(Re)Introducing communication competence to the health professions

Brian H. Spitzberg
School of Communication, San Diego State University, San Diego, CA, USA

Significance for public health

Models matter, as do the presuppositions that underlie their architecture. Research indicates that judgments of competence moderate outcomes such as satisfaction, trust, understanding, and power-sharing in relationships and in individual encounters. If the outcomes of health care encounters depend on the impression of competence that patients or their family members have of health care professionals, then knowing which specific communicative behaviors contribute to such impressions is not merely important — it is essential. To pursue such a research agenda requires that competence assessment and operationalization becomes better aligned with conceptual assumptions that separate behavioral performance from the judgments of the competence of that performance.

Abstract

Despite the central role that communication skills play in contemporary accounts of effective health care delivery in general, and the communication of medical error specifically, there is no common or consensual core in the health professions regarding the nature of such skills. This lack of consensus reflects, in part, the tendency for disciplines to reinvent concepts and measures without first situating such development in disciplines with more cognate specialization in such concepts. In this essay, an integrative model of communication competence is introduced, along with its theoretical background and rationale. Communication competence is defined as an impression of appropriateness and effectiveness, which is functionally related to individual motivation, knowledge, skills, and contextual facilitators and constraints. Within this conceptualization, error disclosure contexts are utilized to illustrate the heuristic value of the theory, and implications for assessment are suggested.

Background

Professions related to health care delivery now accept as axiomatic that good communication with patients and clients moderates or mediates positive health outcomes. Unfortunately, there is little consensus across the professions regarding what constitutes good communication and how it should be assessed. Each hospital, clinic, professional association, research team, and health care specialty seems determined to develop institutional, conceptual and assessment silos such development in disciplines with more cognate specialization in such concepts. In this essay, an integrative model of communication competence is introduced, along with its theoretical background and rationale. Communication competence is defined as an impression of appropriateness and effectiveness, which is functionally related to individual motivation, knowledge, skills, and contextual facilitators and constraints. Within this conceptualization, error disclosure contexts are utilized to illustrate the heuristic value of the theory, and implications for assessment are suggested.

Research indicates that judgments of competence moderate outcomes such as satisfaction, trust, understanding, and power-sharing in relationships and in individual encounters. If the outcomes of health care encounters depend on the impression of competence that patients or their family members have of health care professionals, then knowing which specific communicative behaviors contribute to such impressions is not merely important — it is essential. To pursue such a research agenda requires that competence assessment and operationalization becomes better aligned with conceptual assumptions that separate behavioral performance from the judgments of the competence of that performance.
an intimate or satisfying relationship, and are perceived as sincere, acknowledging wrongdoing, remorseful, responding to a less intention- al or more accidental transgression, and offering compensation. These features of an apology and its effects present two important implications. First, the speech act of an apology is far more complex than asking whether or not an apology was offered. Second, asking was an apology offered is likely to be far less important a question than how competently the apology was performed. Indeed, in a study of the verbal and nonverbal enactments of health professionals responding to disclosure scenarios, physicians disclosed their errors in skillful ways in only half of the interactions. In almost half of the encounters, they chose not to be completely honest, did not convey empathy, and failed to accept responsibility for their error.

The complexities of communication in these two sentinel types of medical interactions, handoffs and error disclosures, illustrate the importance of competent communication. In these contexts, errors can be introduced, and aggravated, by incompetent performance, or minimized and repaired by competent performance. As such, the impression of the health care professional's communication competence becomes a significant moderator or mediator of the outcomes of such encounters. A conceptual framework toward communication competence is introduced next, which has significant implications for the assessment and training of communication in the context of health care interactions.

The importance of communication competence

The interdisciplinary Palo Alto school of scholars articulated some time ago that one cannot not communicate. Although much debated within the field of communication, this is a sensitizing assumption—it draws attention to the idea that regardless of a communicator's intention to send a message, people interpret and assign meaning to that communicator's behavior. A nurse may simply intend to be efficient, but a patient may read such behavior as communicating a lack of empathy, concern or sociability. That is, the nurse was just going about business, but the patient interpreted the meaning of that nurse's behavior as something else. All observable verbal and nonverbal behaviors are part and parcel the constituents of communication, and any or all such behaviors can, and generally do, contribute to people's interpretation of any given encounter.

