Published in final edited form as:

J Cancer Educ. 2009 ; 24(2): 129–134. doi:10.1080/08858190902854681.

The Impact of Personal and/or Close Relationship Experience on Memorable Messages about Breast Cancer and the Perceived Speech Acts of the Sender

Sandi W. Smith, Ph.D., Charles Atkin, Ph.D., Christine M. Skubisz, M.A., Samantha Munday, B.A., and Cynthia Stohl, Ph.D.

Michigan State University in East Lansing, MI (SWS, CKA, and SM) in collaboration with University of Maryland (CMS), and University of California, Santa Barbara (CS).

Abstract

Background—Memorable messages and their speech acts (purposes of the messages) can promote protection against breast cancer and guide health behaviors.

Methods—Participants reported their personal, friends', and relatives' experiences with breast cancer and a memorable message about breast cancer if one came to mind. Those with a memorable message reported its perceived speech acts.

Results—Individuals who had personal *and* friend or relative experience with breast cancer were significantly more likely to recall memorable messages than other respondents. The most frequently perceived speech acts were providing facts, providing advice, and giving hope.

Conclusion—This information should be used to form messages in future breast cancer protection campaigns.

Breast cancer is one of the most salient health issues of our time and advocate organizations, corporations, and even celebrities are creating and sending messages about it. Breast cancer messages are prevalent, but what remains unknown is who is recalling these messages and what features are being remembered. These are questions that this paper addresses.

Two purposes of health communication are to create messages that motivate behavior change and to understand their effectiveness. For a message to be effective, it must first be remembered and then applied. Determining the characteristics of those who recall particular messages allows identification and more effective targeting of individuals who are, or are not, recalling memorable messages. This paper identifies personal and relational characteristics of women who recall memorable messages about breast cancer and the purposes they perceive in the messages.

In 2005, 212,920 new cases of invasive breast cancer were diagnosed in the United States (1). It is the second most common cancer among women, and about 1 in 8 women will develop invasive breast cancer at some time during her lifespan while other women will experience concerns related to the disease. Currently, there are over two million breast cancer survivors in the US (1). Both those with disease and those in their support networks need social support, the giving and receiving of tangible or emotional assistance, empathy, validation, or

information (2). Vaux suggests that social support be viewed as a process that involves transactions between the individual and their support network. This view requires attention to be placed upon the interaction between the individuals and their social environments, as well as relationships in the network (3). The provision of information, advice, and motivational support defined as “expressions of care, concern, love and interest especially during times of stress or upset” (4, p. 2), are especially important. Meaningful or memorable messages can serve as an important form of social support and information about the disease.

Communication researchers have examined memorable messages in other contexts. Knapp (5) originally defined memorable messages as “verbal messages which may be remembered for extremely long periods of time and which people perceived as a major influence on the course of their lives”. Individuals receive hundreds of messages each day, yet most are simply processed and forgotten. However, some are recalled for long periods of time, affect behavior, and guide sense-making processes (6); thus they have been termed memorable messages. Messages perceived as memorable are most often brief and prescribe rules of conduct for solving problems. They tend to transcend a specific context and are applicable to a variety of situations.

Smith and Ellis (7) conducted an investigation of memorable messages as guides to behavior, focusing on messages in the context of self-assessing personal behavior. Memorable messages have been studied within the contexts of conversations about religious faith (8), aging (6), gendered socialization (9), and newcomer socialization in organizations (10).

Receptivity to a particular message type may be higher during a personal health crisis or when a close other is experiencing health problems, and should be highest when both situations occur. Therefore, we offer the following hypotheses:

H1: Individuals with personal experience with breast cancer *and/or* who have a relative or friend with concerns are significantly more likely to recall a memorable message.

H2: Individuals who report no experience with breast cancer personally, nor any relatives or friends who have experienced concerns are significantly less likely to recall a memorable message.

H3: The likelihood of recalling a memorable message should be highest for individuals who have both personal experience and a relative or friend affected, followed by those with personal experience, then those with a relative or friend affected, and finally, individuals with no experience, respectively.

