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Planning Improves Vocal Fluency and the Appearance of Concern When Communicating Emotional Support

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Emotional support is often conveyed to people with cancer; however, not all support messages are effective, leading some potential supporters to fear appearing incompetent when communicating support. Additionally, nonverbal behaviors, such as vocal fluency, pitch variety, eye contact, and conveying concern, have previously been associated with support recipients' outcomes and perceptions of speaker competence. This experiment determines whether these nonverbal behaviors can be increased through message planning. Participants were randomly assigned to either a planning condition or a distraction task condition before recording emotional support messages for a friend hypothetically diagnosed with cancer. Results showed that planners spoke with significantly more vocal fluency and conveyed significantly more nonverbal concern than nonplanners. Planners also used more eye contact and pitch variety than nonplanners, but these differences were not statistically significant. Results suggest that planning may improve some nonverbal aspects of communicating support, which may in turn improve perceptions of supporters' competence.

Keywords: Cancer; Emotional Support; Nonverbal Communication; Planning Theory; Vocal Fluency

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Effectively providing social support is an important communicative behavior in friendships (Burleson & Samter, 1994) and is especially characteristic of more intimate friendships (Westmyer & Myers, 1996). Communicating emotional support, in particular, plays a vital role in developing and maintaining close relationships (Goldsmith, 2004), and one situation when support from friends and other loved ones is expected and/or offered is during a personal health crisis such as a cancer diagnosis. Because the quality of emotional support communicated to cancer patients influences the extent to which recipients experience positive outcomes (Ray & Veluscek, 2018), researchers ought to investigate how friends can more competently communicate support, specifically in terms of nonverbal behaviors.

This study employs planning theory to determine whether nonverbal behaviors previously tied to perceptions of speaker competence, such as vocal fluency, pitch variety, eye contact, and conveying concern, are increased through message planning. The subsequent literature review reviews emotional support within the cancer context, discusses the importance of nonverbal communication as an aspect of perceived competence, and overviews the tenets of planning theory that are relevant to the study. Several hypotheses are then explicated.

Emotional Support and Cancer

Social support occurs in many forms; however, emotional support messages, defined as “expressions of caring, concern, empathy, and reassurance of worth” (Goldsmith, 2004, p. 13), are consistently reported by cancer patients as more helpful than other support forms, such as informational, instrumental, or tangible support (Dakof & Taylor, 1990). For example, cancer patients who experienced higher levels of emotional support from friends and family also reported greater quality of life and self-efficacy (Arora, Finney Rutten, Gustafson, Moser, & Hawkins, 2007). Although receiving emotional support from friends and other loved ones can positively affect support recipients, not all emotional support messages are equally effective (Goldsmith, 2004; High & Dillard, 2012). For example, in some instances, friends may lack the necessary experience or expertise regarding certain problems (e.g., a cancer diagnosis), and this may lead to less effective support messages (Wright & Miller, 2010). Importantly, communicating low-quality support messages may result in less emotional improvement for cancer patients (Ray & Veluscek, 2018) and may lead to cancer patients reevaluating whether the supporter is someone worth sharing updates with or seeking support from in the future (Ray & Veluscek, 2017).

Potential supporters of cancer patients also appear to be aware of the possibility of failing to communicate effective emotional support messages and sometimes choose to forgo supporting someone they know with cancer out of fear of appearing incompetent (Ray, Manusov, & McLaren, 2019). It appears, then, that supporters and support recipients are both aware of the potential for supportive interactions to go awry and subsequently produce negative evaluations of a supporter’s competence. Therefore, it is useful to consider how supporters can communicate support in ways

that are perceived by support recipients as more competent. One such approach involves focusing on supporters' nonverbal communication.

Nonverbal Behaviors and Competence

Although few studies have focused specifically on nonverbal communication in the support context (Burleson, 2009), many specific nonverbal behaviors have been found to affect recipients' responses to support messages, including vocal pitch, vocal fluency (Dolin & Booth-Butterfield, 1993), and eye contact (Jones & Wirtz, 2006). These nonverbal behaviors have historically been associated with perceptions of speaker competence and credibility. Specifically, those who communicate with greater levels of vocal fluency (Burgoon, Birk, & Pfau, 1990), pitch variety (Burgoon & Le Poire, 1999), eye contact (Beebe, 1974), and the appearance of concern (Jones & Guerrero, 2001) are perceived as more competent and credible. Having identified specific nonverbal behaviors that affect recipients' perceptions of speaker competence, it is worth considering what supporters can do to improve their nonverbal communication. One such behavior is message planning, and planning theory (Berger, 1997) therefore serves as a theoretical framework for this study.

