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THE EFFECTS OF THE COMMUNICATION TECHNIQUES OF CONCERN ELICITATION
AND MUTUAL AGENDA SETTING ON THE SATISFACTION, SELF-EFFICACY, AND
UNDERSTANDING OF A PATIENT AFTER A PROVIDER ENCOUNTER

by

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A thesis submitted in partial fulfillment of the requirements
for the Honors Interdisciplinary Thesis in Health Communication
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Abstract

The goal of this investigation is to explore the relationship of health provider communication techniques and their impact on patient understanding, satisfaction, and self-efficacy. This investigation looked at the two specific communication techniques of concern elicitation and mutual agenda setting which occur during the beginning of a medical visit. Encounters were recorded with patient knowledge and transcribed to be analyzed. Following a coding manual created from both previous research and original input, the transcripts were organized and read through to process data. Focusing on the two communication techniques—concern elicitation and mutual agenda setting—I looked at the beginning of the encounter to note any usage of the techniques. Using a series of independent samples *t*-tests, I found that patient understanding was significantly correlated with concern elicitation. At the same time, the length of visits that used concern elicitation and mutual agenda setting was not significantly greater than the length of visits in which these techniques were not used. This implies using these communication techniques clinical practice does not risk losing precious time. This investigation can also give support to more in depth research on various other communication techniques and their potential benefits in bridging the disparity in health literacy.

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Introduction

It is estimated that around one-third of Americans have low health literacy (Santana et al., 2021). When patients have poor health literacy, they are less likely to understand their diagnosis and treatment plans, and this can affect how well they adhere to their treatment plan (Schillinger et al., 2004; Hernes & Ott, 2018). Health literacy can be defined as two branching topics. First is personal health literacy which is the “ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others” (Santana et al., 2021, p. 2). Second is organizational health literacy as “the degree to which organization equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others” (Santana et al., 2021, p. 2). Ultimately, both can cause patients to have poorer health outcomes. Patient-provider communication is one focal point for addressing this concern (Santana et al., 2021). If healthcare providers use evidence-based universal precautions to communication in a way that most patients will be better able to understand them, patients will be better able to manage their own health.

Coleman and colleagues (2017) have provided guidance about specific provider best practices for assisting patients in communicating in a way that maximizes understanding. From over 30 communication techniques elicited, top techniques were as follows from first to eighth: utilization of teach-back, avoiding the usage of medical jargon and explaining it when used, eliciting questions from the patient, using a universal precaution approach, use of a medical interpreter for foreign languages, negotiating a mutual agenda with the patient, emphasizing a couple “need-to-know” concepts during an encounter, and eliciting patient concern at the outset of a visit. There is substantial literature on several of these—including teach-back, medical

jargon use, and medical interpreters. (Miller, et al., 2021a, b). However, some of these communication techniques that could show potential to improve patient understanding have been rarely studied. Two communication practices among the top eight communication practices described in the Coleman (2017) study focus on the opening of the visit: negotiating a mutual agenda at the outset of an interaction and eliciting a list of patient concerns at the beginning of an interaction. Focus was on these two as well since they are just as easy to implement in person as they are virtually (Coleman 2020). The purpose of this study was to investigate the relationship of these provider communication practices with patient understanding, self-efficacy, and satisfaction.

Provider Communication Practices at the Beginning of a Visit

The beginning of a patient encounter is critical. This is the time when the patient and provider establish a groundwork about what they will be discussing and set the tone for how the conversation will proceed including whether the patient is engaged or passive. The flow of the whole encounter is largely affected by the beginning interaction. Two key elements of beginning a patient appointment effectively are establishing a mutual agenda and eliciting all patient concerns from the start (Kowalski et al., 2018).

Establishing a mutual agenda between the patient and provider enables both parties to receive and give more pertinent information about a specific issue and make better use of their time together (Epstein & Gramling, 2013; Skovlund et al., 2020). Setting a mutual agenda involves prioritizing what needs to happen so both patient and provider have a mental framework on which to build (Kowalski et al., 2018). The use of a mutual agenda is understood to empower the patients since they are more likely to feel heard and have input on their treatment as a whole. An example would be “First, I’m going to get some information from you about what you’re

experiencing, and then I'll examine you. After that we'll discuss next steps." This is an element of patient-centered care that can help increase follow-through on physician recommendations and treatment plans. It puts value on the patient as a whole rather than treating the patient as just a diagnosis. (Dwamena et al., 2013; Kaphingst et al., 2014).

