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Support Person Holding Back Information in Medical Interactions: The Role of Empathic Communication and Disclosure Efficacy

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ABSTRACT

Support people are often both physically and emotionally involved in patients' cancer-care trajectories with first-hand knowledge of the patient's health; they also harbor their own fears and concerns. When present in the medical interaction, support people report hesitancy to share patient information and concerns with clinicians, although they deem this information is important for patient care. Framed in the disclosure decision-making model, this study examines how support people's perceptions of clinician empathic communication affect their disclosure efficacy, and how these concepts relate to outcomes of holding back information about patient health or their own fears and concerns. Participants included support people (N = 129) recruited from the Love Research Army® who completed an online survey. Analyses investigated how disclosure efficacy influences the association between perceived clinician empathic communication and support person holding back patient health information (model 1) and support person holding back their own fears and concerns (model 2). Overall, results identify differences in support people's holding back when making disclosure decisions related to patients' physical health versus their own fears and concerns. Greater disclosure efficacy shaped the relationship between perceived clinician empathic communication and lower levels of holding back patient health information, bolstering the importance of clinician empathic communication with support people of cancer patients.

A severe diagnosis such as cancer affects the diagnosed individual or patient as well as their close family and friends who may serve as informal support providers (Laidsaar-Powell et al., 2016). Support people (SP) often integrate patient care into their daily tasks and responsibilities as well as accompany patients to medical treatments (Eggly et al., 2006; Junkins et al., 2020; Laidsaar-Powell et al., 2016; Shin et al., 2013). When SP live with patients or have regular contact, they can be very familiar with patient health and well-being. SP may be well-informed about patient eating or medication habits, treatment side effects, pain, or mood, and therefore offer valuable perspectives to clinicians. In fact, at times SP may be able to provide or record more detailed and complete information when communicating with clinicians than can patients (Street & Gordon, 2008).

Like patients, SP also experience fears and worries about general cancer management and the patient's well-being (Hagedoorn et al., 2008). During patients' medical interactions, SP may contemplate sharing information with clinicians about the patient's health or about their own concerns and fears about the patient. The medical interaction provides a unique opportunity in which the patient, accompanying SP, and clinicians attend to and communicate about patient health, offering the potential for patients, and at times SP, to offer updates and share concerns. However, SP may evaluate whether to share or withhold information in these appointments. Although research has documented patient processes in disclosure decisions to clinicians (Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023), less is known about SP communication preferences when sharing or holding back information with clinicians (Washington et al., 2019). Grounded in the disclosure decision-making model (Greene, 2009), this study evaluates SP decisions to share or withhold specific information during cancer care appointments.

SP communication in medical interactions

One stable feature of medical interactions, including oncology care, is information exchange (Epstein & Street, 2007). Clinicians give direction, ask questions, and share information; similarly, patients and SP may ask questions and provide information. Although often triadic (clinician, patient, and SP), clinicians generally orient to and communicate primarily with patients, providing patients the opportunity to communicate about their health (Laidsaar-Powell et al., 2013).

SP communicating about patient health concerns

When patients are unable or unwilling to provide information about their health, SP may clarify, correct, or supplement patient information (Senger et al., 2024; Street & Gordon, 2008). SP have reported on the necessity of their participation when patients experience cognitive impairment or "chemo brain" as a result of their treatment and are unable or unwilling to completely or accurately recall information (Venetis et al., 2024). Patients often resist sharing with clinicians the

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information that they evaluate as less relevant to their care. Such information often includes their emotions, fears, and concerns (Manne et al., 2015) or physical changes that they perceive as unrelated to their health condition (Venetis et al., 2024). For example, a frustrated SP described how his wife, the patient, omitted telling her clinician about her allergies and inability to sleep because she did not think it was relevant to her care (Venetis et al., 2024). Further, SP worry about the appropriateness of this participation (Glasser et al., 2001; Mastel-Smith & Stanley-Hermanns, 2012). A SP described how he felt badly when telling the clinician about the patient's nausea, information that she had omitted (Venetis et al., 2024). SPs are concerned that the act of sharing, correcting, or clarifying information may offend patients or reduce patient autonomy (Lee et al., 2022; Petronio et al., 2004; Venetis et al., 2024). Thus, SP may be cautious when determining whether to share or withhold patient health information with clinicians.

