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Title: Hospital pharmacists' and patients' views about what constitutes effective communication between pharmacists and patients

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Introduction

Effective conversations between patients and healthcare professionals are necessary for patients to have a good understanding of their medications and be able to manage their medication after discharge.^{1,2} Understanding what patients need from a conversation with a hospital pharmacist about their medications may assist pharmacists in preparing patients for discharge and supporting patients' confidence in managing their medications. However, there are no studies published that have focussed their investigations on hospital pharmacists' and patients' opinions about what constitutes an effective pharmacist-patient conversation. Instead researchers have only explored questions tangentially related to patients' opinions about pharmacist-patient communication.³⁻⁸ For example: patients' views of pharmacist prescribing that included aspects of interpersonal communication,³ inpatients' requirements for medication information⁴, patient preferences for hospital pharmacy services,⁵ patients assessing aspects of patient counselling (pharmacist attitude, information and explanation of side effects)⁶, inpatients' experiences and evaluations of pharmacy services,⁷ and hospital pharmacists' perceptions of medication counselling.⁸

As well, these studies evaluate either the patients' or pharmacists' perspective, but not both participants' experience. This is important as patients and healthcare providers may not necessarily share similar views about effective communication. In addition, previous research was not theory based. This research intends to address these gaps in the literature by exploring hospital pharmacists' and patients' perceptions of effective conversations and by invoking Communication Accommodation Theory (CAT) as the framework to interpret their views.

CAT has been widely used in healthcare communication research.⁹⁻¹⁴ For example, CAT has been used to interpret communication exchanges between parents and nurses in neonatal intensive care units⁹ and to examine pain communication strategies used by older patients and their doctors in outpatient settings.¹¹ CAT posits that an individual's goals drive their communication behaviour.¹⁵ Five CAT strategies (approximation, interpretability, discourse management, emotional expression and interpersonal control) will facilitate the analysis of pharmacists' and patients' perspectives of effective conversations.^{9,16,17} In studies where

speakers appropriately adopt CAT strategies, interactants rate the communication exchanges as effective.¹⁸ Communication outcomes in CAT research are described as being either accommodative or non-accommodative. Accommodative behaviours reduce communication barriers while non-accommodative behaviours typically produce or increase linguistic distances between speakers.^{15,17}

Approximation deals with speech production (E.g. rate, volume, use of dialect or accents) where speakers typically match or converge to another's speech pattern or they may choose to diverge from that of their partner's speech. A pharmacist uses accommodative approximation when they slow down their speech to match that of a patient who speaks slowly. Interpretability strategies focus on conversation content where adjustments are made in the language level used and words chosen to ensure understanding.¹⁹ A pharmacist, avoiding medical terminology in conversations with patients unfamiliar with these terms, would be demonstrating appropriate interpretability. Discourse management strategies used to keep conversational partners engaged include: asking open-ended questions, responding to non-verbal cues, turn-taking, and using conversation maintenance (E.g. "mm" or "yeah") or conversation repair (E.g. face saving).^{9,20} Pharmacists use accommodative discourse management when they ask open-ended questions to elicit issues patients might have about their medications. Emotional expression strategies are used by pharmacists to demonstrate an appropriate level of concern and reassurance in response to patients' emotional needs.¹⁶ Validating a patient's feeling of being overwhelmed when prescribed multiple new medications would be an example of a pharmacist demonstrating appropriate emotional expression. Interpersonal control focuses on power relations between speakers. Accommodative interpersonal control strategies promote equality between pharmacists and patients, as opposed to limiting patients to passive roles.⁹ An example of appropriate interpersonal behaviour by pharmacists would be encouraging patients to take active roles in managing their own health and medications.

In our earlier work, we obtained hospital pharmacists' views about their roles and goals in medication counselling in focus groups⁸ and mapped these pharmacist-identified goals to CAT strategies.²¹ Next, audio recorded hospital pharmacist-patient conversations were

investigated by our group to determine how well pharmacists utilised CAT strategies in their exchanges with patients.²² We found that most pharmacists effectively used all five CAT communication strategies during medication counselling except when they spoke too quickly, used medical terms, and excluded patients from the agenda-setting phase.²² This current study builds on our previous research with an objective to explore both pharmacists' and patients' views about what constitutes effective pharmacist-patient communication exchanges.

Methods

Study Type and Design

This was a qualitative study using semi-structured interviews to gather details about how pharmacists and patients perceive effective pharmacist-patient conversations. Research ethics approval was received from Human Research Ethics Committees of the participating hospital (HREC/15/QRBW/433) and university (2015/13).

