An experimental investigation of the dilemma of delivering bad news

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1. Introduction

Skilful communication is crucial when a physician has to deliver bad news, such as a terminal diagnosis or prognosis, transitioning to palliative care, acknowledging the failure or lack of an available treatment, or explaining irreversible side effects. Physicians report that communicating a terminal diagnosis is one of their most challenging tasks, yet one in which they receive almost no formal training [1,2]. The recommendations in editorials, anecdotal papers [3–5], and guidelines [1,6–9], fall short in two ways: they consist primarily of abstract goals such as “Tell the patient the diagnosis and prognosis honestly and in simple language, although not bluntly” [7] but do not offer linguistic tools for implementing these goals. These recommendations necessarily lack linguistic detail because the majority of studies on this topic have used retrospective methods of inquiry (e.g., surveys or questionnaires) that ask about the news delivery rather than studying it directly [10]. Some recent qualitative analyses of bad news interviews using audio [11–13] or video [14–17] are beginning to address this deficiency.

The second problem is the lack of experimental verification or theoretical justification [18] that would build on and inform the qualitative and survey research. We sought to address both problems with an interdisciplinary methodology that (a) began with a theoretical analysis derived from basic research, (b) tested the applicability of this theory with a quantitative experiment, and (c) analysed instances of skilful delivery by experienced physicians. This approach focused more on internal than external validity [19], aiming for experimental control that would permit strong inferences about the cause and consequences of the medical bad-news dilemma. Experimental methods potentially complement and strengthen the external validity of other research approaches that provide information on the experiences and opinions of large and varied samples of physicians or patients but do not support causal inferences.

The complementary nature of these two approaches is apparent in differences between the present experiment and the previously cited qualitative studies. Our study aimed for strong internal validity, which requires a controlled experiment...
with an independent variable designed to test a specific theory. To achieve experimental control, it was necessary to create an analogue setting in which real physicians met with analogue patients and talked about a standardized scenario. This design has limited external validity and generalizability to real clinical settings. In contrast, the above non-experimental studies (especially those with larger samples [12–14]) aimed for strong external validity and generalizability. These studies analysed how real physicians communicated in real clinical settings with real patients discussing important topics. There was no independent variable, experimental control, or hypothesis-testing because internal validity was not their goal. However, both Rodriguez et al. [13] and the present experiment focused on the use of implicit language in bad news delivery. If the findings are similar, then these contrasting methods support and strengthen each other precisely because of their differences.

1.1. Theoretical analysis

What physicians find most difficult about delivering bad news are the apparently conflicting requirements of conveying distressing information while being kind and preserving the patient’s hope [1,3,20]. Begley and Blackwood [21] referred to this difficulty as a dilemma of “truth-telling versus hope,” and Latimer [22] articulated it as a potential clash between the ethical principles of autonomy, beneficence, and non-maleficence. Patients’ preferences reinforce this dilemma, as patients consistently report wanting physicians to give them bad news in a straightforward and honest way but also gently and with hope [23–27].

We propose that these descriptions conform to an established theory in the field of communication research. Bavelas and colleagues [28,29] proposed that there are situations that are difficult because they make apparently incompatible communicative demands. In these situations, all explicit communicative options lead to negative outcomes; e.g., the truth would be hurtful but a lie would be wrong. This dilemma occurs frequently in everyday life; e.g., thanking someone for an unsuitable gift or criticizing the performance of someone who is trying hard to do well. The same dilemma occurs when a physician must deliver bad news, but the negative outcomes are much more serious: conveying the diagnosis explicitly (e.g., “You have terminal cancer”) could be harmfully blunt and even destroy hope, but avoiding accurate diagnostic information to spare the patient’s feelings would not be honest or compatible with informed decision-making. The doctor’s dilemma is how to communicate “honestly … although not bluntly” [7]. Bavelas et al. pointed out a linguistic solution to this kind of dilemma: the selective use of implicit language—language whose meaning has to be inferred by the recipient rather than being explicitly stated by the speaker. In an extensive series of lab experiments using hypothetical everyday dilemmas, these researchers found that participants consistently used truthful, implicit language [29].