Planning Theory

Planning theory (Berger, 1997) explains how people use their cognitive abilities, such as the ability to imagine future interactions (Honeycutt, 2003) and recall prior experiences (Wood, Baxter, & Belpaeme, 2011), to plan behaviors that can achieve social goals. People pursue a variety of social goals through communication (Dillard, Segrin, & Harden, 1989), such as persuading, informing, or, in the case of the present study, providing emotional support. Berger (1997) contends that the pursuit of social goals begins with planning—a process in which individuals draw upon prior experiences and knowledge of the context of the upcoming interaction to develop plans. Plans are knowledge structures that allow people to envision action sequences leading to goal attainment, and prior to enacting plans, people may engage in the rehearsals of such plans (Honeycutt, 2003).

Of particular relevance to the present study is Berger's (1997) assertion that successfully implementing a plan depends on having both the cognitive ability to develop sound plans and also the requisite communicative skills to deliver the planned message competently. Regarding the latter, developing and rehearsing plans may increase the nonverbal delivery of emotional support messages specifically because planning provides an opportunity to consider the most effective way to communicate a message in pursuit of a social goal. Additionally, planning can also increase action fluidity, defined as the "verbal and nonverbal fluency with which a plan is enacted" (Berger, 1997, pp. 39–40). As Berger (1994) notes, those who communicate with greater action fluidity are typically perceived as more influential and credible. Based on these arguments, the following predictions are advanced:

- H1: *Planners communicate with more vocal fluency than nonplanners while recording an emotional support message.*
- H2: *Planners use more eye contact than nonplanners while recording an emotional support message.*
- H3: *Planners use more pitch variety than nonplanners while recording an emotional support message.*
- H4: *Planners convey more nonverbal concern than nonplanners while recording an emotional support message.*

Method

Participants

Participants ($N = 100$) were 50 women and 50 men, ranging in age from 18 to 44 years ($M = 19.95$ years; $SD = 3.17$). Participants identified as White/Caucasian (68%), Hispanic/Latino(a) (11%), Asian (7%), Black/African American (4%), or as having multiple racial/ethnic backgrounds (10%). Participants were recruited from undergraduate communication courses at a large university in the southwestern United States.

The data for this study were collected as part of a broader research protocol that included the collection of saliva samples for cortisol analyses that ultimately yielded no significant findings. Although the salivary cortisol data were not used in the present study, the inclusion of salivary sampling as part of the laboratory procedure led to additional exclusion criteria based on various medical conditions, medications, and life events that are known to affect salivary cortisol levels (Nicolson, 2008). A full list of exclusion and inclusion criteria, as well as how the present study offers a unique contribution unrelated to other manuscripts that rely on this same data set, are publicly available as supplemental materials on the Open Science Framework (https://osf.io/kzt9y/?view_only=9a949b4ef8f3408f95e23652e1316ffb).

Laboratory Procedure

Potential participants took a prescreening survey to ensure that they met the inclusion/exclusion criteria. Qualified participants received an e-mail from the principal investigator inviting them to schedule a laboratory session. Once at the laboratory, the participant was directed to take an online survey and to think about an opposite-sex friend for an upcoming scenario. Immediately following the survey, the participant read a hypothetical scenario in which his or her chosen friend had been diagnosed with a serious form of cancer. The full hypothetical scenario is available through the Open Science Framework at the URL noted previously.

Next, participants were randomly assigned to either the planning condition or a writing distraction task condition. Those in the planning condition were given four minutes to plan an emotional support message. Those in the distraction condition wrote for four minutes about a matter unrelated to the cancer diagnosis, which prevented them from planning their supportive message ahead of time. These

experimental conditions were developed, in part, based on prior research on planning and nonverbal communication (Allen & Honeycutt, 1997) and the expressive writing paradigm (Pennebaker, Colder, & Sharp, 1990).

After receiving their instructions, participants were left alone for four minutes and were instructed to stop working on their assigned task (planning or writing) as soon as the researcher returned. Participants were then told to use the video camera atop the computer at which they were seated to record an emotional support message for the friend who was hypothetically diagnosed with cancer. (To be clear, the identified friend never received the emotional support message, as this study did not collect dyadic data.) After recording a message, participants took a final survey and were then debriefed.