Participant inclusion criteria, Recruitment and Data Collection

This study took place at a 1000 bed hospital with multiple specialties and service delivery to inpatient wards and outpatient clinics. Further details about methods used can be found in the first part of the study involving audio recorded pharmacist-patient exchanges.²²

Inclusion criteria

Interested pharmacists who provided clinical pharmacy services in either inpatient or outpatient settings were recruited prior to patients. Eligible patients were prescribed three or more medications to manage a chronic disease(s), and had been admitted to a clinical area in which a study pharmacist practiced.

Data collection

Separate audio recorded semi-structured interviews were conducted with patients and pharmacists following their medication counselling session. Interview questions and prompts intended to elicit participant's views about effective pharmacist-patient conversations included: "What aspects of a conversation make it effective for you? What's

important to you? What makes it a good conversation? Why do you think it was effective?” Because pharmacists engaged in four pharmacist-patient interactions, additional questions such as “What would have made this particular conversation more effective?” were asked.

Patient interviews took place immediately after medication counselling sessions in either patients’ rooms or in nearby areas. Pharmacist interviews occurred on the same day of their pharmacist-patient exchange in private areas either on the hospital ward or within the pharmacy department.

Observational notes and reflexive note taking were conducted throughout the study. The main researcher (BC) is an experienced hospital pharmacist with strong opinions about best practice and professionalism and is aware of how these could possibly influence her perception and interpretation of the data as a researcher.

Qualitative Analysis and Data Coding

Audio recordings of the semi-structured interviews were transcribed verbatim and verified by comparing transcripts with original audio recordings to reconcile any discrepancies. Pharmacists’ and patients’ opinions of effective pharmacist-patient exchanges were analysed using a process of inductive thematic analysis²³ and then mapped to the CAT strategies. Samples of transcripts coded by BC were checked by co-researchers (BW and NC) to ensure appropriate and consistent interpretation. NVivo® software was used to assist in code organisation.

Results

Medication Counselling Sessions

Twelve pharmacists engaged four patients each for a total of 48 medication counselling interactions, resulting in 48 separate pharmacist and patient semi-structured interviews. The study took place between November 2015 and April 2016. Participant demographic information has been described in Table 1.

Table 1. Participant demographics

Demographic Characteristic		Pharmacists n=12 Number (%)	Patients n=48 Number (%)
Female gender		10 (83)	21 (44)
Age range			
	21-30	6 (50)	1 (2)
	31-50	5 (42)	10 (21)
	51-60	1 (8)	10 (21)
	61-80	0	22 (46)
	>80	0	5 (10)
Years working as a pharmacist			
	1-5	5(42)	N/A
	6-10	1 (8)	N/A
	11-15	3 (25)	N/A
	16-20	2 (17)	N/A
	>21	1 (8)	N/A
Patient care area			
	Inpatient	9 (75)	36 (75)
	Cardiology	2*	6
	Emergency	1	4
	Geriatrics	1	3
	General medicine	1	5
	Nephrology	1*	2
	Neurology	1*	2
	Oncology	1*	2
	Surgery	3	12
	Outpatient	3 (25)	12 (25)
	Heart failure clinic	1	4
	Infectious diseases clinic	1	3
	Renal clinic	1	5
*2 pharmacists rotated within multiple patient care areas			

Pharmacists' and patients' opinions about what constitutes an effective conversation

While several themes contributing to effective pharmacist-patient conversations were described by participants (Table 2), the overarching goal for pharmacists and patients was a shared confidence in patients being able to manage their medications after leaving hospital.

Table 2. What makes a conversation between a pharmacist and a patient effective?

Related CAT Strategy	Patient Semi-Structured Interview Theme	Pharmacist Semi-Structured Interview Themes
Approximation	Not observed	Using <i>shared colloquialisms/slang</i>
Interpretability	Pharmacist <i>explains information well</i> : uses easy-to-understand language, provides clear, precise information, includes information about procuring medication)	<i>Well-explained information</i> given to patient: ensures information is concise and relevant, strategic about information provided (E.g. prioritises type and volume)
Discourse Management	Patient <i>engagement</i> : being engaged in conversation by not feeling rushed in the conversation, having opportunity to ask many questions, and having concerns and questions answered	<i>Engagement</i> : engaging patients in conversation by allowing enough time for conversation, encouraging patient to ask questions and responding to patient's questions and concerns
Emotional Expression	<i>Established rapport</i> with pharmacist: experiences kindness, reassurance (including ongoing access to pharmacist), and feels "heard" or "listened to".	<i>Established rapport</i> with patient: by "hearing the patient", displaying empathy and reassurance (including accessibility to patients after they have left hospital)
Interpersonal Control	Patient <i>empowerment</i> by: being treated as an equal by pharmacists and supported in their autonomy to make informed choices	Pharmacist promotes patient <i>empowerment</i> by: promoting equality between themselves and encouraging patient involvement in shared decision making, and supporting patient autonomy to make informed choices

Approximation (Shared colloquialisms/slang)

Numerous effective communication themes could be mapped to the five CAT strategies, except approximation. Only one pharmacist remarked on the value of using expressions from shared backgrounds, "...perhaps if you use colloquialisms and slang ...that you know

they'll understand...I think that sometimes will put them at ease... so you have a much more natural conversation.”