Speech Acts

Austin (11) and Searle (12,13) have contributed the concept of speech acts, or the actions that are performed through speech. For example, speech acts can include statements to inform (14), change beliefs (15), promise (14), command or request (16), name, compliment, or show anger (14,17,15), among others. The notion of speech acts is a valuable contribution to health communication research because of the positive and negative affect certain acts can have. Drummond (18) used speech acts to study diabetes management. Thirty diabetic women noted five common speech acts related to support or nonsupport messages (deterrence, indifference, encouragement, compliment, and temptation). These five directly influenced self-efficacy to cope. The speech acts of encouragement and compliments were supportive, whereas the speech acts of deterrence, temptation, and indifference were unsupportive and potentially hazardous.

Speech act research originally considered only the sender’s perspective. However, Austin made it clear that the sender’s intention does not always correspond to the purpose the receiver

perceives. Savulescu, Foddy, and Roger's (19) research was based on belief that messages can have profound effects on others, especially to those who are ill. The authors emphasize the sensitivity with which words need to be chosen when speaking to patients. This study of breast cancer memorable messages is based on the receiver perspective.

Providing facts, giving advice, providing hope, providing compassion, managing feelings, telling a story, commanding, controlling, promising and threatening might be the perceived purposes of memorable messages about breast cancer. Respondents might identify other speech acts that they perceive in their memorable messages. Therefore, we pose the following research question and hypotheses:

RQ1: What percentages of each category of perceived speech act will be identified in the memorable messages about breast cancer?

H4: The average number of speech acts perceived in memorable messages should be highest for individuals who have self *and* friend and family experience with breast cancer, followed by those with either self or friend and family experience, and lowest for those with neither.

H5: Individually perceived speech acts should be most frequently identified as purposes in their memorable messages about breast cancer by individuals who have self *and* friend and family experience, followed by those with either self or friend and family experience, and then by those with neither type of experience.

Method

Instrumentation and Procedure

Data were collected through a web-based survey questionnaire which participants completed online. After informed consent, participants were asked to recall a memorable message about breast cancer. Participants were also asked if they personally experienced physical concerns about breast cancer or if it touched the life of a relative or friend. The subset of participants who recalled a memorable message were asked to report the content of the recalled message, and whether or not each of the following 10 speech acts (purposes) were present in their memorable message: to provide compassion, to tell a story, to provide facts, to command you to do something, to promise you something, to threaten you, to give advice, to provide hope, to manage feelings, and to control something. More than one speech act could be perceived in a single message. Participants provided open-ended responses about other speech acts that they perceived in the messages. Finally, all participants completed the same demographic questions as the participants who did not recall a memorable message.

Participants

Participants were recruited from the general public via a news release and from breast cancer awareness organizations and advocacy groups by email and notices distributed at meetings. Additional participants were older female relatives of students at a large Midwestern university and a moderately-sized western university. There were 277 female respondents with ages from 18-81 (mean 43.8). Two hundred and forty-three (87.7%) were Caucasian, 7 (2.5%) were African American, 5 (1.8%) were Hispanic, 8 (2.9%) were Asian American, 5 (1.8%) were Native American, 3 were Pacific Islander, and 6 (2.2%) participants reported another race or ethnicity. Three participants (1.1%) reported having been through some high school, 20 (7.2%) graduated from high school, 99 (35.7%) completed some college, technical school, or earned an associates degree, 92 (33.2%) earned a bachelor's degree, 60 (21.7%) earned a graduate degree, and 3 (1.1%) did not report their level of education.

Results

Overall, 164 (59%) participants recalled and reported a memorable message about breast cancer and 113 (41%) did not. The data did support Hypothesis 1 (individuals who had personal experience with breast cancer *and/or* had a relative or friend who experienced concerns were significantly more likely to recall a memorable message). Of the 114 respondents in the group with personal *and* friend and family experience (42% of total respondents), 87 recalled a memorable message (76%), $\chi^2 (1, n = 114) = 33.7, p < .001$. In addition, individuals who had personal experience ($N = 135$ or 49% of total respondents) were significantly more likely to recall memorable messages (72%) than not (28%), $\chi^2 (1, n = 136) = 26.47, p < .001$. This pattern followed for individuals who had a relative or friend who had experienced concerns ($N = 191$ or 69% of the total) as they were significantly more likely to recall a memorable message (65%) than not (35%), $\chi^2 (1, n = 194) = 44.48, p < .001$.

Support was not found for hypothesis 2, $\chi^2 (1, n = 65) = .75, p > .05$. Individuals who had no experience with breast cancer personally nor have any relatives or friends who experienced concerns were not significantly less likely to recall a memorable message (46%) than to recall one (54%).

