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## 2. Disclosure

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Disclosure is an expanding area of health communication research. Sharing information is important for how patients experience and manage illness. Research examines disclosure to providers, in personal relationships (e.g., partners or family), and in social networks (e.g., friends or coworkers). Several studies have developed scales to measure disclosure as a communication process including focus on patterns of sharing along with timing and message choices.

Disclosure is defined as “an interaction between at least two individuals where one intends to deliberately divulge something personal to another” (Greene, Derlega, & Mathews, 2006, p. 411). In health, disclosure often focuses on sharing a diagnosis or an event (e.g., surgery or pregnancy). Disclosure has been associated with several important outcomes for both individuals and relationships. First, people who disclose have greater access to social support and resources. Next, people who disclose may find better ways of coping with stressful life events with increased access to resources such as support groups. Third, people who disclose report closer relationships with increased trust and openness. Fourth, there is an opportunity for catharsis and reduced anxiety from holding in information (Greene, Carpenter, Catana, & Magsamen-Conrad, 2013). Finally, disclosure can lead to more effective health care if patient disclosure results in health care providers who are aware of all relevant health information.

Health communication scholars studying disclosure have focused on information management, topic avoidance, privacy, and secrets. Some of this research includes patient-provider communication (including why patients withhold certain information from their physician), and other studies focus on disclosure within interpersonal relationships (for example, choosing not to disclose an illness in a newly developing or established romantic relationship).
This chapter focuses on one measure that considers factors such as breadth, depth, and frequency of disclosure rather than considering disclosure as a single unidimensional event. Past research has focused on disclosure of a diagnosis (e.g., cancer or HIV) or single feature (e.g., adoption or sexual orientation) but often missed how patients or partners/providers share their experience of an illness and how information sharing ebbs and flows through both illness and relationship trajectories.

Disclosure measurement has lacked consistency, in part due to the range of foci and several theories, frameworks, and models that attempt to explain the complex disclosure process. Research examines predictors of disclosure including uncertainty, communication efficacy, relationships with the disclosure target, anticipated response, and assessment of the information. Yet, disclosure is often measured by intent to share some piece of information to some target person (e.g., “I am likely to tell this person [my mother] about my diabetes diagnosis”), but this is not the same as a measure that assesses if the information is known: “This person (my partner) knows about my diabetes diagnosis.” In the remainder of the chapter we outline several existing measures of disclosure and offer suggestions for future research.

**Measuring Disclosure**

One available measure of health disclosure was developed to address the multidimensional nature of the construct and has been used with patient samples including cardiologic, cancer, and nonvisible health issues. It has also been developed (and used) in dyadic studies and targeting patients with partners/spouses and patients without partners but focusing on “others” (a family member or friend).

Checton and Greene (2012) initially elaborated on theorizing by Omarzu (2000) to develop a scale measuring patterns of disclosure about a health condition. They asked 203 cardiologic patients about ongoing disclosure to a spouse/partner about their health condition. The authors developed scales related to breadth, depth, and frequency of disclosure. All items were measured on 5-point Likert-type scales with a higher score equal to more of the disclosure feature. Breadth addressed the range of topics disclosed, measured by 4 items with acceptable reliability (α = 0.82, M = 3.69, SD = .92). Confirmatory factor analysis (CFA) indicated that items loaded onto this latent construct, χ² (26) = 46.48, p < 0.01, CFI = 0.97, RMSEA = 0.07. Depth focused on the degree of disclosure intimacy, with 4 items and acceptable reliability (α = 0.75, M = 3.82, SD = .82). CFA yielded good fit, depth χ² (26) = 48.43, p < 0.01, CFI = 0.97, RMSEA = 0.07. Frequency tapped how often participants disclosed, with 4 items measuring this variable (α = 0.84, M = 3.09, SD = .86). CFA indicated all items loaded onto the latent construct, χ² (26) = 33.43, p = 0.15, CFI = 0.99, RMSEA = 0.04. The three disclosure aspects were strongly correlated (range r = .46 – .72).

A number of studies assessed validity through examining correlations between breadth, depth, frequency and other variables. In Checton and Greene (2012) the 3 disclosure variables were correlated with communication efficacy, relational quality, and support such that the higher the breadth, depth, and frequency of disclosure, the higher communication efficacy, higher perceived partner support, and better perceived relational quality. For association with assessment of the information, breadth and depth were directly related yet frequency was inversely related to symptom uncertainty. Thus, symptoms can dampen some aspects of disclosure while simultaneously increasing others.