SP communicating about their own fears and concerns

Patients and SP rarely share emotional information such as fears and worries with each other (A. Y. Zhang & Siminoff, 2003) or with clinicians (Beach & Dozier, 2015). In the medical interaction, patients and SP reason that this information is extraneous to patient healing; they rationalize that individuals other than treating clinicians may be more appropriate and willing recipients (Venetis et al., 2024). Further, given that medical interactions generally occur in the presence of patients, SP may have increased resistance to discussing their *own* emotional concerns about patient well-being *in front of* patients. In fact, SP report that when motivated to ask clinicians questions that may upset patients, they do so in hallways and away from patients (Lee et al., 2022). However, the medical interaction may be one of few opportunities in which SP have access to clinicians and their expertise in managing cancer. SP may seek informational or emotional support or validation for their own fears and concerns. As such, SP may feel conflicted about sharing their own fears and concerns during medical interactions.

Predicting disclosure decisions

Individuals are often mindful when deciding to share or withhold information, considering the implications and consequences of disclosure. The disclosure-decision making model (DD-MM, Greene, 2009) offers a predictive framework that describes how individuals contemplate sharing or avoid sharing health-relevant information. The model describes that when deciding to share or withhold information, potential disclosers such as SP consider the *information* to be shared such as patient health information and SP fears and concerns, the *information recipient* such as clinicians, and their own confidence in sharing the information, or *disclosure efficacy*. Although the model has more frequently framed investigations among interdependent partners such as couples (e.g., Venetis et al., 2014, 2018), it has been applied to patients' disclosure decisions with clinicians (e.g., Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023; Friley & Venetis, 2022; Romeo & Bevan, 2023). The model has also been applied to understand the strategic information management choice of topic avoidance or holding back (Venetis et al., 2015). Individuals may prefer to withhold information from clinicians to maintain patient privacy or avoid embarrassment (Petronio et al., 2004). Given that the DD-MM predicts disclosure decisions and because this scholarship seeks to understand SP disclosure decisions to withhold information in medical interactions, the DD-MM was selected to guide this research.

Clinician empathic communication as recipient assessment

The DD-MM describes that when contemplating disclosure decisions, individuals evaluate potential information recipients reflecting on potential recipient's characteristics such as relational warmth, closeness, and anticipated response to the disclosure. Increased positive evaluations of potential recipients are associated with increased disclosure (Greene, 2009). In the medical context in which patients and clinicians may not have established relationships, clinician communication styles inform the recipient assessment (Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023).

One element of patient-centered communication is empathic communication (X. Zhang et al., 2024). Empathic communication includes a series of supportive clinician statements that confirm patient and/or SP experiences, demonstrate interest in patient accounts, show concern, and encourage and respond to emotions (Epstein & Street, 2007). Empathic communication facilitates the development of relationships that are characterized by trust, rapport, and patient perception of patient integration and inclusion within healthcare encounters (Epstein & Street, 2007; Hong & Oh, 2020). Thus, empathic communication promotes the validation of patient emotions and uncertainty and improves patient psychological well-being (Broadbridge et al., 2024; Broadbridge, Greene, Venetis, Lee, Banerjee, Saraiya, et al., 2023; Demiris et al., 2020; Epstein & Street, 2007).

Like patients, SP prefer clinicians who are compassionate, responsive, dedicated, genuine, and empathic (Waldrop et al., 2012; Washington et al., 2019). Among patients, increased clinician empathic communication is associated with increased information sharing (Brandes et al., 2015; Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023). Aligned with a patient sample, we anticipate that increased clinician empathic communication advances information sharing and reduces SP holding back of information (see Figure 1, Hypothesis 1a,b). We offer the following:

H1: Increased SP perception of clinician empathic communication will be associated with decreased SP holding back of (a) patient health information and (b) SP fear and concerns.

Disclosure efficacy, empathic communication, and holding back

When predicting disclosure and holding back, a consistent feature across disclosure models is disclosure efficacy. Disclosure efficacy is conceptualized as an individual's perception that they can share an intended message and yield the desired response (Bandura, 1977). The DD-MM asserts that

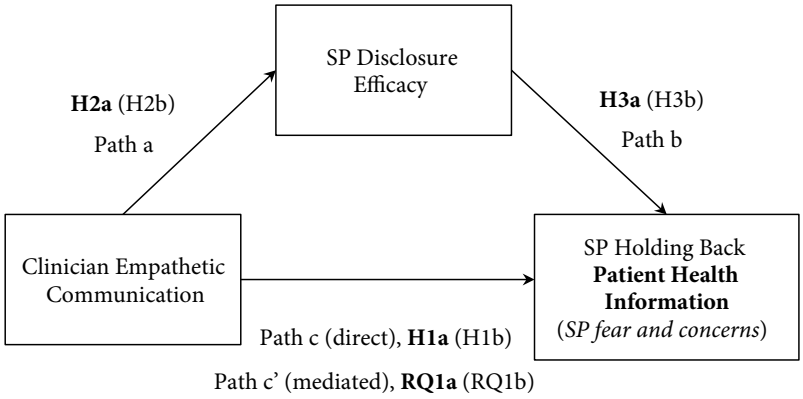

Figure 1. Models 1 and 2: hypothesized models of holding back. Bolded figures represent model 1. Figures within parentheses represent model 2.

