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Medical Decision Making

Decision making and coping in healthcare: The Coping in Deliberation (CODE) framework

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ABSTRACT

Objective: To develop a framework of decision making and coping in healthcare that describes the twin processes of appraisal and coping faced by patients making preference-sensitive healthcare decisions.
Methods: We briefly review the literature for decision making theories and coping theories applicable to preference-sensitive decisions in healthcare settings. We describe first decision making, then coping and finally attempt to integrate these processes by building on current theory.
Results: Deliberation in healthcare may be described as a six step process, comprised of the presentation of a health threat, choice, options, preference construction, the decision itself and consolidation post-decision. Coping can be depicted in three stages, beginning with a threat, followed by primary and secondary appraisal and ultimately resulting in a coping effort.
Conclusions: Drawing together concepts from prominent decision making theories and coping theories, we propose a multidimensional, interactive framework which integrates both processes and describes coping in deliberation.
Practice implications: The proposed framework offers an insight into the complexity of decision making in preference-sensitive healthcare contexts from a patient perspective and may act as theoretical basis for decision support.

1. Introduction

In the face of medical uncertainty, a number of healthcare decisions are dependent on personal circumstances, values and preferences of the patient [1]. These 'preference-sensitive' decisions may be complex, unfamiliar and difficult for patients and deliberation and coping processes in these situations are not well understood and rarely described in detail [2]. For preference-sensitive medical decisions, a detailed description of the deliberation and coping processes undergone by patients may be helpful to understand the different issues and concerns involved in these decisions and to improve the support available to patients in those situations.

There are a number of theories addressing decision making and coping processes in general and in healthcare settings in particular [3–11]. However, many of the more traditional theories do not consider the relationships between both processes, despite their interdependency in real life. More recently, researchers have begun to integrate coping and decision making theories and thereby describe more fully the processes individuals go through when making medical decisions [12,13].

Building on this body of work, we review decision making and coping theories with a view to develop a multidimensional, interactive framework of patient's coping responses in preference-sensitive medical decisions. We begin by examining the process of deliberation in healthcare settings, followed by a description of coping in response to health threats. Finally, we attempt to integrate both processes in one framework.

2. Deliberation in preference-sensitive medical contexts

Particularly in situations of equipoise when no clear medical guidance is available or when decisions are preference-sensitive, decision making in healthcare requires patient input [1]. The decision making process in such situations may be described in several stages, including pre-decisional deliberation, decision determination and consolidation ([14]; Fig. 1).

First, the health threat is presented in the form of a diagnosis, test result or risk assessment. This is followed by the introduction of choice, which is often a new and unfamiliar concept for patients. Next, options are described to, and interpreted by, patients, while preferences are constructed. Once preference construction has been completed to identify the preferred option, a decision can be made. At any point in this process, a patient may decide that s/he does not wish to make this decision for her/himself and prefers to transfer responsibility to her/his physician. A decision may be final

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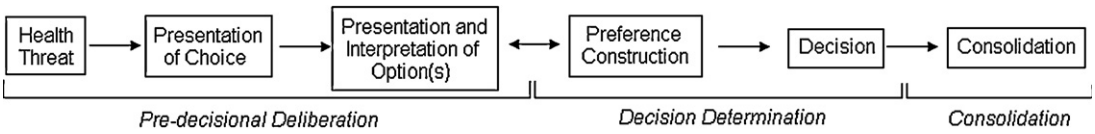

Fig. 1. The deliberation process in healthcare.

or may be revised at a later stage, deferred or avoided [15]. Consolidation of a decision will protect the decision maker from regret regarding her/his decision in the future [11,16].

Patients' reactions to a health threat and associated treatment or prevention options depend on a large number of contextual influences, such as personal beliefs, values and goals, past experiences, and social support [17]. Interpretations of information regarding the health threat and treatment or prevention options also depend on the current emotional and health state of the patient [7]. Emotions such as distress and anxiety can have detrimental effects on decision making and may lead to poor decisions [6].

When faced with decisions in healthcare, patients are often given a substantial amount of information that is new, relatively complex and threatening. Both, the quantity and content of this information may cause distress. It is likely that patients struggle to remember all the information they are given during a consultation [10]. Decisions are therefore based on the parts of the information that were understood and remembered, rather than exact numerical values and associations. Affect heuristics and intuition have also been considered important in medical decisions, especially those which do not allow the patient much time to consider the options, for instance when parents need to decide about amniocentesis [4,18].