Interviewing 40 patients and 17 physicians, Kowalski et al. found that both agreed that setting a mutual agenda was important if their agendas for the visit were to be aligned. However, both also reported that mutual agenda setting was not always easy. Physicians stated that differences in relative ranking of condition importance, number of concerns that could be addressed in a single visit, and medication versus lifestyle approaches to treatment could make it difficult to agree on an agenda for the visit. Patients said short visits made it difficult to establish a shared expectation about medical visits. They also said they might wait to raise potentially embarrassing or stigmatizing concerns (e.g. sexual dysfunction, blood in stool, suicidal ideation) until the very end of the meeting if they raised them at all. However, these studies did not investigate outcomes of mutual agenda setting for patients.

This leads to the first research question:

RQ1: How is the use of a mutual agenda by patient and provider related to a) satisfaction, b) understanding of diagnoses, c) understanding of treatment, d) understanding of treatment rationale, and e) self-efficacy of a patient immediately after the encounter?

A related communication technique is for providers to try to elicit all patient concerns at the beginning of the appointment. Patients often come into the encounter with concerns beyond the presenting problem (Heritage et al., 2007). With both sides knowing that time is limited, there is an underlying sense of pressure for a provider to get to all patient health issues. Being proactive about gathering a list of concerns at the beginning of a meeting can help deal with this

pressure (Kowalski et al., 2018). It is best to do this before a patient history is taken because the provider can note down issues that emerge during agenda setting and pursue those throughout the encounter, rather constantly making amendments as new issues arise (Robinson et al., 2015). Providers can then prioritize with patients what issues should be addressed immediately and which can be dealt with at another appointment, since there may not always be enough time to talk about every concern elicited (Deshpande et al., 2011). This practice allows for better use of the brief time usually allocated for each encounter, since the provider will be able to portion out time based on the amount and severity of concerns (Summers et al., 2016).

It also reduces instances of the “by-the-way” syndrome, that is, patients asking questions right at the end of an appointment. This common patient communication pattern catches many providers off-guard, and as a result they may give basic and uninformative responses (Nielsen, 2012; Heritage et al., 2007). Rodondi et al. (2009), found that this last-minute articulation of patient concerns occurred in 39% of 92 video-taped encounters they analyzed. In 22% of encounters, physicians did not answer the patient’s question; 38.5% of encounters in which the patient’s question was psychosocial. Practitioners interviewed by Summers et al. stated that when patients are able to voice all their concerns right from the start, patient satisfaction is higher, the need for additional visits is reduced, and early identification of serious illness is more likely.

However, it appears that eliciting patient concerns beyond the initial complaint is relatively rare. When Robinson et al. (2016) coded transcripts of 407 primary care visits in 46 community-based clinics in two states, they found that just 32% of visits included elicitation of additional concerns. They also found that the way physicians asked for concerns made a difference. “Do you have any questions” was less likely to generate another concern than asking

whether patients had “any other concerns.” Furthermore, these inquiries were more likely to prompt a concern when done early in a visit rather than late. Heritage et al. (2007) found the same result in an experimental study in which 20 doctors were randomly assigned to use “any” versus “some” to elicit additional concerns in 240 patient encounters. Implementing the “some” condition eliminated 78% of unmet concerns whereas the “any” condition made no statistically significant decrease in unexpressed concerns. A Patients Concerns Inventory (PCI) which gives many prompts to allow for patients to report concerns before a meeting with a provider has expanded on these two options (Gibson et al., 2019).

Nevertheless, objections have been raised to the practice of eliciting all patient concerns at the start of an encounter, however. Summers and colleagues (2016) explain that rapport is built throughout the whole course of a medical encounter. Patients may not be prepared at the beginning of an encounter, before sufficient rapport is established, to open up about all of their concerns. Furthermore, many times a patient will relay their concerns to either a nurse or a doctor, but not to both. This can cause a disconnect or gap between the understanding of the situation by the patient and provider (Nilan et al., 2018). With little evidence available about the results of eliciting additional patient concerns, I posed a second research question.

RQ2: How is the eliciting of all patient concerns at the beginning of an encounter related to a) satisfaction, b) understanding of diagnoses, c) understanding of treatment, d) understanding of treatment rationale, and e) self-efficacy of a patient immediately after the encounter?