The use of this experimental design sacrificed external validity and privileged internal validity. This was a deliberate decision made by the research team as this was the first study seeking to identify the effects of planning on nonverbal behavior within the context of cancer and emotional support. Although internal validity was prioritized, participants did appear to approach the laboratory sessions with a level of psychological realism, as evidenced by some participants becoming visibly emotionally upset while communicating their emotional support message.

Coding Nonverbal Behaviors

The dependent variables were participants' nonverbal behaviors (vocal fluency, pitch variety, and eye contact) as well as a general assessment of their level of concern communicated nonverbally. Each dependent variable was coded on a single, bipolar adjective scale (e.g., no eye contact/continuous eye contact; no concern/a great deal of concern), with 7 scale points between the anchors. Reliability statistics are not available because these variables were coded using a single item. These items were completed by the trained coders for each of the 100 participants.

The trained coders were three communication graduate students and one undergraduate communication honors student who were blind to the study's goals, manipulations, and hypotheses. A subset of 15 messages from the study's data was used to train the coders. Two of the coders coded pitch variety and vocal fluency, and two of the coders coded eye contact and concern. Prior to coding, each pair reviewed the definitions of the nonverbal variables they were coding and then independently coded 20 messages not used during the training session. Ebel's intraclass correlations indicated reliable coding for pitch variety (.86) and vocal fluency (.70) after the first training session and for concern (.86) and eye contact (.96) after a follow-up training session. Following training, coders evaluated the remaining messages.

Results

The hypotheses were tested using a series of Welch's *t*-tests, which have a more stable Type I error rate than the traditional Student's *t*-test (Delacre, Lakens, & Leys,

2017). Furthermore, Delacre *et al.* (2017) recommend Welch's *t*-tests even when the assumption of homoscedasticity is met (as in our data) because of the possibility of Type II errors occurring with the Levene's test for equality of variances. Finally, the researchers decided to analyze the four dependent variables separately based on a weak average intercorrelation ($r = .214$).

Hypothesis 1 predicted that planners are significantly more vocally fluent than nonplanners. Results were consistent with this prediction, $t(97.98) = 2.01$, $p = .02$, Cohen's $d = .40$. Planners ($M = 4.81$, $SD = 1.58$) were coded as more vocally fluent than nonplanners ($M = 4.17$, $SD = 1.61$). Hypothesis 1 was supported.

Hypothesis 2 predicted that planners use significantly more pitch variety than nonplanners. Results were not consistent with this prediction, $t(95.14) = .49$, $p = .31$, Cohen's $d = .07$. Although planners ($M = 3.77$, $SD = 1.43$) were coded as using more pitch variety than nonplanners ($M = 3.64$, $SD = 1.20$), the difference between the two groups was nonsignificant. Hypothesis 2 was not supported.

Hypothesis 3 predicted that planners use more eye contact than nonplanners; however, results were not consistent with this prediction, $t(98.00) = .34$, $p = .37$, Cohen's $d = .07$. Whereas planners ($M = 3.69$, $SD = 1.77$) used more eye contact than nonplanners ($M = 3.57$, $SD = 1.77$), this difference was nonsignificant. Hypothesis 3 was not supported.

Hypothesis 4 predicted that planners display more concern through their nonverbal communication than nonplanners. As predicted, planners ($M = 3.95$, $SD = 1.36$) were coded as expressing more concern nonverbally than nonplanners ($M = 3.40$, $SD = 1.49$), $t(97.22) = 1.92$, $p = .02$, Cohen's $d = .39$. Hypothesis 4 was supported.

Discussion

Prior research has documented how the quality of emotional support messages is associated with positive outcomes for cancer patients (Dakof & Taylor, 1990). Nonetheless, few studies have focused on tactics supporters may use to increase the quality of their support messages, particularly in terms of nonverbal communication or in the context of friends supporting friends diagnosed with cancer. Thus, this study considers the potential message strengthening effects of planning and specifically focuses on the effects of planning on nonverbal aspects of competently delivering supportive messages.

The predictions concerned three specific nonverbal behaviors—vocal fluency, pitch variety, and eye contact—as well as the general display of concern through nonverbal behavior. For each outcome, planning was predicted to lead to better performance (e.g., more pitch variety or appearing more concerned). Results showed that planners are perceived as more vocally fluent than nonplanners and that planners are perceived as appearing more concerned through their nonverbal communication. Planners were also coded as using more pitch variety and eye contact than nonplanners; however, these differences were nonsignificant.

