IMPROVING MEDICATION SAFETY IN PHARMACIST-PATIENT INTERACTIONS: MAKING A CASE FOR THE USE OF COMMUNICATION ACCOMMODATION STRATEGIES

Rami Maher Delli*[1], Lai Siew Mei Pauline[2], Francisco Perlas Dumanig[3]

1 Faculty of Languages and Linguistics, University of Malaya, Kuala Lumpur, Malaysia.
2 Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia.
3 Department of English, University of Hawaii at Hilo, Hilo, USA.

ABSTRACT: *Effective communication between pharmacist and patient is crucial in ensuring medication safety as it enhances the patient's knowledge and understanding of their medication and increases their adherence. Communication Accommodation Theory (CAT) postulates that the speaker's adjustments in communicative behavior to accommodate the interlocutor's needs and capabilities enhance understanding and improves communicative effectiveness. The pharmacist's use of accommodation strategies may increase the clarity and comprehensibility of the information provided and lead to improvements in medication safety. The study examines the pharmacist's use of accommodation strategies in their interactions with patients at a public hospital in Malaysia. A detailed turn-by-turn analysis revealed the pharmacists' use of accommodation strategies such as avoiding medical abbreviations, avoiding medical jargon, clarifying medication indication, providing explanation, and repetition. These strategies increased communicative clarity and contributed to enhance patient understanding of their medication. Pharmacists must pay heed to their language choices and adjust their communicative behaviors to align with the patient's capability for understanding.*

KEYWORDS: pharmacist-patient interaction, Medication safety, Communication Accommodation Theory (CAT), accommodation strategies.

INTRODUCTION

The need for effective communication is particularly significant in the context of medication safety as poor communication is one of the major causes of medication error in healthcare settings (Cohen, 2007; Makeham, 2008; Murphy, 2010; Manojlovich & DeCicco, 2017). Medication errors have real and severe direct and indirect consequences that can lead to a breakdown in the health care system. They may result in death and disability and impact the patients' emotional well-being (Johari et al., 2013). Research shows that effective communication between patient and pharmacist increases the patient's understanding about their medication and aids recall of the information provided; this improves their medication adherence and positively impacts the outcome of treatment (Adler et al., 2004; Clark et al., 2007; Hill, 2006; Zolnierek

39

& DiMatteo, 2009). Conversely, ineffective pharmacist-patient communication results in non/misunderstanding and communication breakdown, which impacts compliance to medication and causes patient harm (Abu Seman, 2020; Skoglund et al., 2003; Sleath et al., 1999).

Medication errors that result from the patient's lack of understanding and knowledge of their medication may stem from language barriers between patient and pharmacist such as when pharmacists use unfamiliar medical terminology (Cohen, 2007). The use of medical jargon, including standardized and non-standardized abbreviations, in medication counselling can result in non/misunderstanding, which may lead to medication error (Solet et al., 2005). Language barriers lessen the quality of communication between patients and healthcare providers and reduce the quality of care (Bartlett et al., 2008). Hence, pharmacists need to adopt communicative behaviors that align with the patient's conversational needs to increase clarity and comprehensibility (Bell & Condren, 2016). Communication Accommodation Theory (henceforth CAT) has the capacity to explain the pharmacist's accommodative moves in communication that can lead to improvements in medication safety.

CAT has been described as one of the most influential theories of interactive communication (Littlejohn & Foss, 2005). Underlying CAT is the understanding that communication takes place within a macro context that gives shape to the communication that unfolds. What speakers say and how they say it is regulated by societal and situational norms and takes into account not only the goals of the communicative encounter but also the attributes, skills and knowledge of the interlocutor (Giles & Ogay, 2007; Giles & Powesland, 1975). Accommodation, an integral part of effective communication, refers to the process in which speakers adjust their communicative behavior toward (i.e., converge) or away from (i.e., diverge) the others (Gallois et al., 2005). According to Dragojevic et al. (2016), accommodation serves two key functions in interaction; first, an affective function which allows speakers to address identity concerns and regulate social distance between one another, and second, a cognitive function which allows speakers to attend to comprehension and improve communicative effectiveness. While the two are not mutually exclusive, it is the latter that is the focus of the present study. CAT, which takes into account contextual factors, interpersonal and group dynamics, speaker motivations and behaviors as well as the social consequences of accommodation (Dragojevic et al., 2016), is well equipped to explain why, how and when pharmacists adjust their speech in the direction of greater clarity, intelligibility and comprehensibility to increase medication safety.