Power et al. [13] developed a framework of medical decision making which considers the importance of emotion as a motivational aspect in decisions. "Cognitive-emotional decision making" distinguishes cognitive processes in response to the health threat and the decision from emotional processes in response to the health threat and the decision. This distinction allows consideration of each aspect of decision making in turn and of the motivational influence emotions have on cognitive processes relating to the health threat and the decision. For instance, feelings often influence risk estimates, as patients struggle to understand the concept of risk and therefore use their emotional responses to the threat to interpret their risk [19]. This can in turn influence decisions relating to that risk.

As distinguished by Loewenstein et al. [19], decision makers are experiencing *anticipatory* and *anticipated* emotions. Each phase of the decision making process in healthcare is influenced by both types of emotions. Anticipatory emotions arise in response to the immediate issue of being faced with a health threat and with the need to make a decision. Anticipated emotions are predicted emotions which the patient expects s/he will experience when one or more of the possible outcomes associated with the decision occur. These will form at the same time as anticipatory emotions. For instance a patient may imagine what a health threat might mean for their future and how they would feel about this as soon as they become aware of the threat. Furthermore, each option and associated outcomes will give rise to anticipated emotions.

As discussed by Wilson and Gilbert [20], individuals struggle to accurately predict both the duration and intensity of anticipated emotions. Therefore, emotions can lead to biases in the decision making process, as patients may base their decision partly on inaccurate predictions of their future emotions.

Regulating both anticipatory and anticipated emotions is an important motivational target in decision making [13]. Strong negative anticipatory emotions may lead to avoidant behaviour, which allows patients to temporarily regulate these emotions [15]. However, it has been noted that unless the situation is out of their control, non-avoidant behaviours lead to better long-term outcomes [21].

3. Coping with healthcare decisions

Patients who are required to play an active role in decisions about their healthcare have to cope with a number of different challenges and emotions. They need to cope with the fact that they are either ill or at risk of disease. Additionally, they need to come to terms with the fact that there are several options, and that they are being asked to take an active role in decision making. Further, they have to consider the different options and all their potential outcomes in order to make that decision.

Researchers have explored coping processes in healthcare, for example using Leventhal's Self-regulatory Model (SRM) of illness representations [9] and Lazarus and Folkman's Transactional Model of Stress, Appraisal and Coping [8]. An outline of the coping process as described by Leventhal and Lazarus and Folkman is presented in Fig. 2.

According to Lazarus and Folkman, once a threat has been presented, it is appraised in two steps [8]. During *primary* appraisal, the patient cognitively and emotionally assesses the health threat, its severity and its relevance to her/his life [8,9]. As proposed by Leventhal [9], cognitive appraisal of the health threat is based on the patient's understanding and interpretation of the threat's identity, cause, timeline, consequences and possibilities for control. During *secondary* appraisal, the patient assesses the coping resources at her/his disposal [8]. Coping resources may be problem-focused, designed to deal with the threat directly, or emotion-focused, designed to regulate the emotions experienced in response to the threat [22]. Some coping resources may provide

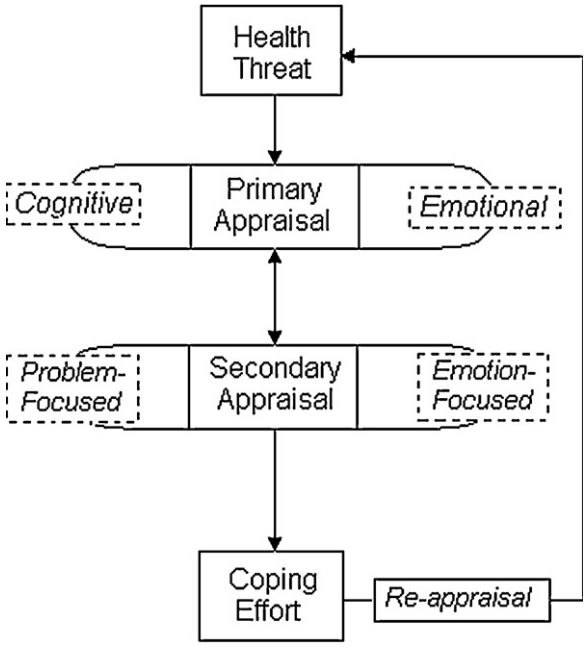

Fig. 2. An outline of the coping process as proposed by Leventhal and Lazarus and Folkman [8].