One possible explanation for a significant difference occurring between planners and nonplanners on vocal fluency but not pitch variety or eye contact is that the planning period acted as a form of rehearsal. Honeycutt (2003) noted that rehearsal is just one of many specific tactics communicators perform when planning—that is, rehearsal is a specific behavior under the broader concept of planning. This notion was supported by the fact that some planners in the present study used their planning time to type the exact wording of their support message. Such a use of the planning period essentially allows the supporters to envision the message they will communicate, which appears to subsequently affect the fluency with which they deliver those messages. In synthesizing both the significant and nonsignificant results, the researchers conclude that planning may improve certain aspects of supporters' nonverbal communication while communicating emotional support to friends with cancer.

Implications

An important implication of this study relates to issues of competently delivering emotional support messages. Berger (1997) notes that attaining goals through communication requires two forms of competence: the cognitive ability to plan an effective message (i.e., knowing what to say) and the communication skills necessary to execute the plan (i.e., knowing how to say it). From the recipient perspective, receiving competently communicated support messages is important given that positive outcomes of receiving emotional support are a function of the recipient's perceived quality of the support (Bodie, Burleson, & Jones, 2012). Interestingly, the possibility of appearing incompetent is a salient concern for some supporters. In some cases, not knowing what or how to communicate support is such a deterrent that some would-be supporters instead choose to forgo communicating any emotional support to the person with cancer whatsoever (Ray et al., 2019)—that is, supporters' self-perceptions of incompetence become an insurmountable barrier to communicating emotional support. This is problematic because social avoidance can create negative outcomes for cancer patients (Peters-Golden, 1982), sometimes at detrimental levels similar to if the supporter had communicated low-quality emotional support messages (Ray & Veluscek, 2018). Therefore, it is worth considering how to best address potential supporters' concerns of appearing incompetent when communicating support.

One potential tactic for increasing perceptions of supporter competence is improving the nonverbal delivery of emotional support messages. Indeed, previous research has shown that certain nonverbal behaviors are associated with perceptions of a speaker's competence, credibility, and composure, such as vocal fluency (Burgoon et al., 1990), pitch variety (Burgoon & Le Poire, 1999), and eye contact (Beebe, 1974). Additionally, the ability to appear concerned is also important when competently communicating emotional support (Jones & Guerrero, 2001). Because our results were significant only for vocal fluency and appearing concerned, the

researchers posit that planning may be a useful behavior that, at times, can improve aspects of one's nonverbal communication related to appearing competent. To be clear, planning is not a panacea for all the challenges inherent in competently delivering supportive messages to friends with cancer but is instead a promising behavior one can enact prior to communicating emotional support to friends with cancer.

Strengths, Limitations, and Future Directions

The present study had both strengths and limitations. For example, replications or extensions of this study should consider using multi-item measures for coding nonverbal behaviors as opposed to relying on single-item measures. Second, as previously mentioned, having laboratory participants record emotional support messages in response to a hypothetical scenario in a laboratory setting detracts from the external validity of the findings. This decision, however, bolstered the internal validity of the study and allowed researchers to systematically investigate the effects of planning on nonverbal variables. One other limitation of the study was its relatively small and disproportionately young sample. Although these limitations restrict the generalizability of this study, the notable effect sizes of the significant results (Cohen's $d = .40$ and $.39$) suggest that these patterns would likely replicate in future studies using more diverse samples in more naturalistic settings. Indeed, replicating these results under naturalistic conditions in a more representative sample is necessary before designing support interventions based on these results.

One potential setting for a more externally valid study could be oncologists' offices and cancer centers. Supporters who accompany friends to their oncology appointments could still be given the opportunity to plan their supportive communication in advance of attending these appointments, and video recordings of the real-time interactions between supporters, cancer patients, and also the health-care professionals at the appointments could provide externally valid data on the effects of planning on nonverbal communication.

Additional research should also investigate the effects of rehearsal as a specific planning behavior. Honeycutt (2003) differentiates planning and rehearsal, stating that rehearsal is a specific behavior that only some planners perform. Furthermore, rehearsal may be a particularly useful planning behavior, as Berger (1997) notes that "The effectiveness of any action plan aimed at achieving a social goal is the joint product of the plan, and the skills and attributes of the social actor who carries out the plan" (p. 87). Thus, whereas the planning process may produce better plans, the rehearsal of one's plans may increase the supporter's ability to carry out one's plans. Moreover, rehearsal allows for a communicator to test out his or her planned messages and make subsequent adjustments. Thus, future studies ought to investigate the possible additive effects of not only planning but also specifically engaging in message rehearsal too.

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Supplementary material

Supplemental data for this article can be accessed [here](#).

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