Speakers who accommodate their interlocutor do so using strategies that manifest as communicative behaviors (i.e., approximation, interpretability, discourse management, and interpersonal control) (Gallois et al., 2005; Giles & Ogay, 2007). In light of the interest in the pharmacist's accommodative behaviors that seek to enhance the patient's understanding of their medication, two strategies are especially relevant, namely, approximation, with a focus on convergence, and interpretability. Convergence allows speakers to adjust their communicative behaviors to resemble those of their interlocutor

(e.g., speaking at a slower rate with an elderly patient) (Dragojevic et al., 2016). Convergence is positively evaluated and perceived as cooperative (Gallois et al., 2005; Giles & Ogay, 2007). Converging behaviors reduce social distance between interlocutors and enhance mutual understanding; in the context of medication intake, this is likely to facilitate compliance (Hajek et al., 2007).

Speakers employ interpretability strategies when they adjust their speech in order to be more easily understood (Chevalier et al., 2017). Based on the perceived needs and capabilities of the interlocutor, the speaker may reduce the complexity of the language used and opt for more transparent lexical items that clearly convey meaning (Jones et al., 1999). Convergence and interpretability strategies are frequently used in tandem to narrow the social gap between speakers and bring about mutual understanding in and through interaction.

CAT has been used to investigate the accommodative behaviors of participants in both interpersonal and intergroup interaction (Giles & Ogay, 2007; Gallois et al., 2005). Pharmacist-patient interaction represents an intergroup encounter in which the speakers define themselves and relate to one another based on their social category memberships. The situational context of medication counselling for example is role-defined (Jones et al., 1999) and marked by discrepancies in status, knowledge and skills (Giles & Ogay, 2007); these asymmetries are likely to form communication barriers in pharmacist-patient interactions. CAT, which is commonly applied to encounters "where the differences between two persons are apparent and significant" (Griffin, 2012, p. 403), therefore is well-suited as a theoretical framework to examine accommodative behaviours in pharmacist-patient interaction.

While a few studies have used CAT to examine pharmacist-patient interaction (Chevalier et al., 2016; Chevalier et al., 2017), there is to date no research that has investigated the use of accommodation strategies in the context of medication safety specifically. Chevalier et al.'s (2016) study, which was one of the first to adopt CAT to study the use of accommodation strategies in pharmacist-patient interaction, relied on data that comprised pharmacists' self-reports in focus group discussions. The present study utilizes conversation analytic procedures (see Data analysis section) to conduct turn-by-turn analysis of pharmacist-patient communication; such analyses are able to provide more detailed accounts of the pharmacist's accommodative behaviours that contribute to enhanced patient understanding and the construction of medication safety. More specifically, this paper was designed to examine pharmacist-patient involvement in preventing medication errors at a public hospital in Malaysia due to the high number of medication errors reported in Malaysia. For example, 2,572 cases of medication errors were reported in 2009 (Maziah et al., 2012; Johari et al., 2013), and 41.1 % of medication errors were found to occur in Malaysian primary care clink in 2012 (Khoo et al., 2012).

METHODOLOGY

This qualitative study was conducted from November-December 2014 at the primary

care clinic, University Malaya Medical Centre, Malaysia. It was part of a larger study which assessed the feasibility of an ambulatory care pharmacist service (ACPS) intervention to improve medication safety in primary care.

In this ACPS intervention, 4 doctors and 4 pharmacists with ≥4 years of working experience were recruited. The doctors identified patients who were at risk of drug-related problems. Hence, patients with chronic diseases, on ≥5 medications, were purposively selected. The patients, 27 in total, were informed about the intervention over the phone by the pharmacist and invited to come in at an appointed date and time. On the appointed day, written informed consent was first obtained. A pharmacist then met with the patient to perform a medication review that lasted 20 to 30 minutes (1st interaction). Next, the pharmacist met the doctor to present the medication-related problems identified in the review; both parties decided on a tentative plan to manage the issues identified. Then, the patient met the doctor for regular consultation, after which the pharmacist and doctor reconvened to discuss the treatment. The pharmacist then collected the medicines from the outpatient pharmacy before dispensing them to the patient while providing counseling (2nd interaction).