For those who have personally experienced breast cancer, there is a large (34%) difference in message retention between participants with versus without family or friends with breast cancer experience. By contrast, there is only a small (4%) difference for those who have no personal experience. Knowing a family member or friend with the disease makes a large difference in recall of memorable messages for women who have experienced cancer concerns, but not for those who do not have cancer. Moreover, for respondents who do not know a family member or friend experiencing breast cancer, there is no difference in retention between women who do versus those who do not have personal experience.

Hypothesis 3 was partially supported. First, recall of memorable messages about breast cancer did follow the pattern in the prediction made in this hypothesis. When respondents had both self *and* friend and family experience, 76% of the participants recalled a memorable message, followed by those with self experience (72%), those with friend and family experience (65%), and finally the group with neither experience (44%). Thus, the percentages did conform to the prediction order in this hypothesis. In addition, 72% recalled a memorable message and 28% did not; this recollection rate is significantly higher than the 47% remembering a message among those with no personal experience, $\chi^2 (1, n = 277) = 18.2, p < .001$. A message was recalled by 65% with a friend or family member with breast cancer, significantly higher than the 44% retention among those with no experienced friend or relative, $\chi^2 (1, n = 277) = 10.5, p < .001$.

When mutually exclusive categories were created by removing those with both self *and* family and friend experience from the self experience or friend and family categories, different results were found. A one-way ANOVA was used to test the four types of breast cancer experiences on the percentage of yes responses for recalling a memorable message ($F (3,276) = 9.6, p < .001$). Although the results are significant, this hypothesis was not confirmed because the four mutually exclusive experience groups were not significantly different from one another. A Tukey post hoc analysis was used and results revealed two groups of respondents. In the first, individuals with only self experience ($N = 21$), only relative or friend experience ($N = 77$), and those with no experience in either domain ($N = 65$) grouped together with 49%, 45%, and 43% of yes responses, respectively. Individuals with both personal experience *and* a relative or friend with experience ($N = 114$) were significantly different from all other groups and were more likely to recall a memorable message (77%).

Research Question 1 centered on the percentage of each category of speech act identified by the entire sample in their memorable messages. In addition to the original list of 10 speech acts, two coders coded the open-ended responses (% agreement = .90) and found four other categories cited by at least 3% of the sample: to remind, to provide support, to solicit support, and to persuade. Table 1 shows that the most frequent speech acts are to provide facts (77%), to give advice (62%), and to provide hope (60%).

Hypotheses 4 and 5 predicted that those who had both self and friend and family experience would have a higher number of total speech acts and would be more likely to identify particular speech acts as present in their memorable messages than those in the other groups. These analyses used the mutually exclusive categories found when testing H5. Both those with friends and family but without self experience and those with no self or friend and family perceived a greater number of speech acts (M 's = 4.4 and 4.0, respectively) than did those with both self and friend and family experience ($M = 3.5$) who were only followed only by those with self experience ($M = 2.8$). The results of a one-way ANOVA ($F(3,161) = 2.82$, $p < .05$) indicate that these means are significantly different, but not in the direction predicted. No speech acts was perceived significantly more frequently by those with both friend and family and self experience.

Table 2 presents the results for H4 and H5 for the two experience categories from the earlier analysis. These results parallel those above. Those in the second group comprised of self only, friend and family only, and neither type of experience perceived a greater number of speech acts ($M = 4$) than did those with both self and friend and family experience ($M = 3.5$), $t(162) = 1.83$, $p = .07$. These results were opposite the prediction. In addition, there were no differences in the frequency with which each speech act was perceived between the two groups, contrary to prediction.

H5 predicted that frequencies of the indices of types of speech acts would differ as a result of experience with breast cancer. Results did not support H5 in that those with self and friend and family experience were not higher in their endorsement of types of speech acts than all others.

Discussion

The first set of results lead to the question of why individuals with different types of experience with breast cancer are more or less likely to have memorable messages. Women who have personally experienced breast cancer and have a friend or family member who has experienced it as well are highly likely to cite a memorable message. This might be explained by greater personal utility of the recollected message for someone who can apply the relevant information to her salient condition, because the information has social utility for interacting with those experiencing the disease, and because they are probably receiving more breast cancer messages from these friends or relatives.