Interpretability (Well-explained information)

Both patients and pharmacists spoke about the importance of patients receiving well-explained information. Pharmacists highlighted the benefits of giving patients concise and relevant information, “...just stick to...’This is what you've got to take. This is why you're taking it. This is how many’...” Many patients agreed with this approach, “...make it simple. Simple. Simple to understand. Simple to follow.”

However, patients were specific about the types of information they wanted to receive from pharmacists. “...tell me what is good and bad about what I'm taking. What to be looking for in those side effects and stuff like that... I want to know what to look for if things were going wrong with my medication.” Several patients also emphasised the need to understand the rationale for their medications, and how to procure their medications. “What I wanted to know - was obviously the functional things of taking the tablets - but also to where to get them from...”

Almost all patients attributed the use of easy-to-understand language and the avoidance of medical jargon to effective exchanges with pharmacists. Examples include, “...she explained things in words that I could understand...” and “...my terms, I mean... Layman's terms.”

A few pharmacists recommended being strategic in the type and volume of information relayed to patients. “...I recognise that you only can remember five things from the session. So, I tried to focus on the changes to the medications because I felt that they were the most significant...”

Discourse Management (Engagement)

Another major theme identified by both patients and pharmacists was around *engagement*. This meant the participants did not feel rushed, patients had the opportunity to ask many questions, and had their issues addressed.

An elderly patient provided the following insightful excerpt, "...the patient needs to be not rushed. At this age, it's not hard to let everything be rushed - but I think that the [pharmacist] needs to be able to explain how things happen and to make them feel comfortable and not to confuse them."

Pharmacists aware of time pressures faced in their workplace often cited the value of not being rushed as a facilitator to effective communication exchanges with patients.

"...and I know that he's not leaving till tomorrow. We had no-one breathing down our necks, or somewhere he had to be or we had to be..."

Many patients placed high importance on the ability to ask questions and have their issues addressed, "...I could ask questions ... instead of rubbing on about whatever the pills are..."

Pharmacists appreciated patients' questions and interpreted these as indicators of engagement, "...it's always effective if they're asking questions because it means at least that what you're giving them is thought provoking or they're taking it in- to the point where they have a question about it."

Emotional Expression (Establish rapport)

Pharmacists and patients described several aspects of building rapport to facilitate an effective conversation. These included pharmacists establishing trust between themselves and patients, demonstrating kindness, empathy and reassurance, and ensuring patients were heard.

To build rapport, pharmacists and patients both indicated the importance of trust within a pharmacist-patient relationship. One patient described trust as a belief in the pharmacist's capabilities. "I think it's important that I have the trust in them that they know what they're talking about..." However, a pharmacist explained how building rapport by establishing a sense of comfort or trust between a pharmacist and patient was needed for information disclosure. "... I feel like the rapport's essential for them to be open with you and tell you if they're in trouble or what they're actually taking."

Patients feeling “heard” and pharmacists “hearing patients” were requirements for effective conversations to take place. One pharmacist provided the following, “...So sometimes you can't always solve their problems, but you can say, ‘I hear you - I understand that's an issue.’” Patients concurred stating, “I think for me - it's them listening to my concerns...”

Many patients focussed on aspects of kindness that allowed positive relationships to develop with pharmacists. Making the time for patients and having them feel valued was cited by several patients. “...just being able to talk to her and ask her anything...” One patient implied that it was a mutual appreciation of each other that led to effective conversations. “...somebody that you can understand and they understand you...it's the understanding of the person, both ways.”

Patients appreciated the pharmacists’ reassurance about their medication concerns. “...she made me feel at ease and comfortable with the fact that I'm going to be able to manage my medication when I get home.” In addition, patients were often reassured by knowing pharmacists could be accessible to them for further questions after leaving hospital. “...it's important because I live two and a half hours away...” Allowing patients to contact them after leaving hospital, also reassured pharmacists and gave them an opportunity to follow up with patients. “I think I got across the main points....and he has the information - and he can call me as well.”

Interpersonal Control (Empowerment)

The theme of patient *empowerment* (interpersonal control strategy) was demonstrated by promoting equality and encouraging shared decision making and informed choices. Treating patients as equals may be reflected in the way pharmacists respond to patients’ questions. This in turn may affect a patient’s willingness to bring them forward, as one patient explained, “I wouldn't be made to feel sillythat I can't ask a question if I don't understand. Sometimes, when people speak to you, you don't want to ask a question because you don't want to feel stupid.”