A relationship was established with the doctors and pharmacists involved in this study. The research team met both parties during the briefing session on the intervention and during data collection. However, no relationship was established between the research team and the patient. It was only the doctor who had an existing relationship with the patient, who was their regular follow-up patient.

Data Collection
Actual conversations between the pharmacist and patient were audio-recorded in a private consultation room at the research site. Prior to the study, ethics approval was obtained from the University Malaya Medical Centre Research Ethics Committee (Ref. No. 890.104).

The interaction data was then transcribed using Jefferson's (2004) transcription conventions (see Appendix A). Both the recording and the transcription of the interaction data were performed by the first author. Transcriptions were checked for accuracy by the second and fourth authors. To protect the participants' identity, pharmacists were coded as Ph and patients as Pt. All participants were asked if they would like to read the transcripts of their conversation but they declined to do so.

Data Analysis
The study adopted conversation analytic procedures to identify and describe the accommodation strategies pharmacists deployed to minimize medication errors in their communication with patients. Conversation Analysis (henceforth CA) is meticulous and detailed in its approach to the analysis of interaction data. Talk is made up of turns which are linked into sequences (Hutchby & Wooffitt, 1998; ten Have, 1999). The interactional significance of an utterance depends on its placement within the sequence of turns at talk (Schegloff & Sacks, 1973) (e.g., a minimal response like "yeah" may function as a continuer or a token of agreement depending on its sequential location).

42

The sequential organization of talk also provides for the overt displays of understanding of prior talk. The recipient's understanding of a speaker's utterance is revealed in their production of a relevant next turn; the next turn also allows the speaker to observe the sense that was made of their prior utterance and to initiate repair if the understanding achieved diverges from the speaker's intended meaning. This "next turn proof procedure" (Hutchby & Wooffitt, 1998, p. 15) also equips the researcher with the means to more accurately interpret and describe what speakers are doing in talk and the understandings they achieve.

In addition, "recipient design", defined as participants' talk "which display an orientation or sensitivity to the particular other(s) who are the co-participants" (ten Have, 1999, p. 111), is a key concept in CA which aligns with the notion of accommodation. To produce comprehensible talk, speakers design their turns specifically for their interlocutor(s). For example, the speaker's choice of words or ordering of information takes into account the recipient's knowledge and ability to understand. CA's insistence on emic or participant perspectives also means that all interpretations of how the pharmacist accommodates the patient is grounded in the details of the talk (Hutchby & Wooffitt, 1998); in other words, the participants' orientations to the talk inform the analysis. For the aforementioned reasons, CA is adopted as the analytical tool to uncover how pharmacists adjust their communicative behavior to increase communicative clarity and enhance patient understanding of their medication.

RESULTS

Twenty-seven pharmacist-patient conversations totaling 6.46 hours were analyzed. The analysis revealed that the pharmacists used several accommodative strategies, namely, avoiding medical abbreviations, avoiding medical jargon, clarifying medication indication, providing explanation, and repetition, to minimize medication error. The data extracts presented below represent the ways in which these strategies were deployed by the pharmacists in their conversations with the patient.

Avoiding Medical Abbreviation
Brunetti et al. (2007) assert that the frequent use of medical abbreviations with patients leads to communication lapses in the medical setting. For example, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) found that almost 5% of the errors reported to MEDMARX resulted from the use of abbreviations by healthcare providers (Brunetti et al., 2007). Despite the National Patient Safety Goals established in 2003 by the Joint Commission on Accreditation of Healthcare Organizations to restrict the use of abbreviations and improve communication, studies show that the practice is still prevalent and can lead to poor patient outcomes and patient harm (Brunetti et al., 2007; Koh et al, 2015).

While the pharmacists use medical abbreviations in their interactions with other healthcare professionals (see Excerpt 2), they avoid doing so when communicating with

patients. As patients may be unfamiliar with medical abbreviations, avoiding their use facilitates understanding of the message and may result in minimizing errors. Excerpt 1 illustrates the pharmacist's avoidance of the abbreviation "UTI" for urinary tract infection.

Excerpt 1: Patient 1
280. Ph: °ok uncle, (.) about your urinary tract infection huh°
281. Pt: uh-huh
282. Ph: uh:: (.) how long have you been, since the last appointment is it?=
283. Ph: =since the last appointment you said, right?