Implicit language is a familiar linguistic tool that speakers use in everyday conversations to soften the impact of requests, orders, and criticisms. Examples include indirect speech acts (e.g., “Can you reach the salt?” instead of “Give me the salt”), passive voice without agent (e.g., “It is proposed that … instead of “We propose …”), or litotes (e.g., “not bad” instead of “not good”). In everyday life, such language is often called tactful or softened; in psycholinguistics, it is often called indirect [30], and in communication research, equivocal [29]. In this context, we prefer the term implicit, introduced by Rodriguez et al. [13], because it captures an essential feature: by avoiding explicit language, these implicit usages require the recipient to draw on the conversational context or conventional forms to understand what the speaker is implying. (The psycholinguistic literature describes how speakers and listeners do this by relying on bridging inferences [31], conversational implicature [32], or the cooperative principle [32,33].)

It is important to emphasize that “implicit” does not mean “untruthful.” Ratings by independent observers confirmed that implicit messages conveyed the necessary information as accurately as explicit messages [29,34]. Implicit language in the delivery of bad news can function in the same way. Suppose a patient comes to an appointment at a cancer clinic to hear the results of diagnostic tests. A physician who says, in a gentle but serious tone, “the news is not good” is allowing the patient to infer the intended meaning (i.e., “the news is bad”) from the context without having to hear it bluntly.

1.2. Design and predictions

We applied Bavelas et al.’s theory to delivering medical bad news, predicting that experienced physicians would solve the dilemma of being truthful without being blunt by using implicit language skilfully. They would communicate the painful information in a way that attenuated its impact while still being honest. As a corollary, we predicted that when the situation did not present such negative choices (e.g., when conveying a benign diagnosis), experienced physicians would communicate more explicitly, accentuating the positive consequences of the news. In short, physicians’ use of implicit language should vary according to the communicative constraints of the situation.

We tested the above prediction experimentally using a counterbalanced within-subjects design and spontaneously role-played, videotaped interviews in which the same physician gave bad news in one interview and good news in another. All of the physicians had experience in palliative medicine or oncology, and the recipients were hospice volunteers acting as analogue patients [35]. The physicians’ scenario was to meet an unfamiliar patient while being on-call for a colleague, with the task of explaining test results to that patient. In all other respects, they were to act as themselves. Using an on-call scenario made this interview the first encounter between physician and patient. The analogue patients were also acting as themselves except for the brief medical history provided to them; they did not know what results they would hear. We applied microanalysis [36–38], which examines the moment-by-moment details of actual language use, to analyse the language each physician used to deliver good or bad news. We also gathered evidence from both within and after the interviews about the physicians’ truthfulness.

2. Methods

2.1. Participants

Eight physicians with experience working in palliative or end of life care, cancer care, or oncology participated without compensation except for the opportunity to learn about communication research. They ranged between 30 and 60 years of age; seven of the eight physicians had an average of 19.30 years of experience (SD = 5.41), and one had approximately three years of experience. Three of them specialized in family medicine, two in general practice and oncology, two in radiation oncology, and one in palliative medicine. They provided care in the local hospitals, cancer agency, hospice or palliative care unit, private practice, or patients’ homes. They reported breaking bad news approximately 1–10 times per month, and none had received formal training on how to break bad news.

The analogue patients were 16 laypersons who were volunteers at a local hospice. We posted a letter of invitation at the hospice, seeking participants who had both formal hospice training and experience assisting cancer patients directly. Analogue patients
were preferable to standardized patients because they would create unconstrained, spontaneous, and realistically varied interviews and would present the physicians with diverse ages and individual styles. Hospice volunteers would have background knowledge about a cancer patient’s experience that fit a scenario of a possible re-occurrence, and they might not be as distressed in a bad-news scenario as others might be. The conjoint Human Research Ethics Boards of the Vancouver Island Health Authority and the University of Victoria approved the project, and all participants gave written informed consent.

2.2. Setting, equipment, and videotaping

The experiment took place in a medical consultation room in Victoria, BC, Canada. The physician and analogue patient sat face to face, slightly off-centre from each other, with a high quality mirror mounted on the wall behind the physician, facing the analogue patient. A Canon GL2 portable camera on a shelf across the room recorded the physician’s face and upper body directly and simultaneously recorded the analogue patient’s face and upper body in the mirror, as if in split-screen. A Crown Sound Grabber II directional microphone recorded their dialogue.

2.3. Procedure

We videotaped each physician interviewing two analogue patients consecutively, one randomly assigned to the bad news condition and the other to the good news condition, in counterbalanced order. The two experienced physicians on our team created the medical scenarios, which contained the same background information for the physician in both conditions, but differed in the test results; this created the two experimental conditions (see Table 1). The case scenarios were limited to the essential medical background information for their role. In all other respects, they were to act as themselves during the interview.