Both patients and pharmacists expressed the need for patients to be given the right information in which to make autonomous and informed choices about their therapy. “...Helping you to understand ...the dos and don'ts against having it or not having it...” Many pharmacists shared this perspective, “So even if they're not 100% on board with everything that you're saying...as long as they're actually participating...wanting to manage their own health and being active in that process - and we're giving them the right information to be able to make those decisions...that's an effective conversation.”

Discussion

Pharmacists and patients were asked their opinions about what made pharmacist-patient conversations effective, and they provided valuable insight about their preferences and goals for these exchanges. The overarching theme or shared goal resonating from the participants' interviews was that patients need to be confident in managing their medications at home. To facilitate this, patients focussed mainly on pharmacists' delivery of medication information and interpersonal behaviours. Pharmacists' themes included building rapport, but also emphasised patients' understanding of their medications and their level of engagement as indicators of patients' confidence in self-managing their therapy.

A key strength of this study is its novel approach taken in directly asking both hospital pharmacists' and patients' their opinions about what constitutes an effective pharmacist-patient exchange. Results of this study may have implications for both pharmacy student and pharmacist practitioner communication skills training by increasing their awareness of patients' preferences for effective conversations with pharmacists. While these results provide pharmacists with some guidance in their approach to medication counselling, it is essential that pharmacists converse with patients to establish patients' specific needs to confidently manage their medications.

There are limitations to this study. Pharmacists and patients may have provided socially desirable responses in their interviews. The self-selection of motivated pharmacists enrolling in this study may limit the transferability of positive results. Because this research

was conducted at a single public hospital, results might not be transferable to all specialty areas at other hospitals or to rural or private hospitals.

All pharmacist and patient themes arising from the interviews could be successfully mapped to the five CAT strategies. This includes the overarching theme of patient confidence in managing medications which is related to patient empowerment, and the CAT strategy, interpersonal control. Although only one pharmacist remarked about using *shared accents and colloquialisms* (approximation strategy) to put patients at ease, this behaviour had been observed in other pharmacists during their exchanges with patients.²² This study pharmacist intentionally reduced linguistic barriers between themselves and the patient, an example of convergence and accommodative approximation.²⁴

In terms of patients having *well-explained information* (interpretability strategy), both pharmacists and patients emphasised providing clear succinct information using easy-to-understand terminology. Study participants' opinions are supported by other researchers' focus group findings, inpatients' survey results, and interviews with inpatients indicating preferences for both oral and written materials that include medication purpose, side effects and prescription alternatives.^{4,5,7}

Discourse management strategies around *engagement* described by pharmacists and patients included not rushing conversations to allow patients ample time to ask and have their questions and concerns addressed. Work-related time constraints have been described by pharmacists as impediments to effective conversations with patients.^{8,25,26} However, in other studies, inpatients and their families have stressed the importance of having sufficient time to discuss medications with pharmacists.^{7,27} Consequences of hurried conversations include low patient satisfaction and engagement²⁸, and patients left with a poor understanding of their medications.^{25,26}

Processes for *building rapport* between pharmacists and patients aligned well with the emotional expression strategy. Participants believed that positive, trusting relationships

were based on empathy, kindness, reassurance and feeling “heard” or “listened to”. Other researchers support these findings and have reported patient preferences for friendly pharmacists that listen, understand and show a genuine interest in patients.^{3,6,7,29}

To *empower patients* (interpersonal control strategy) pharmacists encouraged patients to be involved in shared decision making about treatment and provided them with information to make informed choices. This is supported by a recently published scoping review that found patients wanted sufficient information from pharmacists to allow them to make appropriate clinical decisions.³ Researchers have found that the degree of desired patient involvement in shared decision making varies considerably.³⁰⁻³³ Interestingly, overtime and perhaps with changing demographics and patients’ expectations of healthcare professionals, researchers have found that an increasing proportion of patients prefer sharing decision roles with clinicians.³⁴ Pharmacists encouraging patients to be active in medication decisions may lead to positive health outcomes for patients. Wide ranging benefits of shared decision making to both patients and the healthcare system have been well described in the physician literature.^{2,31,32,35,36}

Patients described being treated as an equal by pharmacists as another example of empowerment. Other researchers have characterised healthcare professionals’ behaviours as positive when patients were treated as equals, and viewed “talking down to a patient” in a negative light.³⁷

Conclusion

Hospital pharmacists and patients provided valuable insights about what makes pharmacist-patient interactions effective. Participants’ shared goal was to ensure patient confidence in managing their medications at home. Pharmacists based patient confidence on patients’ understanding and level of engagement in conversations, while patients emphasised the need for well-explained information and reassurance from pharmacists. Patient-identified aspects of effective pharmacist-patient exchanges may help inform how pharmacy students and practitioners engage patients in conversations about medications.

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