appraisals of disclosure efficacy are dependent on assessments of the information (i.e., evaluating features of the content including stigma and relevance) and recipient assessment (studied here as empathic communication). Increased positive recipient assessment influences increased disclosure efficacy (Greene, 2009). Within a patient sample, empathic clinician communication was positively associated with increased patient disclosure efficacy (Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023). Aligned with a patient sample, we anticipate that increased clinician empathic communication will be associated with increased SP disclosure efficacy (see Figure 1, Hypothesis 2a,b). We offer the following:

H2: Increased SP perception of clinician empathic communication is associated with increased disclosure efficacy.

People who feel more confident and efficacious about sharing a health diagnosis with others are also more likely to disclose the information (Greene, 2009). Higher patient disclosure efficacy promotes increased patient sharing with oncologists (Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023). Alternatively, those with lower disclosure efficacy may be more inclined to withhold information. For example, among cancer patients and partners, increased disclosure efficacy is associated with less topic avoidance of cancer-related discussions about death, the future, sexual concerns, and being a burden (Venetis et al., 2015). Because greater disclosure efficacy gives rise to increased disclosure among patients (see Figure 1, Hypothesis 3a,b), we offer the following:

H3: Increased disclosure efficacy will be associated with decreased SP holding back of (a) patient health information and (b) SP fear and concerns.

Although the relationship between clinician empathic communication and SP holding back information may be direct, as indicated in the DD-MM, disclosure decisions are influenced by disclosure efficacy (Greene, 2009). Grounded in the DD-MM, we predict that disclosure efficacy mediates the relationship between recipient assessment (applied here as clinician empathic communication) and disclosure decisions (applied as holding back of patient health information and SP fear and concerns). As such, we propose that the effects of clinician empathic communication relative to SP holding back are mediated by disclosure efficacy (see Figure 1, RQ 1 a,b), and we offer the following:

RQ1: How does disclosure efficacy influence the relationship between clinician empathic communication and SP holding back of (a) patient health information and (b) SP fear and concerns?

Method

Participants and procedures

Data were collected between June 2020 and December 2022 as part of a larger research project that explored patterns of communication between oncology care clinicians, patients, and SP who attend patients' medical visits (Love Research Army of Women, 2022). Participants were recruited through a national research registry maintained by the Dr. Susan Love Foundation for Breast Cancer Research (i.e., Love Research Army®). The Love Research Army® emailed potential participants who had indicated interest in receiving information about research opportunities.

Participants were eligible to complete the survey if they were aged 18 or older and identified as having accompanied a cancer patient to most of their oncology treatment visits. Participants were required to be able to read English, provide informed consent, and have electronic access to the online survey. Survey completion took approximately 30 minutes (mode = 38). Participants who completed the study were offered entry for a drawing for one of three $50 gift cards. The Rutgers University Institutional Review Board approved all the study procedures and materials.

In total, 197 individuals completed the survey. After removing incomplete data where participants did not respond to more than two items per scale measure ($n = 68$), there were 129 participants. Extended participant demographics are provided in Table 1. Participants were on average 60 years old, with most (78%) reporting a college degree or higher, and self-identifying as women (87%), Caucasian (92%), spouses/

Table 1. Support person demographic information and descriptive statistics ($N = 129$).

Demographic Variables	*n* (%)	M (*SD*)
Age	129	60 (12.13) 22–81 years old
Gender		
Female	112	
Male	(87%) 15 (12%)	
Education		
Highschool Graduate	3 (2%)	
Vocational, technical, or trade school	6 (5%)	
Some College	19 (15%)	
Bachelor's degree	40 (31%)	
Master's/doctoral or professional degree	61 (47%)	
Race		
Asian	3 (2%)	
Multiracial	4 (3%)	
Other	4 (3%)	
White	119 (92%)	
Relationship type w/Patient		
Partner (spouse/romantic)	48 (37%)	
Adult Child	21 (16%)	
Friend (e.g., neighbor, coworker)	20 (15.5%)	
Other Family	35 (27%)	
Parent	4 (3%)	
Length of Relationship to Patient		
Partner		29 (15.65) years range 3–55
Companion		44.5 (19.34) years range 2–83
Patient cancer type		
Breast	78 (60%)	
Colorectal	7 (5%)	
Lung	10 (8%)	
Lymphoma	7 (5%)	
Other	27 (21%)	

partners (37%), or extended family members/friends of the patient (27%). Support people reported most commonly on their experiences helping patients who were diagnosed with breast cancer (60%). The Love Research Army includes individuals affected by various cancers, so SP in our sample also represented different cancer types (see Table 1). The majority of SP (64%) provided support for patients who were post-treatment ($n = 83$), whereas 36% ($n = 46$) supported patients currently undergoing cancer treatment. Among the SP of post-treatment patients, 70% of patients had completed treatment within the last 5 years of data collection.

