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A CONCEPTUAL FRAMEWORK FOR PATIENT–PROFESSIONAL COMMUNICATION: AN APPLICATION TO THE CANCER CONTEXT

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SUMMARY

We present a conceptual framework of one-to-one, in-person communication that occurs between a health-care professional and a patient. The framework is intended as a tool for organizing and summarizing relevant research but it can also help guide assessing the communication process and can help guide development of interventions to improve the process.

The framework includes four key components, with a focus on elements that can be modified. The first component is the focus of the interaction: each participant's communication goals. The second component consists of the participants themselves, each with five key attributes that determine, in part, how they address their goals. The third component is the communication process: each person both conveys messages and receives messages, and the messages themselves can be verbal, non-verbal, or silent. The communication process is iterative and extended in time with one act having an impact on following acts. Finally, the fourth component is the environment in which the communication occurs, both the immediate physical setting and the context beyond. Important aspects of the environment, identified as external factors, affect the communication process through their impact on the participants' attributes.

The framework builds on classic communication frameworks to which it adds unique elements. Some of its unique aspects include the prominent role of the participants' goals and its distinct recognition that messages are conveyed through silence. The framework serves as a common conceptualization of factors important to successful communication for the remaining review papers in this series and for future studies of practitioner–patient communication.

KEY WORDS: patient–professional communication; oncology; conceptual framework; cancer

INTRODUCTION

Research on communication between health-professionals and patients constitutes a large and growing literature, a situation that makes it difficult to acquire a coherent picture of current knowledge. One strategy to help readers integrate the literature is to review it within the context of a conceptual framework. This paper is the first in a series of five critical reviews of the literature on patient–professional communication in the oncology setting. In this paper, we describe a conceptual framework of the important components of the communication process and their relationships to one another. The framework provides the basis on which the literature findings can be synthesized and is utilized by the reviews in this series that follow.

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Applying a conceptual framework to a review of patient–professional communication literature can be helpful in a number of ways. The framework can assist integrating research findings into a coherent body of knowledge; identifying outcomes to be used in evaluating the success of a communication process; providing insight into apparent dilemmas; identifying potential interventions and providing guidance for their design. In addition, in contrast to developing a framework from the reviews (Ong *et al.*, 1995), applying an already developed framework can help identify knowledge deficits demanding further research.

The goal of this paper is to explicate a conceptual framework of patient–professional communication within the health-care setting, and to apply it to the cancer context specifically. Although we recognize that health-care communication is often much broader than one-to-one communication between a professional and a patient, and that the family and carers can play vital roles, the patient–professional dyad is central to the process. We focus initially on one-to-one, in-person communication between the patient and health-professional. We later discuss how the framework can be extended to include other participants.

We add three important features to existing frameworks that present communication as a process that is a function of the people participating. First, the notion that communication is intended to address goals of the participants, and that each participant has his/her own goals, is central to this framework. Although Street (2003) and others have explicitly included each participant's goals, they have not treated goals as a driving force underlying the communication. Second, we describe a unique set of attributes of the participants that are important to what and how each person communicates. Third, we identify three types of messages that are conveyed: two active and one passive, including the explicit role of silence or omission as a vehicle for conveying messages.

In addition to the unique aspects described above, this framework builds on many classic communication frameworks. For example, we separate conveyers of a message from receivers of the message (Shannon and Weaver, 1949). We present the communication process as a function of attributes of the people involved in the communication (Berlo, 1960; Riccardi and Kurtz, 1983; Ross, 1970); our attributes are most similar to those suggested in frameworks of particular components of the process such as developing a helping relationship (Brammer and MacDonald, 2003; Mead and Bower, 2000). As communication is an iterative, dynamic process occurring over time, we include 'feedback', where both the individual conveying a message and the person receiving it can reflect on what was conveyed (Miller, 1972), and 'feedforward' where one act of communication affects acts that follow (Dance, 1967). Finally, we present communication as a multidimensional process, including both a relationship and content (Northouse and Northouse, 1998), that occurs within a complex environment (Bloom, 1963; Street, 2003) that can have subtle but important impact on many aspects of the communication (Thorne and Paterson, 2001).