In an extension of the 2012 study, Checton and Greene (2014b) examined 253 cardiologic patients who reported/did not report that they “shared everything” with their partners. Additional questions focused on sharing specific health related information. Sharing specific physical symptoms was correlated with disclosure depth and frequency but not breadth, and sharing psychological/emotional symptoms was correlated with all three disclosure features. Patients who reported “sharing everything” reported greater breadth, depth, and frequency of sharing with their partner, however, on specific health disclosure items patients who reported “sharing everything” with their partner were not higher in disclosing physical and psychological/emotional health information. Thus, these findings caution researchers against using a broad “share everything” item if assessing disclosure with partners.

Another extension of the 2012 study (Checton & Greene, 2014a) compared 273 cardiologic patients who reported sharing with either a partner/spouse or an “other” (family member or friend for patients without a spouse). Patients reported higher disclosure breadth, depth, and frequency to partners compared to others. Additionally, cardiologic patients reported higher physical and psychological/emotional disclosure and more “heart healthy talk” to spouses than to others.

In a separate study, similar breadth and depth measures were used as indicators of open cancer-related communication (Venetis, Magasen-Conrad, Checton, & Greene, 2014). This is a dyadic study of 95 couples (N = 190) where one partner had a cancer diagnosis. They present additional CFAs confirming the disclosure factor structures. In paired t-tests, partners reported greater perceptions of disclosure breadth and depth than the patients. Reported breadth and depth were strongly correlated, and both were inversely correlated with topic avoidance for both patients and partners. Finally,
the partner’s caregiver burden was correlated with the partners’ disclosure breadth and depth but not the patients’.

The items for three patterns of disclosure about a health condition to a spouse are presented in Table 1. The scale includes parallel items adapted for patients without a spouse (targeting an “other” such as a family member or a friend) as well as versions of the measure for the partner or the other for use in dyadic studies.

Table 1. Checton and Greene’s (2012) Patterns of Disclosure about a Health Condition.

Please indicate your agreement with each of the following statements:

(Breadth)
1. I discuss a wide variety of issues related to my health condition. (R)
2. There are some issues about my health condition that I do not talk about. (R)
3. There are some areas related to my health condition that I avoid discussing. (R)
4. I am hesitant to share small health concerns.

_Depth_
1. I have heart-to-heart talks with my spouse about my health condition. (R)
2. My spouse and I only talk about superficial issues related to my health condition. (R)
3. I hold back from sharing intimate issues about my health condition with my spouse. (R)
4. I share my innermost fears about my health condition with my spouse.

(Frequency)
1. We often talk about my health condition.
2. I rarely talk about my health condition. (R)
3. My spouse and I have frequent conversations about my health condition.
4. How often do you talk with your spouse about your health condition?

*(R) indicates reverse-scored

Other Related Measures

There are other disclosure related measures that may be useful for health communication research. Greene et al. (2012) developed measurement for components of the health disclosure decision-making model (DD-MM). The disclosure decision-making model (Greene, 2009) suggests that 3 components (assessment of information with 5 facets, assessment of the receiver with 2 components, and disclosure efficacy), affect the decision to disclose or not disclose health information. Greene et al. (2012) sampled participants with nonvisible illnesses including sexually transmitted infections, eating disorders, diabetes, and mental health issues. Patients reported about their disclosure experiences with one person who knew their diagnosis and another with whom they had not yet shared the diagnosis. For the purposes of this chapter, we focus on additional measures of disclosure efficacy and anticipated response to disclosure.

Disclosure efficacy. A number of researchers of health disclosure include a construct related to efficacy, either communication or disclosure efficacy. Disclosure efficacy is described as the perceived ability to disclose personal information to another person. Greene et al. (2012) measured disclosure efficacy using 2 items in a sample of 183 patients with a nonvisible health condition (M = 3.63, SD = .94). A sample item was, “I have trouble finding the right words when I share my health information” (R) with responses ranging from 1 (strongly disagree) to 7 (strongly agree). Efficacy was negatively correlated with perceptions of the information in terms of stigma, prognosis, and relevance but not significantly associated with relational quality.

Cleckton and Greene (2012) used four 5-point Likert type items (α = 0.84, M = 4.56, SD = .59) to measure efficacy in a sample of 203 cardiology patients. A sample item included “I am confident that I can share information about my health condition with my spouse when I want to.” Efficacy was directly related to breadth, depth, and frequency of disclosure to spouse. In a related use of this measure, Checton and Greene (2014) reported no difference in cardiology patients’ and partners’ ratings of efficacy.