The analogue patients’ scenario was the same in both conditions, so they did not know whether they would hear good or bad news; see Table 1. After the interview, the experimenter asked them to write a letter to their hypothetical family physician (still in their role as patients), explaining what they had just learned about their diagnosis and prognosis. The experimenter then interviewed the participants in the bad news condition, using open-ended questions to elicit their evaluations of the physicians’ news delivery style. All participants viewed their videotape and indicated in writing which uses of the videotapes they authorized. Later, the researchers met with the physicians and with the analogue patients in two separate groups to present and discuss the results of the study.

2.4. Microanalysis of the news delivery

2.4.1. Operational definitions

Whereas explicit language states its meaning overtly, implicit language only implies its meaning. Our operational definition of implicit language drew on this contrast: implicit language does not explicitly state the information overtly but instead requires the recipient to infer it. Therefore, we set a standard for the most explicit or overt language in this situation, then examined the observed language for departure from this standard [cf. 29, Ch. 2]. A subset of the experimental data identified five features that seemed most relevant to the delivery of medical news:

- the physician’s term for the diagnosis;
- the physician’s evaluation of the news;
- the physician’s expressed certainty about the diagnosis;
- references to the recipient;
- identifying the source of the news.

Table 2 illustrates the standard for explicit language for each of the above features and provides examples of implicit language that departs from each standard. When the details of the bad news and good news conditions differed (such as in the diagnostic terms), the analysis included equivalent explicit and implicit possibilities (e.g., there were also possible euphemisms for the good news diagnosis). Full operational definitions, as well as all other methodological details, are available electronically [39] or from the first author. The qualitative results section below provides numerous examples from the data.

There were several reasons for departing from more familiar taxonomic schemes, which have focused on locating a priori categories, such as euphemisms, personal disclaimers, hedges, and indirect speech acts. Recall from Section 1.2 that, in various disciplines as well as in lay language, there is a wide range of differently named categories for implicit language, and few of these are operationally defined. Instead, we are emphasizing what these various categories have in common. All describe a shift from explicit expressions to expressions that depend upon the recipient’s inferences. There was an additional advantage: because this approach did not specify all possible instances in advance, it
was partially inductive and could include novel usages that individual physicians might (and, indeed, did) produce.

2.4.2. Analysis procedure

Because all predictions were specifically about the delivery of bad news, the focus of the microanalysis was the section of each interview in which the physician described the test results and diagnosis for the first time. This section was comparable across all physicians and both interview conditions, because all physicians had to deliver the required diagnostic news. Two analysts, working by consensus, located the news delivery section in each videotape and transcribed everything that the physician and analogue patient said in this section. The microanalysis focused on every word or phrase the physician used in the news delivery section.

The two analysts examined each news delivery section for every instance of each of the five features. They tested reliability by independently looking for each feature in at least 8 of the 16 news delivery sections (always excluding the subset used to develop the operational definitions). The number of independent decisions they made for each of the features ranged from 8 to 57 ($M = 30$), and their average inter-analyst agreement was 95% (range 82–100%). They resolved any disagreements based on the best match to the operational definitions.

The primary quantitative measure was each physician’s rate of implicit language per 100 words (the total frequency of implicit words that this physician used when delivering the news, divided by the total number of words he or she used to deliver the news, multiplied by 100). There was a comparable quantitative measure for the use of explicit language. Neither measure included implicit terms for the source of the news, because this could only occur once, at the beginning of the news delivery.

3. Results

3.1. Quantitative results

As predicted, the physicians used implicit language at a significantly higher rate in the bad news condition and used explicit language at a significantly higher rate in the good news condition; see Table 3. The within-subjects research design was helpful in overcoming the reduction in statistical power due to a small $N$, because it both doubled the total number of observations and controlled for variance due to individual delivery styles.

The average rate of implicit language for each of the four features of the news delivery was consistently higher in the bad news than the good news condition; see Fig. 1. The reverse was true for explicit language; see Fig. 2. The fifth feature showed the same pattern; six of the eight physicians attributed the bad news to a source other than themselves. It is important to note that, as shown in Table 3 and in Figs. 1 and 2, there was explicit as well as implicit language usage in both the bad and good news conditions.