This axiom leads to several fundamental corollaries. First, communication constitutes relationships. Whether strangers or lovers, kin or colleagues, informal or institutional relations, communication is the sine qua non of relationships. There is no such thing as a relationship without communication.

Second, relationships are vital to quality (and quantity) of life. Research has examined this proposition from a variety of perspectives. The most common is examining social networks (e.g., social integration, frequency of interaction in a social network, number of social ties, etc.) or social support. For example, despite societies investing billions to influence people to quit smoking, lose weight, exercise more, reduce exposure to pollution, and so forth, competent achievement of social relationships in the form of social integration, social networks, and social support are more important to reducing mortality. More competent patterns of communication are significantly related to cardiac health, viral and immune resistance, cancer survival, stress reduction, health-promoting behavior, overall health, and the avoidance of management derailment, medical errors and their complications and costs. The deductive conclusion of corollaries one and two resolves as a third: therefore, communication is vital to quality/quantity of life. Fourth, the greater the competence of communication, the greater the quality of relationships. Competent (i.e., higher quality) communication has been extensively linked in empirical research to more satisfying personal relationships and more satisfying and productive occupational relationships. The importance of communicative competence to relationships has been emphasized explicitly in regard to the relationships between health providers and their patients.

Fifth, the greater the quality of relationships, the greater the quality of life. Aside from all the pathologies and morbidities noted above, interpersonal skills and competence have been linked to well-being and the avoidance of daily stresses, and depression. It follows deductively, therefore: the greater the competence of communication, the greater the quality of life.

One of the most surprising aspects of this set of syllogisms is that the vast majority of people seem plurally idiotic of this competence paradox—because we communicate every day of our lives, we tend to assume that we are reasonably competent, and yet, we are acutely aware of how often the problems of life depend on, and suffer because of, inadequate communication. Part of this irony is displayed as a fairly fundamental bias that limits motivations for self- and institutional improvement: the self-enhancement bias, also known as the Wobegon effect or the better-than-average effect. Most people view themselves as above average, which of course, is statistically impossible. So people generally do not perceive much need to improve their own communication. Yet, numerous studies indicate that sizeable percentages of the U.S. population lack fundamental literacy and communication abilities. Research indicates that people commonly encounter problems in their communication and social relationships. Research across a variety of approaches to operationalizing competence suggests that about 7-25 percent of the adult population is interpersonally incompetent or debilitated by social anxiety and/or social isolation. The available evidence indicates that there is substantial need for, or at least, substantial room for, better interpersonal skills among a significant proportion of the populace. While there is evidence that good communication experiences outnumber bad communication experiences in everyday life, the less frequent negative communication encounters appear to disproportionately outweigh positive events in their consequences. Thus, communication is vital, ubiquitous, and is the fundamental foundation of everyday human activity. Yet, despite its ubiquity, it is often far from optimally performed or experienced. It follows, therefore, that it would be valuable to pursue better understandings of the process of competent communication. To establish a better understanding requires first the development of a further set of communication axioms specific to communication competence.

Axioms of communication competence

Scholars have attempted to conceptualize models and characteristics of good communication since at least the time of Plato and Aristotle. Tracing the paradigmatic, theoretical, ethical, and empirical literature from then until now, Spitzeberg and Cupach and colleagues have attempted to formulate a flexible integrative perspective toward competent communication. The explicative of this perspective will proceed through its grounding assumptions and rationale, resulting with an articulated model, along with a consideration of its heuristic value.

By way of introduction, a broadly held presumption must be overturned. The term competence, like its synonym ability, is commonly assumed to have an objective set of referents. Instead, competence must be reconceptualized as an inherently subjective concept. The grounds for this radical reformulation follow along a series of claims.
First, communication processes are equifinal and multifinal (communication is systemic). Equifinality means that there are many paths to the same end or outcome. Multifinality means that any single given path may result in multiple possible outcomes. A fear appeal to a patient may work with one patient resulting in therapeutic compliance, whereas it may aggravate or disillusion another patient, resulting in noncompliance. In contrast, there may be multiple different ways of structuring a message that will result in greater patient compliance (e.g., fear appeal, gain frame, narrative evidence, statistical appeal, counter-argument inoculation, etc.). As an example, although apologies are often prescribed as a standard communication competency in mistake disclosure situations, Mazor and colleagues found that for some patients experiencing mistake disclosures, the apology was not sufficient to restore trust or to return to that professional's care. Certainly, in such contexts, apology alone was not considered a sufficient response to incompetence. It is little surprise, therefore, that forgiveness varies from one type of mistake account to another.