In the following section, we describe the components of the framework and how they are related. We then discuss how this conceptualization can aid in the assessment of the communication process and in guiding the development of interventions to improve the process.

FRAMEWORK DESCRIPTION

Overview

The framework is presented in Figure 1. It shows that the communication occurs between two people, the patient and the professional, to address both participants' goals. Each person's participation and goals for the communication are a function of their key attributes. The communication process involves each person both conveying messages and receiving messages. The communication process is extended in time with messages typically being conveyed then received—although there can be many concurrent messages—and with one act having an impact on following acts. Finally, the communication process occurs within an environment that includes both the current physical setting and the world beyond. Important aspects of the world beyond are identified as external factors that affect the communication process through their impact on the participants' attributes.

Framework component

Goals. Intrinsic to understanding communication between a health-professional and patient,

and to evaluating its success, is the notion that the communication serves to address particular goals of each participant (Figure 1). A goal is defined as the objective of the participants' communication effort, meaning that each encounter has particular goals. Each goal is an expression of one or more of the participant's needs. For example, the goal of a breast cancer patient to obtain medical information might express her need to make a treatment decision as well as her need to gain more control in her life (Lavery and Clarke, 1996). We recognize that people cannot always articulate their goals, as can happen in situations when an intense emotion underlies actions; in such cases, the communication process may include helping the participant discover his goals, as has been seen among newly diagnosed prostate cancer patients (O'Rourke and Germino, 1998).

Research on prostate cancer patients (Feldman-Stewart *et al*., 2000) indicates that a patient's goals may include understanding his health situation, planning his future, making a treatment decision and obtaining care. A professional's goals may include the oncologist's intent to provide care, and to enrol patients in cancer clinical trials (Albrecht *et al*., 2003). One potential source of frustration is conflicting goals either within an individual or between individuals (Freund and McGuire, 1999) and, as Roter (2000) suggests, part of the communication process may be negotiating which goals will be addressed.

We define 'primary' goals as those that catalyze the communication, e.g. the reason(s) the patient wants to meet the professional. Typically, participants will have several primary goals in any one encounter, although different goals can be forefront at different time points. The conceptualization of primary goals is central to evaluating the success of communication during an encounter. We argue that 'successful' communication is that which helps participants work toward their goals, while not necessarily fully realizing them. For example, a cancer patient may have a primary goal of obtaining information about his prognosis, and the professional may have a corresponding goal of informing the patient. The professional, however, may disclose this information in a first encounter, or may feel additional clinical evaluation is first required, or may extend the discussion over time until rapport with the patient is established. Success at the first encounter could thus be measured in terms of the goal being furthered, but not necessarily fully realized.

We also conceptualize secondary or 'enabling' goals as steps or states that facilitate achieving primary goals. An enabling goal may serve one or more primary goals. For example, an oncologist's desire to determine how a lung cancer patient