Measures

A series of Likert-type questions were used to operationalize the study variables, including perceptions of clinician empathic communication, SP disclosure efficacy, and SP holding back about patient health information and SP fear and concerns. Analyses were computed using SPSS Version 29. Initial analyses confirmed data normality; scale reliability was assessed with Cronbach's alphas. Items were removed individually based on a review of systematic data points including eigenvalues, scree plots, factor loadings, and theoretical relevance to create composite scores.

Perceptions of clinician empathic communication

SP perceptions of clinician empathic communication were measured using the 10-item Consultation and Relational Empathy (CARE) questionnaire (Mercer et al., 2004). Similar to lexical adaptations for oncologists (Broadbridge, Greene, Venetis, Lee, Banerjee, Saraiya, et al., 2023; $\alpha = .97$), our questionnaire was adapted to fit the oncology context by replacing "doctor" with "oncologist." Participants rated their perceptions of clinician empathic communication on a 6-point scale ranging from 0 to 5 (*really poor*, *excellent*), with higher scores indicating increased perceptions of clinician empathic communication. All items had the stem, "For the appointments you attended, how was the oncologist at … " Sample items evaluated perceptions of the oncologist's empathic communication with "making me feel at ease," "letting me share my experience with the patient's cancer," and "really listening to me." Confirmatory factor analysis indicated a unidimensional factor structure, with all items loading onto one factor at or above .83. The items were averaged to a composite ($M = 3.41$, $SD = 1.35$) and were highly reliable ($\alpha = .97$).

Disclosure efficacy

SP perceptions of their disclosure efficacy when sharing information with the oncologist were measured using a modified scale to consider confidence in sharing health information between

patients and their spouses (Checton & Greene, 2012, 2015) and previously applied in the cancer context with high reliability (Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023; α = .89). The scale contains six self-report items rated from 1 to 5 (*strongly disagree, strongly agree*), with higher scores indicating greater efficacy. An example item is, "I am confident that I can share information about the patient's cancer with their medical team when I want to." All items were retained to form a composite ($M = 4.20$, $SD = 0.71$), and the scale achieved good reliability (α = .83).

Holding back

SP perceptions of holding back when discussing cancer-related topics with the oncology team were assessed using a modified version of Pistrang and Barker (1995) and Manne et al. (2015) Holding Back Scale. One caregiving burden item was also included from Donovan-Kicken and Caughlin's (2010) research exploring topic avoidance between breast cancer patients and their relational partners. The adapted holding back scale included 16 self-report items rated on a five-point scale from 0 to 4 (*never*, *almost always*), with higher scores indicating more SP holding back. The scale instructions read, "For each statement, please respond to how much you hold back from or actively avoid sharing the concern during visits with the medical team." All 16 items were included in an exploratory principal components analysis using varimax rotation; two factors emerged with eigenvalues over 1. The factors accounted for 72.90% of the total variance. The items were subjected to a rotated component matrix, demonstrating item placement within the two factors. Factor 1, holding back about patient health information, included three items that loaded at .64 and higher. Factor 2, holding back about SP fear and concerns, included 13 items that loaded at .66 and higher (see Table 2).

Table 2. List of items and exploratory principal components analysis factor loadings for the holding back scales.

Item	α	Factor loadings
Composite Items for Measuring Holding Back Patient Health Information	0.75	
Concerns about the patient's physical symptoms (e.g., pain, fatigue, breathing, swallowing, speaking)		.88
Concerns about the cancer treatment (e.g., medical or surgical treatments, medicines, interactions with doctors and nurses, being in the hospital)		.89
Concerns about the patient's well-being		.64
Composite Items for Measuring Holding Back SP Fear and Concerns	0.97	
My emotions such as fear, worry, or sadness		.80
Fear of death or that they might die from this disease		.80
My fear of the patient's disease progressing or coming back		.66
Concerns about my own well-being		.87
Concerns about my relationship with the patient		.82
My concerns about relationships with others (e.g., children, other family members, friends)		.91
My financial concerns (including insurance, household costs, and medical bills)		.92
My concerns about the patient's finances (including insurance, household costs, and medical bills)		.90
My job-related concerns		.91
Whether the patient is a burden on me		.93
Concerns about the patient's ability to function sexually		.77
Dissatisfaction or embarrassment about my body image or appearance		.85
My concerns about the patient's job		.85

SP holding back about patient health information describes SP withholding discussion about patient physical well-being. Sample items included holding back about "[the patient's] physical symptoms (e.g., pain, fatigue, breathing, swallowing, speaking)" and "concerns about the cancer treatment (e.g., medical or surgical treatments, medicines, interactions with doctors and nurses, being in the hospital)." Higher values indicated increased holding back ($M = 1.05$, $SD = 1.00$); the scale had acceptable reliability (α = .75).