Cleckton, Greene, Magsamen-Conrad, and Venets (2012) used five 5-point Likert type items to measure communication efficacy (patient α = 0.81, M = 4.40, SD = .58; partner α = 0.86, M = 4.26, SD = .63) in a sample of 308 dyads (N = 616) where one person had a chronic health condition. Results indicated a single factor for patients (eigenvalue = 2.93, 59% variance, loadings above .70) and partners (eigenvalue = 3.26, 66% variance, loadings above .80). Patient and partner perceptions of the patient’s communication efficacy were moderately correlated (r = .27). Thus, there is only moderate agreement between spouses on patients’ efficacy. Additionally, communication efficacy was correlated with uncertainty, but efficacy was correlated with health care management for partners but not patients.
Magsamen-Conrad, Checton, Venetis, and Greene (2015) measured communication efficacy using six 5-point Likert type items with a sample of 95 couples \((N = 190)\) where one had been diagnosed with cancer. Factor analysis indicated a single factor for patients (eigenvalue = 4.18, 70% variance, all items loading above .73) and partners (eigenvalue = 3.25, 65% variance, all items loading above .72). Communication efficacy was strongly correlated with cancer management for both patient and partner, but efficacy was also inversely correlated with prognosis uncertainty. Finally, patients reported higher efficacy than partners.

For researchers interested in using an efficacy measure related to disclosure, note that the above scales use both five and seven-point responses and additionally range from 2 to 6 items. Finally, Greene et al. (2013) developed a brief HIV disclosure intervention targeting increases in disclosure efficacy, but they use semi-structured interviews that may not be as useful for measurement. The intervention is beneficial for practice and prevention, however, using interviews in data collection introduces some challenges. On the benefit side, semi-structured or unstructured interviews can provide greater depth of response when participants generate content instead of reacting to provided stimulus items. In contrast, researchers must weigh these benefits with the labor costs of interviews, generally smaller sample sizes, and inability to compare some responses precisely.

**Anticipated response.** Beyond efficacy, a number of researchers are including anticipated response as a predictor of health disclosure. Anticipated response is described as expectations of how the disclosure recipient would react upon learning the health information. In the Greene et al. (2012) study of patients with nonvisible illnesses, anticipated reaction was comprised of 2 latent variables, anticipated response and anticipated outcome measured in response to “If I shared my health diagnosis with this person.” Anticipated response was measured with 4 items, \( \chi^2 (8) = 6.51, p = 0.58, \) CFI = 0.99, RMSEA = 0.01, \( \alpha = 0.80. \) A sample item was, “This person would offer emotional support.” Anticipated outcome was defined as expectations of positive relational outcomes and was measured with 3 items, \( \chi^2 (13) = 29.50, p = 0.01, \) CFI = 0.97, RMSEA = 0.08, \( \alpha = 0.74. \) A sample item included, “I am concerned about how this person will feel about me after hearing the health information.”

Anticipated response and anticipated outcome were positively associated, such that expectations of a supportive response were related to expectations of positive relationship outcomes. Anticipated outcome and disclosure efficacy were also related, such that expectations of positive relationship outcomes related to higher perceived ability to disclose information. Finally, anticipated response was correlated with prognosis and closeness as well as disclosure depth.

**Privacy rules.** Another measure developed by Venetis et al. (2012) in three studies operationalizes prior restraint phrases, which are privacy rules about information. Perception of ownership, explicit privacy rules, and implicit privacy rules were scales developed for the study based on communication privacy management theory (CPM, Petronio, 2002). CPM postulates that people “own” and create boundaries around information. To protect private information, people use rules to indicate what information should not be shared further. Items were developed in Study 1 and used Likert-type scales ranging from 1 (strongly disagree) to 5 (strongly agree). Perception of ownership items asked participants if they “owned” the health information and if others had a right to share this health information \((\alpha = 0.67, M = 4.16, SD = 0.78).\)

6 explicit privacy rule items loaded onto one latent construct, \( \chi^2 (9) = 25.99, p = 0.01, \) CFI = 0.98, RMSEA = 0.07, \( \alpha = 0.90, M = 2.68, SD = 1.09. \) These items asked if participants told recipients not to share their information, clarity in issuing privacy rules, and timing related to explicit rules. Implicit privacy rules measured if the discloser perceived that the recipient knew not to share the information without being specifically told \((\alpha = 0.57, M = 3.88, SD = 0.57).\) In the dyadic Study 2, an additional measure beyond anticipated further revealing included was actual further revealing, asking disclosure recipients if they shared the information with others.