Second, communication skills are curvilinear to evaluation (communication is curvilinear). There can be too much of a good thing, and almost any behavior, no matter how normatively positive its evaluation, is likely to result in negative evaluations to the extent that it is used excessively. We are commonly told to engage in eye contact, yet staring or glancing is considered rude. We are told to ask questions, but a barrage of questions can seem like interrogation or uncertainty or deference. Even social support and positive affect can be excessive. In almost all circumstances, there is the possibility of enacting too little, or too much, of a communication skill.

Third, communication skills are evaluated differently by different people (communication is perspective-dependent). Whether communication is being evaluated by self or by other is referred to as the locus of perception. Research demonstrates that communicators do not perceive themselves in the same way as others perceive them. There is typically between 0.25 and 0.50 correlation between an interactant's self-assessment and others' perceptions of that interactant. A meta-analysis of medical students' ability to self-assess their own abilities, in particular, including communication abilities, correlated 0.22 to other measures of their performance. A study comparing patient with physician ratings of the physician's respect behaviors found that 85% of the patients overestimated physician respect, and 16% underestimated the physician's level of respect. Blanch-Hartigan found that on average, medical students' self-assessments of their ability correlated only 0.21 with independent criteria of their abilities. In another study, multiple interns' ratings of a given intern's handoff communication skills relate at only 0.18 on average. Analogue patient satisfaction correlates to real patient satisfaction in similarly modest ways, although correlations increase when certain restrictions of range are constrained. Perhaps the most insidious prospect is that biased self-assessment is itself a marker of communicative incompetence — that those whose self-perceptions are inflated are the most likely to be communicatively incompetent.

Research on core communication contexts in emergency healthcare contexts found that patients tend to interpret their illness in a normal narrative rationality sense, whereas health professionals often interpret medical situations in a technical rationality sense. Thus, when patients are reconstructing the rich story of their incoming history, health professionals are deconstructing extracted symptoms as a routine checklist and treatment recipes. These distinct interpretive perspectives yield different perspectives on the extent to which a patient feels attended to. It is apparent that any single perspective is subject to biases, and that multiple assessment loci are preferable.

A particularly potent exemplar of the implications of this axiom is found in the research on assertiveness training. In the 1970s and 1980s, training people in assertion skills was widely viewed by psychologists as a set of skills that would enhance a person's social competence and mental health. They found they could teach such skills, and that such skills elicited impressions of competence from third-party raters, usually comprised of professionals and counseling graduate students. Eventually, however, researchers began asking what the conversational partners, those who received such assertiveness, thought about the assertive person. These partners tended to perceive such assertive behaviors as effective, but not very likable or appropriate. This illustrates the hazards of presuming either that any one locus of perception is sufficiently informative, or that skills alone are a sufficient concern for instruction and investigation.

Fourth, communication skills are evaluated differently in different contexts (communication is contextual). A smile tends to mean very different things when telling a story or a joke, as compared to disclosing bad news. Asking What's going on? has very different communicative implications than when asked casually of a coworker passing in the hallway than it does in the middle of open heart surgery. Different physical, cultural, relational, and functional situations elicit different sets of expectations and criteria for evaluation of people's behavior.

Fifth, the competence of communication skills is an inference (competence is an inference, not an ability). Traditionally and historically, competence has generally been defined as a set of abilities or skills. An ability is generally defined as a potential trait through which a person can perform a task. To the extent that this ability is learnable, intentionally or goal-directed, repeatable, and capable of improvement, it can be considered a skill. In any given context, the behaviors a person engages in do not constitute their competence. They constitute the person's abilities and skills, but whether or not those abilities and skills are competently performed is always a contextualized judgment applied to the adequacy and relevance of those behaviors for that particular activity and that particular context. Competence, therefore, does not inhere in the ability to perform a behavior per se, but in the social evaluation of the behavior by a given perceiver in a given context. This distinction is obscured by most models of communication competence in the health setting, such as the early model by Kreps or Hannawa in which competence tends to be conceptualized as comprised by skills, rather than inferences about the quality of those skills. Competence is an impression, or an evaluative inference, rather than an ability or set of skills or behaviors per se.