SP holding back about SP fear and concerns describes how SP withhold discussion about their emotional concerns. Sample items include, "my emotions such as fear, worry, or sadness," and "fear of death or that they may die from this disease." Higher values indicated increased holding back ($M = 1.67$, $SD = 1.43$); the scale was highly reliable (α = .97).

Mediation analysis

Mediation models tested H1-H3 and RQ1 by investigating the indirect effect of clinician empathic communication on disclosure efficacy and holding back of patient health information (model 1) and SP fear and concerns (model 2). Analytic models were tested in PROCESS Macro (v. 4.0) utilizing model 4 with bootstrapped confidence intervals using 5000 iterations to obtain the indirect effects (Hayes & Scharkow, 2013). Hayes' PROCESS macro uses at least two ordinarily least square regressions to estimate equation parameters, path coefficients, standard errors, *t*-values, *p*-values, and other inferential statistics (Hayes, 2018). For all models, several criteria were applied to assess the significance of the tested pathways, including the statistical significance of each of the indirect path coefficients and bootstrapped upper and lower bound confidence intervals for the direct path, which did not include zero.

As a statistical method, mediation analysis allows for the evaluation of evidence by examining how at least one independent antecedent variable (*empathic communication*) transmits an effect on a consequent dependent variable (*holding back of (a) health information or (b) SP fear and concerns*) through a third intervening variable (*disclosure efficacy*). In the present study, direct effects refer to the influence of perceived clinician empathic communication on SP holding back absent the hypothesized mediating variable (see Figure 1). Indirect effects include the relationship between perceived clinician empathic communication and the outcome variable through the mediating variable, and total effects incorporate both the direct and mediated pathways. Each indirect effect was accepted as statistically significant only if the bias-corrected 95% confidence interval excluded zero.

Results

Descriptive statistics and a zero-order correlation matrix of study variables are provided in Table 3. The results of the total, direct, and indirect statistical effects for both mediation models are summarized in Table 4 and Figure 2. Independent samples *t*-tests demonstrated no significant differences across study variables dependent on SP's patient

Table 3. Descriptive statistics and bivariate correlations for study variables.

Variable	*M (SD)*	α	1	2	3	4
1. Clinician empathic communication	3.41 (1.35)	0.97	–			
2. Disclosure efficacy	4.20 (0.71)	0.83	0.49**	–		
3. Holding back patient health information	1.05 (1.00)	0.75	−0.19*	−0.32**	–	
4. Holding back SP fear and concerns	1.67 (1.43)	0.97	−0.29**	−0.23**	0.03	–

Note. ** Significant at $p < .01$ level, * Significant at $p < .05$ level (2-tailed).

Table 4. Mediation analysis results.

Path	Effect	Estimate	SE	95% CI
4a. Path estimates for Model 1 about SP Holding Back Patient Health Information				
X (empathic communication)→M (disclosure efficacy)	*a*	0.26	0.04	[0.18, 0.34]
M (disclosure efficacy)→Y (holding back)	*b*	−0.41	0.13	[−0.68, −0.15]
X (empathic communication)→Y (disclosure efficacy) (Total)	*c*	−0.14	0.06	[−0.27, −0.16]
X (empathic communication)→ Y(disclosure efficacy) (Direct)	*c′*	−0.04	0.07	[0.10, −0.05]
Indirect	*ab*	−0.11	0.03	[−0.18, −0.05]
4b. Path estimates for Model 2 for SP Holding Back Fear and Concerns				
X (empathic communication)→M (disclosure efficacy)	*a*	0.26	0.04	[0.18, 0.34]
M (disclosure efficacy)→Y (holding back)	*b*	−0.23	0.19	[−0.61, 0.16]
X (empathic communication)→Y (disclosure efficacy) (Total)	*c*	−0.31	0.09	[−0.49, −0.13]
X (empathic communication)→Y (disclosure efficacy) (Direct)	*c′*	−0.25	0.1	[−0.46, −0.05]
Indirect	*ab*	−0.06	0.05	[−0.17, 0.04]