Ownership was positively related to both implicit and explicit privacy rules such that the higher the perception of ownership, the more participants specifically asked recipients not to share their information and the more certain participants felt that recipients would not share their information even if they did not specifically ask them. Explicit and implicit privacy rules were not related, but both were related to information valence. Ownership and anticipated revealing were positively correlated, such that the higher perception of ownership, the higher expectation that the disclosure recipient would reveal the information. Ownership and actual further revealing were negatively correlated, such that the higher perception of ownership, the less likely recipients were to share information. In terms of effectiveness of either type of privacy rules, neither implicit nor explicit privacy rules fully protected information from further sharing (see pilot study and Study 2). That is, even when we share information with others using “please don’t tell anyone” types of qualifications and phrases, some others still choose to share further. Thus, people
should continue to carefully evaluate decisions to share and how to balance those risks and benefits, even with close others.

Table 2. Venetis et al. (2012) Privacy Rules.

(Perception of Ownership)
1. I feel that I “own” my health information.
2. Others do not have the right to share my health information.

(Explicit Privacy Rules)
1. I asked this person not to share the health information with anyone else.
2. We never discussed if s/he could share the health information with others. (R)
3. I was clear about who this person could tell/not tell the health information.
4. Before I shared the health information with this person, I asked him/her not to share the information with anyone.
5. After I shared the health information with this person, I asked him/her not to share the information with anyone.
6. I never asked this person to keep the health information to him/herself. (R)

(Implicit Privacy Rules)
1. Although I did not ask this person not to, s/he knows not to tell others.
2. I know that s/he won’t share my health information even if I didn’t ask him/her to keep the information to him/herself.

Reasons for/against disclosure. Other health disclosure measures developed in the HIV/AIDS literature include the reasons for and against disclosure, based on an integrative model of HIV-disclosure decision-making (Derlega, Winstead, Greene, Serovich, & Elwood, 2004). The model includes the social environment, relational and individual factors, and the interplay between these levels to affect reasons why people would or would not disclose their HIV status. HIV-positive patients completed surveys focusing on reasons for and for not disclosing. Reasons for disclosure included 24 items highlighting five reasons for disclosing including catharsis, duty to inform/educate, desire to test reactions, a close/support relationship, and similarity. Reliabilities (α) ranged from 0.60 to 0.90. Reasons for nondisclosure contained 23 items and highlighted six reasons for not disclosing including privacy, self-blame/self-concept difficulties (note association with stigma and identity), communication difficulties, fear of rejection, protecting the other, and superficial relationship. Reliabilities (α) ranged from 0.75 to 0.91.

Disclosure personality measures. Two additional measures treat disclosure as an individual difference rather than focusing on message features or other communication components. These measures focus on how individuals manage information based on personal tendencies different from previously reviewed scales emphasizing changes in disclosure patterns related to the health information or a diagnosis.

Larson and Chastain’s (1990) self-concealment scale considered the construct separate from disclosure. Sample items include “If I shared all my secrets with my friends, they’d like me less” and “My secrets are too embarrassing to share with others.” Items are measured on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree). The scale consists of 10 items with good reliability (α = 0.83) in samples of human service workers, participants at a professional training conference, and psychology graduate students.

Kahn and Hessing’s (2001) disclosure distress measure taps concealment versus disclosure of distress. The index includes 12 items measured on a 5-point Likert-type scale. Instructions ask participants to indicate the extent to which they agree or disagree with each item. Sample items include “I usually seek out someone to talk to when I am in a bad mood” and “I try to find people to talk with about my problems.” The survey was validated through several studies with undergraduate students, and reliabilities (α) ranged from 0.92 to 0.98.

Use of Existing Measures and Future Studies

This chapter reviewed measures that have been used in health disclosure studies, focusing on one measure that assesses breadth, depth, and frequency of sharing health information. Many studies create new scales, yet most of the scales presented in this chapter can be adapted for certain illnesses and diseases. Several of the existing scales can be easily modified to apply in the health communication context instead of creating unique scales for each new context. Some of the measures can be adapted for similar illnesses and diseases, for example, measures for HIV/AIDS can easily be applied to other stigmatized health conditions such as mental illness. We encourage use of similar or adapted measures to allow for comparison of findings across samples and context.

Continuing to use these scales with various populations and in different health contexts can improve both theory and psychometrics. One important consideration in measuring disclosure is distinguishing it from privacy, secrets, concealment, and other information management concepts. This is
vital for improving validity. Future studies should distinguish disclosure from other similar concepts to continue to contribute to the growing literature on information management and health communication.

**Recommended Readings**


**References**