Table 2

<table>
<thead>
<tr>
<th>Standard of explicit language for delivery of bad news.</th>
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<tbody>
<tr>
<td><strong>Explicit bad news delivery (the standard)</strong></td>
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<tr>
<td><strong>Implicit bad news delivery (departures from the standard)</strong></td>
</tr>
<tr>
<td>Full message</td>
</tr>
<tr>
<td>Term for the diagnosis</td>
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<tr>
<td>Evaluation of the news</td>
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<tr>
<td>Expressed certainty about the diagnosis</td>
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<tr>
<td>References to the patient</td>
</tr>
<tr>
<td>Identification of the source of the news</td>
</tr>
</tbody>
</table>

Table 3

Mean rates of implicit and explicit language per 100 words by experimental condition.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Physicians’ language</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rate of implicit terms per 100 words</td>
</tr>
<tr>
<td>Bad news</td>
<td>11.30 (3.22)</td>
</tr>
<tr>
<td>Good news</td>
<td>5.45 (1.63)</td>
</tr>
<tr>
<td>$t_{17}$</td>
<td>5.51</td>
</tr>
<tr>
<td>$M_{D}$</td>
<td>5.84</td>
</tr>
<tr>
<td>$SE_{D}$</td>
<td>1.06</td>
</tr>
<tr>
<td>$C_{D}$  (95%)</td>
<td>3.33–8.35</td>
</tr>
</tbody>
</table>

Note: Standard deviations are given in parentheses. $p < .001$ (two tailed).
implicit language in both conditions. The effect of the experimental conditions was to change the rates of implicit and explicit language, not to eliminate either one.

3.2. Qualitative analysis

A qualitative examination revealed both variety and subtlety in the physicians' language resources for delivering bad news. Some of their choices replicated phenomena found in previous studies in medical and other research [13,16,17,29,34,40,41,16,42,43], and some were novel or idiosyncratic. Each of the sub-sections below begins with the explicit standard for one of the five features, then quotes several instances of implicit language that we found in the bad news condition, followed by some explicit language from the good news condition.

3.2.1. Implicit language for the bad news diagnostic term

The standard for an explicit diagnostic term in the bad news condition was “cancer” or “metastasis.” Implicit diagnostic terms that physicians used in the bad news condition included:

- Euphemisms; e.g., “condition” or “tumour” (usually after first using the explicit term).
- Demonstrative pronouns referring back to the explicit diagnostic term, which avoided repeating it; e.g., “We’re not going to be able to get rid of this.”
- Eliciting the explicit term for the diagnosis from the patient; e.g.:
  - Dr: And did [your regular physician] tell you why he was doing the second CT scan?
  - Pt: To find out more precise details, I presume. Yes.
  - Dr: Right. What did he suspect that they might be related to, these lesions?
  - Pt: Well, I, the, seven years ago when I had the uh, operation and they thought they had removed all of the cancer.
  - Dr: Right. Right.
  - Pt: Apparently … [unintelligible] … this is cancer returning?
  - Dr: Right, yeah.

In the good news condition, the explicit terms were “hemangiomas,” or “benign blood vessels.”

3.2.2. Implicit language for evaluating the bad news

The standard for explicit evaluation in the bad news condition was “bad news” or “malignant condition.” Implicit evaluations used in the bad news condition included:

- Euphemistic (or qualified) evaluations; e.g., “a little disappointing” or “serious” (rather than “terminal”).
- Litotes (which negate the opposite of the explicit term); e.g., “this is not great news” instead of “this is bad news.”

Explicit evaluations in the good news condition were terms equivalent to “good” but not, for example, “encouraging.”

3.2.3. Implicit language for expressing certainty about the bad news

Note that this analysis assumed (a) that there is seldom absolute certainty in test results and (b) that the physicians’ words reflected how they chose to phrase their news, not necessarily their private estimate of certainty.

The standard for explicit expressions of certainty in the bad news condition were “the tests effectively rule out …” or “the red cell scan confirms ….” Implicit techniques in the bad news condition included:

- Less than definite expressions; e.g., “from the tests, it seems that you have …” “these lesions might be related to cancer …” “this looks like a group of blood vessels,” or “this is probably cancer.”
- Personal disclaimers; e.g., “They might be cancer, unfortunately. I mean, they haven’t been biopsied, we don’t have any tissue to confirm that.”

In the good news condition, explicit phrases were, for example, “these are totally benign cysts in the liver, not cancers at all.”

3.2.4. Implicit references to the recipient in the bad news condition

The standard for explicit references in either the bad news or good news condition were second-person pronouns referring to the recipient or to his or her body (e.g., “You have cancer in your liver.”) In the bad news condition, the physicians often subtly distanced the diagnosis from the recipient by avoiding the second-person pronoun; e.g.:

- An article instead of a personal pronoun; e.g., “The colon cancer has come back” or “in the liver.”
- Generic or impersonal forms that only implicitly connected the disease with the patient; e.g., “It is cancer …” or “There are some questionable things.”