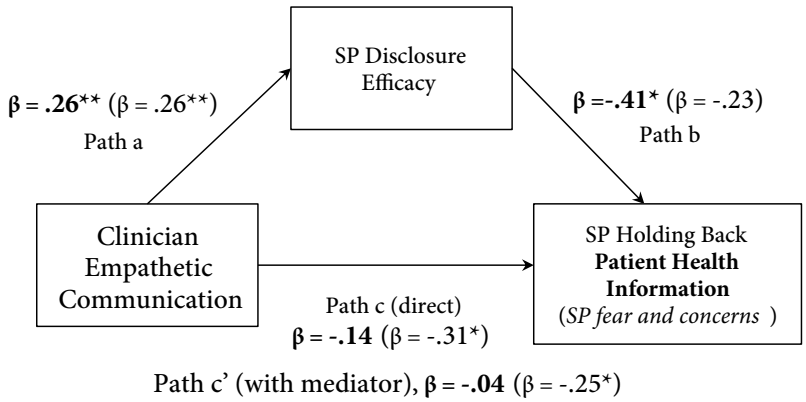

Figure 2. Models 1 and 2: direct and indirect effects models of holding back. Bolded figures represent model 1. Figures within parentheses represent model 2. **p < .01 level, *p < .05 level.

treatment (in-treatment or post-treatment) and data was collapsed.

Model 1: SP holding back patient health information

Examination of direct paths indicated that H1a was not supported; SP perceptions of clinician empathic communication were not associated with holding back patient health information (β = −.04, SE = .07, $p = .62$, CI [−.18, .10]). Higher SP perceptions of clinician empathic communication were associated with higher disclosure efficacy (β = .26, SE = .04, $p = .001$, CI [.18, .34]), supporting H2a. Finally, greater disclosure efficacy was associated with lower levels of holding back patient health information (β = −.42, SE = .14, $p = .003$, CI [−.68, −.15]), supporting H3a.

RQ1a asked about the role of disclosure efficacy as a possible statistical mediator between the relationship of perceived clinician empathic communication and SP holding back patient health information. The analysis for model 1 indicated that disclosure efficacy statistically accounted for the relationship between perceptions of clinician empathic communication and SP holding back patient physical health information. The results revealed a significant indirect relationship involving disclosure efficacy and SP holding back of patient health information (β = −.11, CI [−.18, −.05]). Comparing the nonsignificant direct effect to the statistically significant total effect (β = −.14, SE = .06, $p = .03$, CI [−.27, −.02]) suggests that the statistical association between clinician empathic communication and holding back may operate through SP disclosure efficacy.

Model 2: SP holding back SP fear and concerns

Examination of direct paths indicated that H1b was supported; higher SP perceptions of clinician empathic communication were associated with lower levels of SP holding back fear and concerns (β = −.25, SE = .10, $p = .02$, CI [−.46, −.05]). Higher

SP perceptions of clinician empathic communication were associated with greater evaluations of SP efficacy (β = .26, SE = .04, p = .001, CI [.18, .34]), supporting H2b. Finally, greater efficacy was not associated with lower levels of SP holding back fear and concerns (β = −.23, SE = .20, p = .25, CI [−.61, .16]); thus, H3b was not supported.

RQ1b asked about the role of disclosure efficacy as a possible statistical mediator between the relationship of perceived clinician empathic communication and SP holding back fears and concerns. The mediation analysis found that disclosure efficacy did not statistically mediate the relationship between perceived clinician empathic communication and SP holding back fear and concerns (β = −.25, p = .02). Further, the indirect relationship between disclosure efficacy and SP holding back fear and concerns was not significant (β = −.05, CI [−.17, .04]). The association between clinician empathic communication and SP holding back fear and concerns was statistically significant (β = −.31, SE = .09, p = .001, CI [−.49, −.13]). The findings suggest a direct association between clinician empathic communication and SP holding back fear and concerns, yet disclosure efficacy did not mediate the relationship.

Discussion

This study examined how SP of cancer patients evaluate perceptions of clinician empathic communication and their own disclosure efficacy in relation to holding back information about patients' health and about their own fears and concerns. A unique theoretical contribution of this study is that disclosure processes may vary depending on the subject of the shared information (e.g., about another's health vs. about my feelings). Study results demonstrate two different processes that guide disclosure and withholding decisions when SP interact with clinicians. Although greater perceptions of empathic communication influenced disclosure efficacy in both models, the influence of efficacy varied per context. When sharing patient health information, perceptions of clinician empathic communication were associated with greater efficacy, and this higher efficacy was associated with lower levels of withholding. Alternatively, when sharing their own concerns and fears, SP perceptions of empathic communication were associated with both greater efficacy and less withholding. However, efficacy was not associated with withholding. In what follows, we discuss why these patterns may differ.

SP holding back information

It may seem striking that patterns of SP holding back vary depending on the type of information being considered. However, this finding is aligned with the complex nature of disclosure decisions.