Nevertheless, a memorable message is recalled by almost half of those who have no breast cancer experience either personally or socially. This surprisingly substantial rate may be partly due to the plethora of breast cancer messages in today's medical, interpersonal, and media environments. Breast cancer is a prevalent topic in the news media, TV talk shows, and women's magazines, and breast cancer is a relatively frequently discussed disease when women interact with family and friends; moreover, medical professionals communicate about breast cancer to patients, especially those ages 40 and older. Beyond sheer exposure to messages, another reason why the messages are remembered is that the information may be stored for future use; women are aware that there is a chance that they will be diagnosed in the future, and an even greater likelihood that they will eventually be interacting with a friend or relative with breast cancer.

It is interesting to note that among the women who have no experience, the rate of message retention does not differ whether or not relatives or friends have the disease. This suggests that the preeminence of explanations relating to media message availability and apprehension of experiencing the disease. On the other hand, there is a large difference on this factor among women who have experienced breast cancer; the subset who have family or friends with breast cancer have a very high rate of message retention, while the subset with no family or friends have the lowest retention. This latter finding might be attributed to the lack of a social network of cancer survivors available to provide an interpersonal source of memorable messages.

This study combined the two primary subgroups of interpersonal contacts in the women's relational networks, friends and family members. It might be revealing to perform additional investigation to determine which subgroup plays the key role in memorable message retention. Perhaps younger women with mothers or aunts with breast cancer would be more likely to recollect messages because of higher informational relevance associated with future personal risk as well as utility in current social interactions. By contrast, those with friends but not family members experiencing breast cancer would tend to absorb messages for social utility alone.

Another interesting question that arises from these data is why women with both self and friend and family experience identify fewer speech acts about breast cancer than expected. This pattern is even more intriguing because women who had both self *and* friend or family experience actually recollected significantly more messages than all other groups but endorsed fewer individual and fewer total speech acts per memorable message. These findings seem to suggest that the perceived purposes of the speech acts were more focused and narrow for those who experience both self *and* friend and family concerns with breast cancer. The speech acts of providing facts, giving advice, and providing hope were endorsed as the most frequent sender purposes of the messages, and all three of these speech acts could have served to reduce uncertainty for these women. In addition giving advice and providing hope serve to provide emotional support. Future research should be conducted to further probe this pattern.

The findings suggest that speech acts might form a profitable framework for future analyses of health communication messages on particular issues related to disease. Many researchers have already applied speech act analysis to medical interviews (20,21,22), but very few other health issues have been addressed through this framework with the exception of diabetes (18), childhood obesity (23), and safe sex (24). Comparisons across topics would enable insight into the relative prevalence of various purposes such as providing facts versus compassion. Additional study is needed to examine the differing purposes of speech acts from distinct sources such as medical professionals, media, and interpersonal contact.

These findings have implications for those who design and send messages about breast cancer. Be they about prevalence, prevention, detection, or treatment of breast cancer, messages that present facts and offer advice in a manner that provides hope would seem to be most memorable from the results of this survey. This should be especially true in the case of a population that includes those who have experienced breast cancer personally *and* who have friends or family members who have experienced breast cancer as well. Practitioners who can segment their potential audience into the groups shown in Table 2 can refer to the perceived speech acts most frequently cited in the memorable messages of those women. They can then create messages that include content that addresses those purposes in messages that they hope will become memorable to their audience.

Limitations

The majority of the women in the study were Caucasian and highly educated. While this ethnic group is at risk for breast cancer, it is important to include individuals from all ethnicities to determine the characteristics of those receiving and recalling memorable messages. Breast

cancer affects individuals regardless of education level or socioeconomic class, but future research should determine if breast cancer messages are recalled in the broader population or isolated within certain subgroups.

Conclusion

This research explored the characteristics of women who have memorable messages about breast cancer and the perceived speech acts that underpin those messages. Women who have personal experience *and* have friends and family with breast cancer experience recollect far more memorable messages. Providing facts, advice, and hope were most often identified as the perceived speech acts of the memorable messages about breast cancer.

Acknowledgments

Supported by the Breast Cancer and the Environment Research Centers grant number U01 ES012800 from the National Institute of Environmental Health Sciences (NIEHS), and the National Cancer Institute (NCI), NIH, DHHS. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the NIEHS or NCI, NIH.