This radical reformulation is important, so it will be restated as bluntly as possible. In a simple case of closing a suture or diagnosing an X-ray, there may be an important sense in which competence is precisely whether or not a set of specific, correct behaviors and decisions are made at all. But even in these cases, issues of probability and levels of proficiency arise. In the case of communication behavior, it is never the case that competence can be understood strictly as the ability to do something behaviorally. Instead, competence is always contingent upon social evaluations of a set of behaviors in a social (e.g., cultural, relational, situational, functional) context. It is therefore this evaluation, and not the skill itself that constitutes competence, and it is this evaluation that will mediate, or at least moderate, the role that the specific, objective skills have on the outcomes of that communicative episode. As such, the evaluation of skills becomes an essential part of assessment and conceptualization, and who is conducting those evaluations becomes an essential priority in the understanding of how a given set of skills produce a given set of outcomes. That is, the skills of communicating are only one part of the puzzle, and often not even the most important part.

Sixth, communication accomplishes things (communication is functional). The assumption that competence is an inference or judgment, rather than an objective set of skills, does not deny the importance of skills — it simply gives them a different, and more conceptually useful, role in a model of competence. Specifically, the relevant question of competence changes from What skills comprise communication competence? to what skills best predict impressions of competence? Although
competence is an evaluation and not a skill, the evaluation is likely to be systematically related to skills. Certain skills are more likely to predict impressions of competence across given types of societal and cultural contexts than others. That is, behaviors function to produce impressions of the competence of those behaviors. It is expected that in contextually (culturally, relationally, situationally, functionally) homogenous episodes, the relationship between certain behaviors and certain competence impressions will be systematic, and therefore, predictable.

Seventh, conversational skills can be understood at different levels of scale (communication skills vary in hierarchy and abstraction). A person’s communication skills can be perceived, and evaluated, at various different levels. Skills can be evaluated and assessed at multiple levels of inference and judgment, varying along a continuum of abstraction, from very specific (molecular) to very abstract (molar). The more specific the skills assessed, the more informed diagnostics, instruction, and intervention can be. This assumption becomes particularly important in the development and validation of assessments of competence. It is common to examine any given assessment of communication competence and see items cast at very different levels of abstraction. For example, an instrument may have an item or competency assessing a medical student’s asking of questions regarding the patient’s condition right next to another item assessing the student’s made a professional impression. Asking questions is a relatively objective molecular-level behavior or skill, whereas professional impression is a high-level molar-level inference based on numerous potential molecular behaviors, and other personal biases, stereotypes, and beliefs. If competence is an impression or inference about a person’s quality of communication, then skills must be separated from the evaluation of those skills, which means that assessments must be designed to separate these types of judgments — what skills (behaviors) were performed, and to what extent were these behaviors performed competently. If competence is a judgment, what kind of judgment is it? It is a judgment of quality.

Eighth, communication skills are subjectively evaluated (communication competence is a judgment of quality, best anchored by appropriateness and effectiveness). The impression of competence is optimally defined by two judgments of quality: appropriateness and effectiveness. Most other relevant evaluative criteria (e.g., clarity, understanding, satisfaction, efficiency, attractiveness, etc.) are substantially subordinate to or overlapping with appropriateness and effectiveness. Appropriateness is the degree to which a person, or a person’s behavior, is perceived as legitimate, acceptable or fitting to the context. Effectiveness is the degree to which one or more relatively preferable outcomes are achieved in that context.

A person’s behavior can be evaluated as both inappropriate and ineffective (minimizing), appropriate but ineffective (sufficing), inappropriate but effective (maximizing), or both appropriate and effective (optimizing). These are distinguishable evaluations in regard to communication behavior but they are also closely interrelated. It is important to note three additional features of these criteria. First, appropriateness is not the same as conformity to the normative rules of a situation. There are times when behavior must violate existing rules in order to negotiate and establish new rules. A doctor crying with a patient after delivering bad news may violate normative rules of the relationship, but it is not out of the question that there could be times when such behavior would be understood as changing that rule. Second, effectiveness is not the same as goal achievement. There are no-win situations, in which any action will result in harm or dissatisfaction. There may be few if any ways of discussing ending life support, harvesting organs, or disclosing a medical error that are considered satisfying, but clearly there are more and less competent ways of engaging in such discussions. In such cases, effectiveness consists of engaging in the least costly or harmful course of action. Third, these are complexly interrelated criteria. Behaving inappropriately often will jeopardize the ability to be effective, as people reject the relationship or seek other avenues of goal pursuit. Likewise, engaging in ineffective behavior, allowing others to have their way, may be viewed as inappropriate if confident or assertive decision-making actions are expected.