Methods

Study Design

The study conducted was part of a larger study about provider communication techniques in the student health center of a large state university in Florida. Ninety-two randomly selected primary care appointments were recorded and analyzed, and self-reported data were collected from the patients. Data were collected between November 2019 and February 2020. Approval to conduct this research was provided by the university Institutional Review Board (approval # STUDY00000721). The nurses in the participating units collected the data. All nurses had two hour-long training sessions with the researchers involving techniques regarding data collection in addition to completing human subjects certification.

Recruitment of Patients

The unit of analysis in this study was patient appointment. In order to obtain a sample of appointments, a weekly schedule of general appointment times (without specific patients identified) was provided to researchers and time slots were randomly selected for each provider in proportion to the number of appointments they had for the day, using a random number generator.

When a student made contact with the student health services, they were asked by staff what type of appointment they wanted. At the request of student health center staff, appointments that involved sexually transmitted diseases, sexual assault, women's health, substance use disorders, mental health, and behavioral health were not used due to privacy concerns. Furthermore, women's health and behavioral health sessions are different in the structure than other primary care appointments. They have an intake assessment and mandatory procedures that would make sessions longer. Thus, by excluding them, the appointment formats and length used

for the study were more likely to be consistent with each other. If a randomly selected time slot turned out to involve one of the excluded topics, extra randomly selected times at the end of the data collection period were used. If a patient shifted to one of these topics early in the appointment, providers stopped recording and audio files were destroyed. If a patient raised an excluded topic at the end of an appointment, providers turned off the recorder, but existing data were retained.

Recruitment of Providers

Every healthcare provider in the primary care area of Student Health Services was asked via email to participate in the study. Out of the 14 invited, 12 agreed to participate in the study. The Assistant Director of Medical Health and Administration then explain expectations of the research to the providers in detail. Informed consent was obtained at that point from providers. To limit bias, providers were only told that the study had a focus on patient-provider interaction, but specific topics were not elaborated on.

Procedure

Each day, the nurses participating in the study were given a numbered and collated packet of materials for each session. When a patient in a designated time slot arrived, the nurse would explain the purpose of the research and ask if they would be willing to participate. They further explained that the session would be audio recorded, but the intent was not to focus on the patient, but rather the way the provider communicated, and how effective they were. Patients were then asked to sign consent and HIPAA release forms. These forms were sent to the privacy and security officer of the SHS who placed them in a double locked file behind a locked door. The code that linked patient identifiers with their identifying number was kept in a password protected Excel sheet with the protection of the university firewall on the building's server. The

only people with access to the files were the directly associated nurses, the privacy officer, and the assistant director. No patient under 18 participated in the study.

After informed consent was obtained, nurses recorded the packet ID number for each appointment on a table-top digital recording device and placed the active recorder in the examination room before the patient's entered the room. The recording devices were turned on and off by the nurse before and after the provider left the room as to not distract both the patient and the provider. The recorders ran throughout the entire encounter. Providers filled out a questionnaire directly after the session about the content of the meeting. This form was self-administered and returned to nurses to be collated with other materials in the packet. Nurses administered a post-appointment questionnaire to the patients after receiving the provider questionnaire.

In order to develop adequate interrater reliability in transcript coding, the researchers went through one transcript together applying the coding scheme and elaborating on decision rules as issues arose. The coding scheme was finalized through 8 more meetings (two each month from January to April), for which two team members individually coded four to six additional transcripts, made note of questions for the lead author, and then made necessary additions and changes to the coding scheme during the meeting time. After the third meeting, the two coders individually coded the remainder of the transcripts. Disagreements were resolved by discussion.

Instrumentation

Questionnaire

Right after an appointment, providers filled out a self-administered questionnaire with open-ended questions which asked what the diagnosis was for the patient, what instructions they

gave to the patient about treatment, and why this was important for the patient to do. These last three questions were modeled on the “Ask Me 3” items which have been identified as important for patients to know when they leave a medical appointment (Koch-Weser S et al., 2010).

The patient questionnaires were administered by nurses. Self-report items asked patients about their satisfaction with the visit and self-efficacy for engaged in the recommend behavior. Patient knowledge was then measured directly by asking them the same “Ask Me 3” items. Referring to provider responses to the same items, nurses rated patient responses as “very inaccurate,” “accurate,” or “very accurate.”. A patient understanding index was created by summing scores on these three items.