SP holding back patient health information

The DD-MM (Greene, 2009) recognizes that potential disclosers consider both the information to be shared and the potential recipient before evaluating their efficacy to share the information. When considering SP withholding of patient health information, it is interesting that the recipient assessment variable, perceptions of empathic communication, was not statistically associated with SP patterns of withholding. One argument to potentially explain this finding is information ownership (Petronio, 1994). Petronio argued that individuals own information that is about themselves, and information owners have primary, often exclusive, rights to determine how and with whom their information is shared; in this case, patients would have ownership of their health information. Further, Petronio explains that others who know the information, or information co-owners, are expected to share or protect the information as indicated by information owners; in this case, SP are co-owners. Thus, when sharing information about the patient's physical health, SP may be sensitive that patients, and not SP, have ownership of patient health information. As co-owners SP may be cognizant that sharing patient information that patients could share themselves may overstep patient expectations of SP behavior or engage in a breach of patient confidence, resulting in negative relational consequences (Petronio, 1994; Petronio et al., 2004; Venetis et al., 2024).

The motivation to withhold patient health information may be further complicated by clinician empathic communication. Among a sample of patients, increased clinician empathic communication fosters increased patient disclosure (Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023). Thus, in the event that the patient withholds information in an environment primed for open disclosure, SP may be more hesitant to share information that patients could share independently. As such, SP may require increased efficacy for how to share information about the present patient.

SP holding back their fears and concerns

Unlike the model of withholding patient health information, disclosure decisions concerning SP fears and concerns were not influenced by efficacy. One argument to understand differences in study results again reflects information ownership (Petronio, 1994). Unlike sharing of patient information, SP are information owners about their fears and concerns. Thus, efficacy may be deemed as less relevant. It is possible that other factors, such as SP worry that emotional disclosures may place an undue burden upon the patient, may further complicate sharing during medical interactions.

An alternative explanation considers the information assessment component of information relevance (Greene, 2009). Information relevance reflects perceptions of how the information is consequential to the potential recipient. Because patients and SP are hesitant to share fears with clinicians (Venetis et al., 2024), it is not likely that SP will willingly and easily share their fears and concerns with clinicians. Rather, the decision for SP to act as privacy spanners by sharing their own fears and concerns about the patient suggests that their concerns are grounded in some feature of the patient's well-being (Petronio, 2002; Petronio et al., 2004). SP may perceive their concerns may inform or give insight to clinicians about information that is consequential to patient health or their own caregiving journey. Future research should examine SP motivations when contemplating sharing their

own emotional concerns with clinicians to further promote joint coping with the disease (Koenig-Kellas et al., 2021).

Implications for clinician empathic communication

Aligned with prior findings on SP participation in medical interactions (Freytag et al., 2018), our results underscore the importance of clinician efforts to facilitate SP communicative involvement and disclosure efficacy. Study findings reaffirm the benefits of clinician empathic communication, demonstrating both direct and indirect relationships between greater clinician empathic communication and lower levels of SP holding back. Greater clinician empathic communication was associated with increased SP disclosure efficacy, which led to less holding back of information when communicating about the patient's physical health. Clinician communication that pays attention to, respects, and addresses the informational and emotional needs of SP (Ellis, 2012, Laidsaar-Powell et al., 2013; Washington et al., 2019) is likely to increase SP perceptions of having efficacy required to participate in medical interactions. This process, in turn, may facilitate clinicians receiving potentially more useful and accurate information related to patient health. Study findings suggest that, similar to patients, SP perceptions of clinician empathic communication are an important target for continued focus on clinician training for improving psychological health outcomes and physical well-being throughout the cancer trajectory (Broadbridge, Greene, Venetis, Lee, Banerjee, Buckley de Meritens, et al., 2023).

Higher perceptions of clinician empathic communication were also associated with lower levels of SP holding back their own emotional concerns. Prior research has established that SP value clinicians who are aware of and attend to their unmet caregiving information needs (Washington et al., 2019). SP's ability to share emotional concerns may serve to reduce caregiver burden and promote perceptions of support.