Ninth, subjective evaluations of skills vary from low to high levels (competence judgments are continual, not dichotomous). Judgments of quality (i.e., appropriateness + effectiveness) are most naturally arrayed along a continuum, from lower levels to higher levels of competence. Indices of competence, therefore, need to be at least minimally ordinal to interval in nature. As such, our language allows judgments of others as incompetent or competent, but such dichotomous terms are actually anchored along a continuum ranging from extremely incompetent to extremely competent, with shades of gray populating the range between such anchoring judgments.

Tenth, different people evaluate communication skills differently (judgments of competence and their locus vary in utility). Judgments of quality in general, and appropriateness and effectiveness in particular, are not equally relevant and important to all parties in a communication encounter. Although multifinality and equifinality mitigate any universal generalizations, it seems reasonable to conjecture that a communicator is the best judge of his or her own effectiveness, and the other communicators in that context are the best judge(s) of that person’s appropriateness. Specifically, only I can know if I achieve goals or outcomes that seem relatively advantageous (or relatively less costly). However, consistent with the Wobegon effect, I am likely relatively unaware of the extent to which I come across as rude, off-putting, awkward, or inappropriate to the others in the encounter. Thus, even though communicators will judge both self and others in the encounter in terms of their appropriateness and effectiveness, these criteria are weighted differently across self and others.

Eleventh, successful communication depends on the subjective evaluation of communicators and their communication (competence impressions moderate and mediate communicative outcomes). Research on conflict in interpersonal relationships demonstrates that positive relational outcomes such as trust, power sharing, liking, and satisfaction are mediated by the impression of competence (i.e., appropriateness and effectiveness). This means that research and assessment need to separate the actions involved in a particular communicative task or function, the communicative manner in which those actions are performed, and the relationships of those actions to both professionals’ and patients’ impressions of the competence of those actions. If any given behavior may be considered a competent response in one context (whether cultural, relational, environmental, or functional) but not in another, then it is not the behavior that is intrinsically competent or incompetent. As illustrated by assertiveness training, any given skill in any given context, with any given receiver, can be perceived as inappropriate and ineffective, appropriate but ineffective, effective but inappropriate, or appropriate and effective. It is therefore the evaluation of that behavior’s appropriateness and effectiveness that index the competence of the behavior in any given context. As such, the question is whether or not the skills that are being taught are the skills that patients will perceive as appropriate and effective.

Twelfth, communicative performances are evaluated through the expectations of others (competence evaluations are moderated by valenced expectations). Enculturation involves, among other processes, the development of a repertoire of experiences in a variety of social contexts. As such, over time an individual begins to formulate interpretive categories and models, or cognitive schemas, which represent idealized features of contexts, relationships, episodes, encounters and types of individuals. Not all expectations are created equal in function, however. In the event that a communicator can ascertain the valence of other people’s expectations in an encounter, then positive expectancies should be fulfilled, whereas negative expectations should be unfulfilled or appropriately violated. For example, in a routine successful medical procedure,
people expect positive outcomes and are more prone to evaluate routine communication of such outcomes as competent. In contrast, however, one of the reasons that forthcoming disclosures and offers of apology and automatic remuneration may be viewed as competent is because they violate people’s negative expectations that institutions and professionals to cover up their mistakes.

Given these axioms as a background, it is now possible to sketch the figure of a competence model. The model in Figure 1 illustrates in very basic form the concepts involved in accounting for competent communication. It is important to remember that competence is strictly only the appropriateness and effectiveness judgments at the end of the model. All the other components are proposed predictors of competence – they do not constitute competence.

A theoretical model of communication competence

Communication competence can now be formally defined as the degree to which meaningful behavior is perceived as appropriate and effective in a given context. To the extent that a particular individual is perceived as consistently engaging in appropriate and effective communication, that individual is likely to be viewed as a competent communicator. A person may perceive self as a competent communicator, and not perceived as competent by others, and vice versa.

