emotions and coping. *European Journal of Personality*, 1(3), pp. 141-169.

Leventhal, H., Meyer, D. and Nerenz, D. 1980. The common sense representation of illness danger. In: S. RACHMAN, ed, *Contributions to Medical Psychology*. Vol II edn. New York: Pergamon Press, pp. 7-30.

Petrie, K.J., Cameron, L.D., Ellis, C.J., Buck, D. and Weinman, J. 2002. Changing illness perceptions after myocardial infarction: an early intervention randomized controlled trial. *Psychosomatic Medicine*, 64, pp. 580-586.

Rothberg, M.B., Sivalingam, S.K., Ashraf, J., Visintainer, P., Joelson, J., Kleppel, R., Vallurupalli, N. And Schweiger, M.J. 2010. Patients' and cardiologists' perceptions of the benefits of percutaneous coronary intervention for stable coronary disease. *Annals of Internal Medicine*, 153(5), pp. 307-313.

Sigurdardottir, A.K., Sigurlásdóttir, K., Kjartan Ólafsson, K., and Svavarsdóttir, M.H. 2017. Perceived consequences, changeability and personal control of coronary heart disease are associated with health-related quality of life. *Journal of Clinical Nursing*, 26 (21-22), pp. 3636-3645.