Transcript Coding

An initial coding scheme in line with existing literature about mutual agenda setting and eliciting a list of concerns was developed following the criteria below. A research assistance and I elaborated on decision rules and made adjustments while going through a total of eighty-seven transcripts. The coding scheme was finalized through five more meetings. All transcripts were individually coded by both the assistant and I because adequate inter-rater reliability was not established. Therefore, we discussed all discrepancies point by point and resolved disagreements by consensus.

Outset of an encounter was considered anything between the start of the interaction until the point at which the provider starts explaining the main concern to the patient. The provider explanation could be identified by any of the following indicators:

- “So, this seems to be a _____” or similar statements followed by an explanation of diagnosis;

- A substantial decrease in patient and provider talking back and forth, shifting toward the doctor mostly explaining a request for the patient to sit down so the provider can check something specifically;
- offering by the provider of the first bit of diagnostic information.

Independent variables were operationalized as follows in coding the transcripts.

Establishing a mutual agenda was considered present if, within the above defined time, the provider explicitly stated the purpose of the visit and gave the patient an opportunity to comment. This could be identified by any of the following indicators on the part of the provider:

- The provider requests a list of concerns OR initiated an additional elicitation AND the patient indicates that they had completed listing their concerns.
- The provider asks for a list of concerns OR initiates an additional elicitation AND demonstrates negotiation or prioritization.
- The provider makes multiple additional elicitations OR asks for a list of concerns multiple times.

Eliciting patient concerns was considered present if the provider specifically asked the patient about reasons for their visit. This was operationalized as any of the following:

- The provider asks for any other concerns after hearing why the patient has come.
- The provider has a back and forth dialogue with the patient about their symptoms with the implied focus of obtaining additional problems.
- Before moving on to diagnosis, the provider explicitly asks, “Do you have any other concerns.”

Data Management

The MP3 files were put into a folder behind a secure firewall, and the devices were wiped after each upload, about once a day. Five audio files were removed from analysis because they were inaudible, incomplete, or permission was withdrawn by the patient partway through the interview, leaving a total of 87 audio files. The 87 files were transcribed manually in the SHS building in a dedicated area by four researchers and one assistant. Before taking transcripts out from the firewall for analysis, all identifying information was redacted.

Results

Research questions were tested using *t*-tests. Levene's test was used to determine whether equal variance could be assumed. Research question 1 asked how the use of a mutual agenda by patient and provider was related to the satisfaction, understanding, and self-efficacy of a patient immediately after the encounter. Results are presented in Table 1. Patient understand of the prescribed treatment was significantly higher in visits in which providers elicited patient concerns at the outset of the meeting.

Table 1. Effects of elicitation of patient concerns on dependent variables

	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Understanding of diagnosis					
Elicits patient concerns	2.78	0.48	81	-1.27	0.207
Does not elicit patient concerns	2.61	0.61			
Understanding of treatment					
Elicits patient concerns	2.88	0.38	22.54	-2.09	0.048
Does not elicit patient concerns	2.61	0.50			
Understanding of treatment rationale					
Elicits patient concerns	2.77	0.53	80	-0.30	0.763
Does not elicit patient concerns	2.72	0.57			
Satisfaction					
Elicits patient concerns	4.94	0.30	81	0.08	0.938
Does not elicit patient concerns	4.94	0.24			
Self-efficacy					
Elicits patient concerns	4.89	0.31	81	0.66	0.513
Does not elicit patient concerns	4.94	0.24			

The data in this table is obtained from a summary analysis of the independent variable, presence of concern elicitation, with the variables of patient understanding, self-efficacy, and satisfaction. A Levene's test was performed to determine if equal variance could be assumed, and an independent two sample *t*-test for means was done. The resulting *t* scores and *p* values are shown above.

Research question 2 asked how the eliciting of all patient concerns at the beginning of an encounter would be related to satisfaction, understanding, and self-efficacy of a patient immediately after the encounter. Results are presented in Table 2. No significant differences were found between visits in which a mutual agenda was established at the beginning of the encounter for any of the dependent variables.