In line 280, the pharmacist, who is reviewing the patient's medication, enquires about his urinary tract infection. The pharmacist uses the medical term in full rather than its abbreviation, "UTI". The patient responds with a backchannel device, "*uh-huh*", which suggests understanding of the medical terminology. By using the term "*urinary tract infection*", which is sufficiently transparent in its meaning, the risk of non/misunderstanding is reduced. This accommodation constitutes a downward convergence as the pharmacist clarifies his message using an unambiguous term that is likely to be understood by the patient. Downward convergence generally occurs when a speaker simplifies their word choice to accommodate the less proficient interlocutor (Giles & Powesland, 1975). However, in this context, the adjustment is made to accommodate the non-specialist interlocutor. Avoiding abbreviations contributes to preventing medication errors and improving the patient's safety (Kuhn, 2007).

Excerpt 2, which comes from the pharmacist's interaction with a doctor in the subsequent part of the intervention, is presented below to illustrate the pharmacist's use of the abbreviation "UTI" when communicating with a fellow healthcare professional. This strongly supports the observation that the avoidance of the abbreviation in Excerpt 1 is deliberate and constitutes an accommodative strategy designed to facilitate the patient's understanding.

Excerpt 2: Patient 1 (from pharmacist-doctor first discussion)
9. Ph: .hhh I've been seen his (chips) (.). he's compliant to the point that there are a few days left in his [medication for [each of his [tablet
10. D: [yeah   [ok   [ok
11. Ph: so, there is no (.) real problem with all his medication. .hhh his main concern is actually:: that he has **UTI**
12. D: um
13. Ph: he was under urology

Avoiding Medical Jargon
Jargon is "the technical term used by members of a profession, generally not understood by a layperson, to describe concept(s) related to their line of work" (Thomas et al, 2014: p. 2). In the healthcare setting, medical jargon is the voice of medicine, and its use in communication reflects the healthcare professional's expertise (Farrington, 2011; Charles, 2000). In contrast, the patient's voice is generally characterized by the use of non-technical discourse reflective of the patient's day-to-day language (Charles, 2000).

44

The mismatch between the two voices is consequential as it may lead to miscommunication between healthcare professionals and patients (Farrington, 2011). Graham and Brookey (2008) affirm that jargon creates communication barriers which reduce the patient's understanding (Farrington, 2011) and hinders the delivery of effective healthcare services.

The pharmacists in this study however are inclined to avoid the use of medical jargon when communicating with patients (Excerpt 3); this contrasts with the obvious use of jargon in their interactions with other healthcare professionals (Excerpt 4).

Excerpt 3: Patient 8
228. Ph: so basically (.) the last blood (.) result right, that I check, you::r how to say you::r bad cholesterol
229. Pt: ah
230. Ph: is a bit high (.) than the normal, a bit high only.
231. Pt: ok
232. Ph: ok? but for your (.) high, your good cholesterol (.) is a bit low.
233. Pt: low?
234. Ph: ah yeah =
235. Ph: = so basically::, this one when you take right,
236. Pt: uh-huh.
237. Ph: ok? it will reduce your bad cholesterol
238. Pt: ah
239. Ph: and will increase the good cholesterol.
240. Pt: so I must take (.)

In lines 228, 230 and 232, the pharmacist informs the patient that his "*bad cholesterol"* level is a little higher than usual while the "*good cholesterol"* is a little low. The patient responds using backchannel devices such as "*ah*", "*ok*", and "*ah yeah*" to signal understanding. According to Yngve (1970), Orestrom (1983), and Maynard (1997), backchannel devices serve a supportive function to indicate the speaker's understanding and agreement. In lines 237 and 239, the pharmacist explains the need to take cholesterol medication, saying, "*it will reduce your bad cholesterol*" and "*and will increase the good cholesterol*", to which the patient responds using backchannel devices once again. Throughout the extract, the pharmacist uses "*bad cholesterol*" and "*good cholesterol*" in place of "low-density lipoprotein/LDL" and "high-density lipoprotein/HDL", respectively, which are terms commonly used by healthcare professionals (see Excerpt 4). The pharmacist's avoidance of medical jargon makes meaning transparent and reduces the risk of misunderstanding that could lead to misuse of medication. Sleath et al. (1999) affirm that misunderstanding contributes to difficulties in taking medication which can result in medication errors. As in Excerpt 1, the pharmacist uses a downward convergence strategy by adopting layperson's terms to increase the patient's understanding of his health condition and emphasize the need for cholesterol medication.