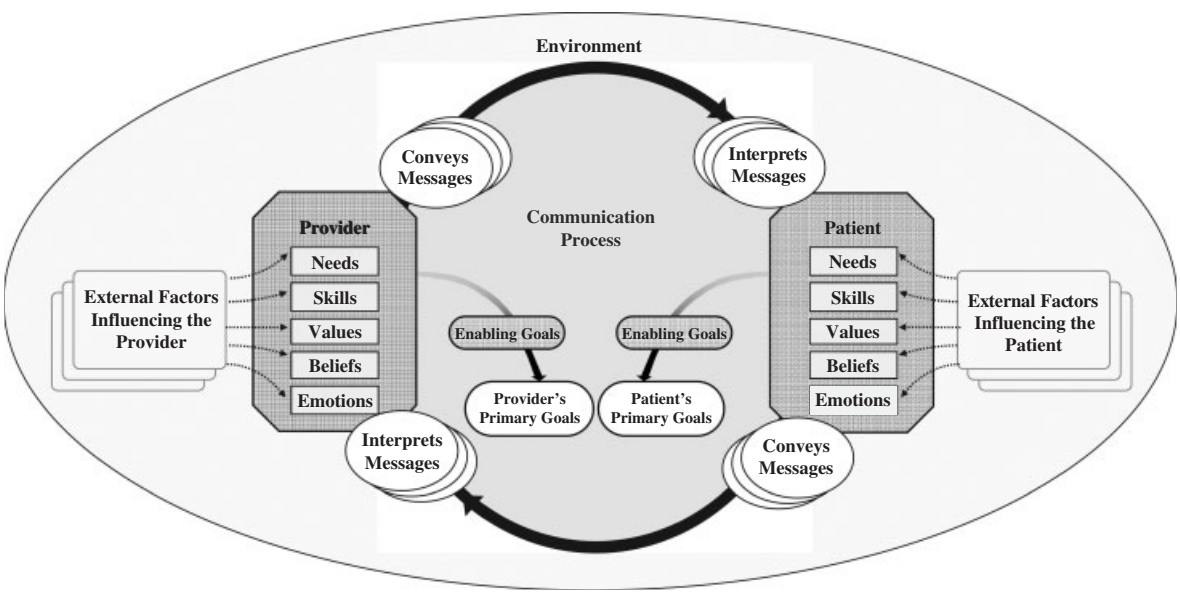

Figure 1.

values quality versus quantity of life facilitates achieving the primary goal of making a treatment decision; alternately, a patient wanting to develop a trusting relationship with the professional facilitates his ability to obtain care and to make a treatment decision (Brammer and MacDonald, 2003).

Participants' attributes: needs, beliefs, values, skills, and emotions. The communication is directly a function of the attributes, or qualities, of each person involved. We conceptualize five key attributes: needs, beliefs, values, skills, and emotions. A participant's attributes affect the content and form of each message s/he conveys, in addition to the individual's expectations and understandings of the messages received.

Needs of a participant underlie motivation. While needs can be conceptualized in a variety of ways (e.g. Maslow, 1954; Reeve, 2005), this framework includes all levels of needs that are both intrinsic and secondary to human functioning. This includes those needs related to basic physiology and safety (e.g. food and security), as well as social (e.g. affiliation), psychological (e.g. recognition, self-respect, autonomy, power) and self-actualization needs (e.g. need for truth).

Beliefs of a participant represent her understanding of her world, including the specifics of her situation and what the participant considers to be fact (knowledge). Both participants will have longer-term beliefs (e.g. their self-perceptions) and shorter-term beliefs (e.g. the time available to them for the consultation). Examples of relevant beliefs include a lung cancer patient's understanding of his condition, its potential treatments and their respective benefits and consequences or the oncologist's understanding of the patient's condition, the efficacy of treatments, and the respective roles of the different professionals involved with the patient. It is primarily, though not exclusively, beliefs that will be altered via feedback, both internally from the participant to him/herself and externally from the other participant.

Values of a participant include qualities or end-states that may or may not be considered worthy or desirable; they can assume positive or negative valence. Values include principles or standards that are fundamental to the participant's functioning, and they can combine with beliefs to produce attitudes (Rokeach, 1973). The participant may be able to verbalize beliefs; however when confronted with new situations, the participant may have to discover or clarify relevant values as part of the communication process (see Fischhoff *et al*., 1980), as has been noted, for example, among prostate cancer patients (O'Rourke and Germino, 1998).

Skills are the elements that underlie a person's ability to accomplish particular goals. Many skills are required to convey both verbal and non-verbal messages, and they differ from the skills required to understand and interpret messages received, although there may be overlap. Skills, which evolve slowly over time (Anderson, 1980), can also change during a particular communication session either because of internal (e.g. recognizing that a particular piece of information was not conveyed well) or external feedback (e.g. look of confusion on the other participant's face).