Practical implications

Managing illness requires extensive efforts by patients and their formal and informal support providers. SP involvement can be essential in medical visits because of their access to patients, knowledge of patient well-being and behavior, and ability to advocate for patients. As noted by Epstein and Street (2007), SP are within patients' inner social circles and are central to patient care. SP can be facilitators of information that is essential for clinician provision of care. As such, SP should be encouraged to share information with clinicians in the service of patient care. SP who are less efficacious than those represented by the current sample, and therefore more likely to withhold disclosure during medical interactions, may give rise to consequences related to the patient's medical care and the emotional well-being of all parties involved. For example, underutilization of SP insights may contribute to incomplete understandings of clinical care and treatment decisions, missed opportunities for symptom management, and diminished effectiveness of patient-centered communication (Lee et al., 2022; Senger et al., 2024), as withholding information can undermine a collaborative approach to open health interactions (Manne et al., 2015). When SP hold back cancer-related fears and concerns, it may increase feelings of caregiver burden or lower their confidence in the caregiving role, ultimately diminishing their sense of purpose and involvement in the medical interaction (Wittenberg et al., 2022). To allay these consequences, clinicians can proactively foster communication environments that encourage SP to share relevant information while maintaining respect for privacy boundaries, thereby enhancing the quality of care and support for patients. SP acknowledge the importance of when they offer information in the medical interaction (Venetis et al., 2024). Specifically, SPs prefer to offer their accounts after patients have spoken with clinicians in effort to respect patient autonomy. As such, we recommend that clinicians facilitate SP sharing after patients have had the opportunity to discuss their experiences. Clinicians could say, "even though I'm asking [Patient] about their health, I know you likely have important information to share from your own perspective, and I welcome your input and questions." Alternatively, clinicians may improve disclosure efficacy by addressing the uncertain nature of information ownership in the cancer context and say, "sharing information about [Patient]'s health can be complex. To get a complete picture, I'd really value your perspective. As someone who knows them well, your insights are important. Is there anything you think I should be aware of?" Clinicians can make efforts to normalize emotional disclosures during the visit by empathically listening and validating SP perspectives to help them feel more confident in sharing. An example includes, "It's completely understandable to have concerns as a caregiver. I want to make sure we're addressing your questions too – what's been on your mind lately?" Additional strategies and communication guidelines for encouraging family/companion participation in medical interactions are provided by Laidsaar-Powell et al. (2017) and Gilligan et al. (2017).

Study results emphasize the value of clinician empathic communication promoting SP participation. In both models, higher perceptions of clinician empathic communication are associated with greater SP efficacy. Thus, consistent with prior research, when SP felt comfortable and listened to, they reported being more confident participating in the medical interaction (Street et al., 2005). Because of the value of SP engagement, future health communication interventions that increase clinician empathic communication and SP efficacy would be particularly beneficial.

Strengths, limitations, and future directions

Despite the contributions of this scholarship, it is not without limitations. First, data are cross-sectional, thus limiting the opportunity to make claims about the directionality of findings. Because we measured SP perceptions of clinician empathic communication and holding back at the same time points, the statistical mediational analyses provide strictly correlational evidence and restrict our understanding of the temporal and causal order among these variables (Chan et al., 2020). Thus, results should be interpreted with caution. Future research should examine longitudinal data to further understand disclosure patterns and the impact of clinician empathic communication. Second, all participants were recruited from a volunteer registry and were not

compensated for participation. As such, participants are likely more highly engaged in cancer-related communication than others external to these data, and this was reflected in the relatively high average score reported for SP disclosure efficacy and low average score for holding back. Therefore, the study results may not generalize to SP who are less invested in wellbeing during cancer care or have reduced research altruism. Third, participants were recruited online and completed online surveys. These participants have online literacy that likely exceeds many others, and results have limited generalizability to those with reduced literacy skills who may contemplate disclosure decisions and particularly their communication efficacy differently than those with increased literacy skills (Donovan-Kicken et al., 2012). Fourth, although we had adequate sample size to identify measurable effects, we are constrained from applying more sophisticated modeling. Fifth, the reduced heterogeneity of the sample may diminish the generalizability of the findings; study participants are predominantly white women in their 60s who are highly educated and share well-established relationships with the patients they provided care for. Individuals of other cultural backgrounds, education levels, and varying relational types with cancer patients very likely have differing patterns of communication (Singh et al., 2018). Future research should replicate this study with additional samples to assess similarities in patterns of communication. Finally, as with all research, study results present new questions. As indicated in the DD-MM, the content of the information influences disclosure decisions. We further argue that the subject of the information may influence decisions such that information about another person is managed differently than information about the self. To better substantiate this claim, future research requires additional information such as perceptions of information ownership, motivations to disclose or withhold information, and perceptions of patient advocacy to help untangle how SP approach sharing information in the service of patient health.

Conclusion

This study examined disclosure decisions among SP of patients managing cancer. Specifically, results demonstrated that greater clinician empathic communication is associated with greater SP efficacy. Although increased clinician empathic communication contributes to SP sharing of fear and concerns, the pathway for SP sharing of patient health information is different and unaffected by SP efficacy. When contemplating sharing patient health information, SP holding back is shaped by their disclosure efficacy. Thus, the findings encourage additional research with SP that accounts for the type of information shared and/or held back.

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