References

1. American Cancer Society. Learn about breast cancer. [Accessed June 20, 2006]. Available at: http://www.cancer.org/docroot/lrn/lrn_0.asp.
2. Vaux, A. Social support: Theory, research, and intervention. Praeger; New York, NY: 1988.
3. Berscheid, E.; Regan, P. The psychology of interpersonal relationships. Pearson Education; Upper Saddle River, NJ: 2005.
4. Burleson BR. The experience and effects of emotional support: What the study of cultural and gender differences can tell us about close relationships, emotion, and interpersonal communication. *Pers Relatsh* 2003;10:1–23.
5. Knapp ML, Stohl C, Reardon KK. “Memorable” messages. *J Commun* 1981;31:27–41.
6. Holladay SJ. “Have fun while you can,” “You’re only as old as you feel,” and “Don’t ever get old!” An examination of memorable messages about aging. *J Commun* 2002;52:681–697.
7. Smith SW, Ellis JB. Memorable messages as guides to self-assessment of behavior: An initial investigation. *Communication Monographs* 2001;68:154–168.
8. Keeley M. Final conversations: survivors’ memorable messages concerning religious faith and spirituality. *Health Commun* 2004;16:87–104. [PubMed: 14979853]
9. Dallimore EJ. Memorable messages as discursive formations: The gendered socialization of new university faculty. *Women’s Studies in Communication* 2003;26:214–265.
10. Stohl C. The role of memorable messages in the process of organizational socialization. *Communication Quarterly* 1986;34:231–249.
11. Austin, JL. How to do things with words. Harvard University Press; Cambridge, MA: 1962.
12. Searle, J. Speech acts. Cambridge University Press; London: 1969.
13. Searle, J. Expression and meaning: Studies in the expression of speech acts. Cambridge University Press; Cambridge, MA: 1979.
14. Cooren F. Textual agency: How texts do things in organizational settings. *Organization* 2004;11:373–293.
15. Nastri, J.; Pena, J.; Hancock, JT. The construction of away messages: A speech act analysis; *The Journal of Computer Mediated Communication*. 2006 [Accessed October 11, 2006]. p. 11 Available from *The Journal of Computer Mediated Communication* [online database] at <http://jcmc.indiana.edu/vol11/issue4/nastri.html>.
16. Wilson SR, Kim MS, Meischke H. Evaluating Brown and Levinson’s politeness theory: A revised analysis of *Directives* and face. *Research on Language and Social Interaction* 1991;25:215–252.
17. Gilbert MA. Emotional messages. *Argumentation* 2001;15:239–250.

18. Drummond DK. Diabetes management: An exploration into the verbal support attempts of relational others. *Qualitative Research Reports in Communication* 2005;6:60–76.
19. Savulescu J, Foddy B, Rogers J. What should we say? *J Med Ethics* 2006;32:7–12. [PubMed: 16373515]
20. Scherz JW, Edwards HT, Kallail KJ. Communicative effectiveness of doctor-patient interactions. *Health Commun* 1995;7:163–177.
21. Shaikh A, Knobloch LM, Stiles WB. The use of a verbal response mode coding system in determining patient and physician roles in medical interviews. *Health Commun* 2001;13:49–60. [PubMed: 11370922]
22. Street RL, Millay B. Analyzing patient participation in medical encounters. *Health Commun* 2001;13:61–73. [PubMed: 11370924]
23. Bruss MB, Morris JR, Dannilson LL, et al. Food, culture, and family: Exploring the coordinated management of meaning regarding childhood obesity. *Health Commun* 2005;18:155–175. [PubMed: 16083409]
24. Adelman MB. Play and incongruity: Framing safe-sex talk. *Health Commun* 1991;3:139–155.

Table 1
Perceived Speech Acts of Memorable Messages Recalled by Whole Sample

Percentage Yes	Speech Act (Purpose)
77%	To provide facts
62%	To give advice
60%	To provide hope
38%	To provide compassion
37%	To manage feelings
27%	To tell a story
27%	To command
26%	To control
10%	To promise
10%	To threaten
9%	To remind
4%	To solicit support
4%	To persuade
3%	To provide support

Table 2

Perceived Speech Acts of Memorable Messages for Women in the Two Breast Cancer Experience Categories

Self and Friend/Family	Either or Neither	Speech Act
74%	82%	To provide facts
59%	66%	To give advice
55%	66%	To provide hope
32%	45%	To provide compassion
33%	41%	To manage feelings
21%	34%	To tell a story
27%	27%	To command
27%	24%	To control
11%	8%	To promise
9%	11%	To threaten
3.5	4.0	Average # of Speech Acts