Table 2. Effects of establishment of a mutual agenda on dependent variables

	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Understanding of diagnosis					
Mutual agenda setting occurs	2.81	0.47	81	-0.92	0.361
Does not set agenda	2.71	0.54			
Understanding of treatment					
Mutual agenda setting occurs	2.91	0.30	80.99	-1.68	0.097
Does not set agenda	2.76	0.47			
Understanding of treatment rationale					
Mutual agenda setting occurs	2.78	0.49	80	-0.34	0.735
Does not set agenda	2.74	0.56			
Satisfaction					
Mutual agenda setting occurs	4.91	0.39	81	0.85	0.401
Does not set agenda	4.96	0.20			
Self-efficacy					
Mutual agenda setting occurs	4.88	0.34	81	0.69	0.490
Does not set agenda	4.92	0.27			

The data in this table is obtained from a summary analysis of the independent variable, presence of mutual agenda setting, with the variables of patient understanding, self-efficacy, and satisfaction. A Levene's test was performed to determine if equal variance could be assumed, and an independent two sample t-test for means was done. The resulting t scores and p values are shown above.

Finally, a post hoc test was run to determine whether eliciting patient concerns or establishing a mutual agenda was associated with any difference in the total minutes spent in the appointment. Results are presented in Table 3. No significant difference in time was found for either variable.

Table 3. Difference in total time in minutes for appointments with and without communication techniques

	<i>M</i>	<i>SD</i>	<i>df</i>	<i>t</i>	<i>p</i>
Elicitation of Patient Concerns					
Elicits patient concerns	18.53	7.95	81	0.52	0.603
Does not elicit patient concerns	19.60	6.71			
Mutual Agenda Setting					
Mutual agenda setting occurs	19.42	7.12	81	-0.63	0.529
Does not set agenda	18.32	8.06			

The data in this table is obtained from a summary analysis of whether eliciting patient concerns or establishing a mutual agenda was associated with any difference in the total minutes spent in the appointment. A Levene's test was performed to determine if equal variance could be assumed, and an independent two sample t-test for means was done. The resulting t scores and p values are shown above.

Discussion

Among the relationships in question, the only statistically significant difference when patient concerns were elicited at the outset of the encounter was in patient understanding. No statistically significant relationships were found between mutual agenda setting and any of the dependent variables.

This lack of statistically significant findings may be in part due to a ceiling effect on all dependent variables. Furthermore, most visits were simple one-off problems on which concern elicitation and agenda setting might not be expected to make a large difference. Nevertheless, patients evidenced a nearly 10% greater understanding of their treatment recommendation when their concerns were elicited at the beginning of the encounter. This shows that there are ways providers can adapt their verbal communication to lower health literacy demand. Elicitation of patients' concerns at the outset of the encounter can provide a better usage of already limited time to increase patient understanding (Summers et al., 2016). It may be that providers are able to give more informed responses due to understanding all of the patient's concerns at the beginning and having time to expand upon them, or that patients feel more comfortable and involved and are, therefore, likely to attend more closely treatment instructions being given, or both (Kowalski et al., 2018).

The findings that concern elicitation increased understanding of treatment becomes more important when we realize that those sessions did not take any more time than sessions in which patient concerns were not elicited at the outset of the appointment. Healthcare providers allot anywhere from fifteen to thirty minutes for most appointments unless the issue is serious in nature (Summers et al., 2016). These findings suggest using those recommended techniques did not place a strain on the time between the patient and the provider. Thus, one of the most

frequently cited provider concerns of providers about using certain communication tools was not problematic in this sample (Deshpande et al., 2011). Providers may be able to bridge some gaps in health literacy by smoothly incorporating concern elicitation in hopes of improving patient understanding all without having to shorten other parts of the medical encounter.

Limitations

The audio recordings and transcripts were taken from a small sample of a single discipline in medicine. The sample encompassed primary care visits among a college age group. Furthermore, scores on all dependent measures showed evidence of a ceiling effect, making statistically significant differences unlikely in this sample. Further testing on different specialties and demographics might reveal larger influence of the techniques on immediate patient outcomes.

Conclusion

In conclusion, providers can utilize concern elicitation to focus on what to talk about so that the patient is better able to understand their recommended treatment plan. Moreover, the fact that incorporating these communication practices had no significant difference in time taken proves that providers do not need to worry about wasting time with a patient. Overall, this study contributes to research about verbal communication practices in a medical setting for the purpose of helping bridge disparities in health literacy among patients.

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