Impressions of a communicator’s competence are not randomly formed. Instead, certain factors systematically predict the impression that a person, or that person’s communication, is judged as appropriate and effective in any given context. Specifically, a common integrative conative model has proposed that competence is a subjective evaluation of communication quality that is a probabilistic function of a communicator’s motivation, knowledge, and skills. Motivation concerns the approach and avoidance orientation to communication. Knowledge includes the cognitive content and procedural dynamics of action assembly. Communication skills are the repeatable goal-oriented action sequences involved in message production and interaction. Such a model provides a flexible conceptual framework within which assessment projects can be organized.

In any given context, judgments of appropriateness and effectiveness (i.e., competence) are expected to be a systematic function of the combination of five broad sets of communicator factors. First, a communicator may fail to be viewed as competent because she or he is either too appre-
Sixth, although appropriateness and effectiveness constitute the primary outcomes of interest in assessing competence, other outcomes of the interaction are likely to influence judgments of competence, including primarily: efficiency, satisfaction, attractiveness, and clarity/understanding/accuracy. In emergency situations, tolerance for deviations from routine or normative expectancies is usually broadened as the structure of the situation evolves through the alternative tasks that have to be triaged and pursued, and efficiency trumps judgments of appropriateness. In hand-off interactions, clarity and accuracy of understanding are generally considered paramount, even though there are clearly likely to be more or less appropriate ways of achieving clarity and understanding.

Finally, the model is intended to be scalable. The competence model is theoretically open-ended. Additional conceptual components can be added to refine the five core components, or identify additional processes that enhance predictability of these components. For example, various theories of expectancy fulfillment or violation may elaborate the ways in which perceptions are formed of behaviors.97 Specific task components or skills associated with a given health context or discipline can be folded into the skills component.98,99

Thus, to be competent, an interactant needs the motivation to create a competent impression, and avoid being debilitated by anxiety. Further, an interactant needs to have the knowledge relevant to the context, topics, activity procedures, norms, and the like. Having motivation and knowledge, however, may not be sufficient if the person cannot demonstrate the actual interaction skills required to implement their goals and understandings.

Applications to error disclosure

There are several implications of this model of competence for understanding the communication of error in health care contexts. Making use of error disclosure as an exemplar, Figure 2 displays some of the granularity implied in viewing this form of communication through the lens of this competence model.

Competence is a social standard, open to the prevailing subjective conceptions of propriety and efficacy. Further, because competence exists on a continuum (i.e., from low to high rather than a dichotomy or discontinuous form), behavior is always competent relative to its perceived possibilities. This in no way diminishes the importance of skills and abilities; it only shifts their role in a comprehensive model of communication competence. Skills and abilities (e.g., active listening, speaking fluency) may make the impression of competence more likely, but they do not guarantee such an impression.

At a very fundamental level, and with the exception of a variety of specific therapeutic endeavors, in the social realm we are seldom interested in the brute binary fact of whether or not someone can merely perform a behavior, or even a sequence of behaviors. The vast majority of the time, particularly in the realm of social action, the concern is how well a class or group of behaviors can be performed, and the standards of quality in this regard are intrinsically social and subjective in nature. To suggest a rather pointed illustration, few of us would be willing automatically to declare a blind person communicatively incompetent if she or he has difficulty establishing eye contact in the process of interacting. Instead, we would tend to adopt alternative criteria, such as how smoothly turns were managed, how well topical flow was developed, how satisfied the interac-

![Figure 2. An exemplary abstraction continuum for analyzing error disclosure from a competence perspective.](image-url)
On not making the same mistake twice

People can learn from their actual mistakes and they can be sensitized to the prospect of mistakes and how they can be handled.\textsuperscript{106,107} No single approach to instruction, intervention, or assessment will be sufficient to assure professional competence.\textsuperscript{108-110} although there are certainly some useful models for organizing more comprehensive approaches to assuring professional competencies,\textsuperscript{111,112} as well as identified improvements that are needed in the research literature on communication skills training and transfer.\textsuperscript{113,115} The relatively technical and technological fixes, such as checklists, system-wide code-scanning, and communication media offer significant potential for reducing errors and enhancing communication effectiveness.\textsuperscript{116-118} Research in nonmedical contexts sug-

_References_

3. Iramaneerat C, Myford CM, Yudkowsky R, Lowenstein T. Evaluating the effectiveness of rating instruments for a communication skills...