Emotions include both those with positive (e.g. joy) and negative (e.g. anger) valence. We include transient emotions, that might change within a particular communication session, and emotions of short duration (i.e. mood or states (Eysenck and Eysenck, 1985)) such as a patient's first reaction of shock at the cancer diagnosis (Gray *et al*., 1999; O'Rourke and Germino, 1998). We also include emotions that are more stable, dispositional qualities such as temperament (Kagan *et al*., 1994) or traits (Eysenck and Eysenck, 1985). Emotions can include components of subjective experience, bodily arousal, and social expression (Reeve, 2005) and are often, although not always, conveyed non-verbally.

Communication process: conveying messages and receiving messages. The provision and interpretation of messages is the heart of the communication process, illustrated as central actions in Figure 1. Building on classic work (Shannon and Weaver, 1949) which has been incorporated into current comprehensive theories of cognition (Anderson, 2002; Newell, 1990) along with our focus on elements of communication that can be modified, we represent the two types of processing separately in the framework; we note that the strategies to improve the two sets of communication skills are largely different. Messages can be conveyed intentionally or unintentionally, and as the figure depicts, multiple messages can be conveyed and received concurrently.

We distinguish three types of messages that can be conveyed, noting that two are 'active' in that an action underlies the message, and one is 'passive'

in that lack of action can also be intended to deliver and/or be construed as a message. Of the active messages, we distinguish two types that are conveyed: verbal and non-verbal. 'Verbal' refers to messages that are expressed using words (Gleitman, 1991) via either talking (Jones and LeBaron, 2002) or other modes of expression such as sign language. Non-verbal messages include all other types of non-language based active messages, such as tone of voice, facial expressions and body language. Similar to the distinction between conveying and receiving, the skills that underlie production of verbal and non-verbal communication differ, as would strategies for improving each. Regarding passive messages, silence may be explicit, for example, in the form of a non-response when one is expected, or may be implied by the lack of a discussion of a particular topic. Studies indicate that 'no news' is given meaning in cancer-related situations, but can be either positively or negatively interpreted (Forss *et al*., 2004; Tishelman and Sachs, 1992).

Comprehension of conveyed messages consists of two fundamental components: content and emotions. Aspects of each component can be conveyed via each type of message. Although verbal messages will predominantly convey content, they could also be used to describe emotion. Similarly, non-verbal messages predominantly convey emotion, but may also convey content, such as the professional's facial expression that conveys a new sense of understanding of the patient's situation. Silence can convey content, such as a professional interpreting a patient's silence as meaning the patient understands the information provided; it could also convey emotion such as the patient interpreting a professional's silence as disinterest.

Environment. Patient–professional communication occurs in a complex environment that includes social, cultural, legal, and physical aspects. We include here the many factors outside the particular communication process that influence the participants' attributes, called external factors. Some factors (e.g. cancer information services (Meissner *et al*., 1990; Montazeri *et al*., 1999; Slevin *et al*., 1988) influence primarily patient attributes, other factors (e.g. practice specialty) influence primarily the professional's attributes and yet others (e.g. mass media (Henwood *et al*., 2003; Montagne, 2001; Vordermark *et al*., 2000)) can influence the attributes of all involved participants. The influences of external factors on participants' attributes may be recent, such as new information about their condition altering the patient's beliefs, or longstanding, such as culture's impact on initial development of values.

DISCUSSION

We developed this conceptual framework for patient–professional communication to facilitate organization and synthesis of literature, to identify further research questions, and to help clarify contradictory findings. The review papers that follow illustrate this potential. For example, Parker *et al*. (this volume) show that apparently conflicting results regarding the effectiveness of audiotapes in assisting communication is due, in part, to the use of outcome measures that do not address the communication goals directly.