In the good news condition, they were more likely to say “You have benign hemangiomas in your liver.”

3.2.5. Implicit identification of the source of the bad news

In both conditions, the standard for explicit statements were those that clearly identified the physician as the source of the news; e.g., “I have … news.” Implicit ways of framing the source in the bad news condition included:

- Speaking as if the physicians’ role were to pass on the information given to them by a colleague or by the tests; e.g., “Well, those two tests uh, have indicated that the lesions are probably cancer” or “the radiologist, at least, reports that those two tests are consistent with a diagnosis of cancer in the liver.”
- Asking for the patient’s consent to hearing the news; e.g.:
  - Dr: And, you want me to give you all the results no matter what they are?
  - Pt: Yeah. I need you to, yeah, I need to get—I need to know.
  - Dr: Yes, okay.

In the good news condition, explicit language included “I’m pleased to say that the tests are entirely normal.”

3.3. Truthfulness

The above analysis confirmed the prediction that physicians would avoid being blunt when they delivered bad news by including a higher rate of implicit language. The other side of their dilemma was to do so while still being truthful. There were several converging sources of evidence that the physicians’ implicit language did not interfere with conveying the diagnosis accurately. All of the analogue patients did one or more of the following: first, within the interviews, they responded as if they had understood; e.g., one followed up with the question, “So, similar, similar to the type of cancer that was found in the colon?” Second, after hearing the diagnosis, all of the analogue patients joined the physician in discussing the various treatment options for metastasized cancer. Third, in the letters they wrote to their hypothetical family discussing the various treatment options for metastasized cancer. Fourth, in their responses to the experimenter’s open-ended questions, several of the analogue patients spontaneously mentioned “bad news.” Also in the open-ended interview, none of the analogue patients described a physician as evasive or misleading, and they often commented positively about the physicians’ communication. For example, “He presented the serious information to me in a respectful way, and he could have come on quite—more bluntly.”
4. Discussion and conclusion

4.1. Discussion

We applied an established theory of communicative dilemmas to the bad news situation, in which physicians must be honest but not brutally honest, then tested experimentally whether this dilemma led to implicit communication. To manipulate the situation, to control extraneous variables, and to provide quantitative measurement, real physicians were in hypothetical scenarios with analogue patients. Within this standard scenario, they gave bad or good news to different patients. Implicit language consisted of words or phrases that required the recipient to infer the meaning. The results supported the prediction that the physicians’ use of implicit language would vary as a function of their communicative situation. When the news was bad and the explicit communicative options in the situation were negative (i.e., lying or being blunt), the physicians used implicit language at a higher rate. Evidence from the analogue patients during and after the interview supported the conclusion that they had inferred the accurate meaning. Therefore physicians had solved the dilemma by telling the truth and also softening it with implicit language.

4.2. Conclusion

Our methodological goal was to provide a theory-driven experiment that would complement the extensive survey literature and qualitative studies of bad news delivery. This experiment added to the literature by examining closely the communicative situation. Our goal was not to establish generalizability to the wide variety of situations in which individuals give and receive bad news in real medical interviews. However, the findings gain generalizability by their strong similarity to those of Rodriguez et al. [13], who found frequent use of implicit language in real medical conversations with terminally ill patients. Together, these complementary studies provide both internal and external validity for our theory.

4.3. Practice implications

Viewing the delivery of bad news as a communicative dilemma with a communicative solution can lead to more concrete, practical guidelines for solving this challenging situation. The skilled and selective use of implicit language is a linguistic tool that physicians can use to be truthful without appearing callous. The analysis presented here could help physicians become more aware of what makes some language implicit rather than explicit, of how implicit language functions in everyday life, and how it can be used, with care, for the sake of their patients.

There is a teaching DVD [44] with video examples of physicians’ bad news delivery from this experiment, which is currently in the curriculum of a major medical school and on the website of the International Association of Hospice Palliative Care (www.hospicecare.com) and the Canadian Virtual Hospice (www.virtualhospice.ca). These examples and the qualitative results of this experiment argue against a “one size fits all” approach to medical communication. Even in this small sample, there was a wide range of personal styles, including implicit usages not previously noted in the literature. We encourage students and practitioners to examine closely these examples and to absorb the principles, yet maintain their own individual style.

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We confirm that, except as expressly permitted by signed informed consents for the video image, all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story.

Conflict of interest: None of the authors had actual, potential, or perceived conflicts of interest (whether financial, personal, or other) that could influence this work.

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