Successful application of a framework requires that it be simple enough that it can be understood readily but comprehensive enough that fundamental components are not overlooked. Our framework is designed to achieve this balance but not to act as a 'model', that is, it does not have mechanisms that allow prediction of either specific behaviours of participants or the outcomes of specific communication events (Sejnowski and Churchland, 1989). Instead, it is designed to describe the fundamental relationships between components that can help investigators generate hypotheses regarding where communication is potentially faulty, what components are amenable to interventions, and which outcomes best evaluate the benefits or risks of an intervention.

While the framework describes a patient–professional dyad, its has the potential to be extended beyond two individuals by applying the principles to all participants involved in an encounter. As such, each participant has goals, and conveys and receives messages in the context of their attributes and the communication environment. Each time a message is conveyed, it can be received by each of the participants but may be understood uniquely by each individual. In addition, the presence of a third participant may alter which attributes exert their influence. For example, a patient's goals may change considerably in the presence of a family member who acts as an advocate, and differ again in the presence of a family member whom the patient wants to protect.

Our strategy of reducing the framework to its fundamental components should not be seen to imply that the communication is necessarily simple. Within the framework, several components can be active simultaneously, and the components may interact in complex ways. For example, a patient's values concerning perceived trade-offs between quantity and quality of life may exist prior to a diagnosis of cancer and, thus, underlie a choice to avoid a toxic treatment, or, that value may be discovered or developed because the diagnosis has caused the patient to face such issues for the first time. Complexity can also arise when the two participants attempt to convey messages simultaneously, or one participant anticipates the meaning of a message that is only partly conveyed and responds to it (possibly misinterpreting the intent).

One aspect of our framework contributing to its simplicity is the short list of participants' attributes included. Our list is designed to be brief yet sufficiently comprehensive to account for important elements, with a priority on elements that are amenable to intervention. To assess the adequacy of our list, we compared it to the participant attributes included in three other frameworks that addressed particular aspects of the communication process. Brammer and MacDonald's (2003) framework of a helping relationship identifies self-perceptions, experiences, expectations, expertise, and definition of the problem as relevant participant attributes. Our 'beliefs' captures self-perceptions, expectations, elements of expertise, and identification of the problem whereas 'skills' captures expertise. We conceptualize participants' experiences as important because the experiences impact on participants' attributes, primarily 'skills' and 'beliefs'. Mead and Bower's (2000) framework on patient–centredness includes the attributes of attitudes, knowledge, personality, gender, age, ethnicity, the doctor's knowledge of the patient, the patient's knowledge of the doctor, and the nature of the medical problem. Each participant's personality, sex, age, and ethnicity are among those attributes that are not amenable to intervention in their own right but are expected to influence 'beliefs', 'values' and 'skills', for example, where we capture their impact. Our 'beliefs' include what Mead and Bower's deem 'knowledge', beliefs about the patient and health-practitioner, along with beliefs about the nature of the medical problem. Parle *et al.*'s (1997) framework on professionals' communication with cancer patients includes knowledge, skills, attitudes, and beliefs, all of which are part of our framework. Parle *et al.*'s professionals' requirement for support in the workplace is conceptualized in our framework as a need.

We repeat our assertion that central to appropriate evaluation of communication is the notion that communication serves goals. Although this notion has been recognized both in the general (McQuail, 1987) and in the health-communication literature (Bensing *et al.*, 2003; Bloom, 1963), we have not found a coherent framework that explicitly places each participant's unique and possibly multiple goals central to the communication process. Nor have we found an explicit recommendation that evaluation should be linked to the goals. Frequently, communication has been evaluated by patient 'satisfaction' (Hall and Dornan, 1988; Hall *et al.*, 1990; Roter, 1977), patient health outcomes (e.g. symptom resolution or functional status) or physiologic measures (e.g. blood pressure) (Stewart, 1995). In all cases, the evaluations are indirect measures of communication success and they provide little insight into what should be changed to improve the process. Understanding which goals underlie each participant's actions, and how they are achieved, can help direct the evaluation more specifically to the relevant elements. 'Good' communication within a particular visit, thus, would typically involve each participant being clear about their communication goals, and subsequently feeling that each was addressed adequately (though not necessarily achieved in a single encounter). Good communication might also involve one participant helping the other to discover what his goals are or to adapt them so that they are more viable in the circumstances. Recognizing that participants can have several goals allows the possibility that the communication could be very effective at working toward some goals whereas others are neglected or addressed to a lesser degree. In addition, the existence of multiple goals clarifies that the more goals that the participants have, the greater the chance that goals will be in conflict.

Decision making is frequently an important goal of both the patient and the professional. It has received much attention in the literature from a variety of perspectives and can exemplify how this framework is able to accommodate various approaches. For example, roles and power in the patient–professional relationship underlie whether the decision making process is paternalistic,

shared, or patient driven (Charles *et al*., 1997, 1999; Degner *et al*., 1997; Emanuel and Emanuel, 1992). Within our framework, the role and power that each participant has is a function of their attributes as influenced by external factors as well as by the perceived decision-making role of the other participant. The dynamic and changeable nature of such aspects of the communication is a result of the relative impact of the various attributes shifting, with potentially radically different implications in different settings.

It should be noted that some approaches to patient–professional communication place developing a relationship very prominently (Brammer and Mac Donald, 2003) while others (Roter and Hall, 1991) emphasize that a poor relationship may preclude good communication but a good relationship is not sufficient to ensure good communication. Watzlawick *et al*. (1967) argued that in healthy relationships, the relationship dimension recedes into the background and content is the focus. This framework highlights the importance of clearly conceptualizing if and when establishing a good relationship is a primary goal, as opposed to an enabling goal (enabling but not assuring good communication).

Another unique aspect of our framework is our distinction between active and passive messages, and the specific inclusion of silence as a message medium. Empirical evidence suggests that people often interpret messages from silence (Gans and Counselman, 1999; Lomax, 1997), and that people use silence explicitly to convey messages (Kacperek, 1997; Lane *et al*., 2002; Lomax, 1997). Although we have found patient–professional communication frameworks that explicitly acknowledge silence within its context (Smith and Liehr, 1999), we have not found one that explicitly identifies silence as a message medium. Much of the empirical evidence about the meaning of silence falls into what we would refer to as explicit silence. But, we note that implicit silence which is not addressing a particular topic, has also been found to convey messages such as women interpreting no news after being screened for cervical cancer as bad news or good news, but not neutral (Forss *et al*., 2004; Tishelman and Sachs, 1992). The distinction is valuable in understanding how participants can be convinced of certain messages without those messages being linked to any utterance or action, and it suggests a limitation of many methods of communication analyses.

A final unique aspect of our framework concerns an expanded depiction of the environment. Environment is included in other frameworks (Bloom, 1963) where the local social and cultural context, for example, is captured. We distinguish between those aspects of the environment that are situation specific, and the many aspects of the world beyond the participants that impact on the communication in a more enduring manner (captured in our framework 'external factors'). Strategies for developing interventions to impact on the two types of factors would differ: improving the immediate physical environment would be most effectively accomplished by focussing on the situation, while improving non-physical aspects of the environment might be best accomplished by addressing the participants. For example, an environment that provides inadequate privacy (as defined by at least one participant) can be improved by changing the physical conditions. In contrast, privacy legislation that exists in some settings can be considered part of the sociocultural environment that requires that particular practices occur. An intervention to improve such practices might focus on the professional's awareness of the required processes (altering her beliefs) or might be directed to convincing the professional that the practices would improve her ability to achieve her goals (altering her values).

The most immediate application for our conceptual framework is to provide a structure for summarizing, integrating, and critically evaluating the cancer-related communication literature. However, the framework has potential benefits that extend beyond the immediate application. In particular, we believe that it can guide evaluations of patient–professional communication, and guide the design and implementation of interventions and their assessments. Thus, we have conceptualized the communication process in terms of what it is intended to accomplish and what has potential to change to better achieve those ends.

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