The pharmacist's use of "*HDL*", instead of "good cholesterol", in his interaction with the doctor in the subsequent part of the intervention (Excerpt 4), underscores the accommodative feature of the strategy of avoiding medical jargon in pharmacist-patient communication.

Excerpt 4: Patient 8 (from pharmacist-doctor first discussion)
61- Ph: because he thought that the uh simvastatin would reduce the [HDL] HDL level also
62- D: [um]
63- D: oh I see I see

Clarifying Medication Indication
The analysis reveals that the pharmacists clarify medication indication when referring to new medication; specifically, they clarify the condition the medication treats to increase the patient's knowledge of their medication. According to Coupland et al. (1988), when members of two different groups communicate (e.g., pharmacists and patients), they are likely to modify their talk to accommodate their interlocutor's level of knowledge and familiarity with the topic to achieve effective communication. This explains the pharmacist's move to clarify the indications of use of a new medication in Excerpt 5.

Excerpt 5: Patient 10
133. Ph: o::k (.) then (.) for the simvastatin
134. Pt: ah
135. Ph: for the cholesterol actually::, this one you must take lah.
136. Pt: ah take cholesterol ah
137. Ph: ah yeah, ok

The talk preceding Excerpt 5 (not shown) revealed that the patient had never taken "*simvastatin*" and was uninformed of its indications of use. Hence, when the pharmacist mentions "*simvastatin*" in line 133, the pharmacist promptly explains the condition it treats, saying, "*for the cholesterol actually*" (line 135). Since patients with chronic diseases are generally familiar with their medication, the pharmacist only clarifies medication that is being referred to for the first time. The pharmacist uses easy-to-understand language, "*for the cholesterol*," to make meaning clear and increase the patient's knowledge of new medication. This constitutes a downward convergence strategy that simplifies medical terminology to accommodate the patient's lack of knowledge and familiarity with the medication; it reduces the risk of non/misunderstanding which is vital in improving medication safety.

Providing Explanation
The pharmacists also provide explanation of the purpose of a medication when they observe a need for this information; such explanations are provided using non-specialist language that is easily understood to increase the patient's knowledge of their medication. The use of this strategy may contribute to minimizing medication error as patients acquire deeper understanding of their medication.

Excerpt 6 illustrates how the pharmacist explains why Atenolol (a medication used to treat high blood pressure) has been prescribed to enhance the patient's knowledge of his medication. In the talk preceding this extract (not shown), the pharmacist observed that the patient required more information about why this medication had been prescribed. In line 424, the patient names the medication, which prompts the pharmacist to explain its uses.

Excerpt 6: Patient 1
424. Pt: this is atenolol (.) 50 mg.
425. Ph: ok, so this atenolol
426. Pt: um
427. Ph: it actually helps with your blood pressure number one, but it also helps with your heart (.), ok?
428. Ph: it's going to help your heart to pump out more blood so that your heart won't work so hard, so you won't be tired so fast (.), ok?

In line 425, the pharmacist repeats the name of the medication before explaining its purpose in line 427, saying, "*it actually helps with your blood pressure number one, but it also helps with your heart...*". The pharmacist then proceeds to explicate how the medication works, saying, "*it's going to help your heart to pump out more blood so that your heart won't work so hard, so you won't be tired so fast (.) ok?*". The pharmacist accommodates the patient's lack of knowledge of his medication by using non-specialist language to explain the reason for the prescription. This strategy contributes to medication safety as it increases the patient's knowledge and understanding of his medication.

Repetition
Repetition is a multifunctional strategy commonly used in natural human interaction (Genc, 2007). Tannen (1989) highlighted the role of repetition in conversation in terms of how it contributes to production, comprehension, connection, and interaction. Meanwhile, according to Johnstone (1994), repetition serves as a bridging device in interaction, in that it is used for iteration, clarification, emphasis, or confirmation. In this study, the pharmacist repeats the patient's prior utterance when verifying their medication as a means to provide confirmation and show agreement, as illustrated in Excerpt 7.

Excerpt 7: Patient 5
57. Ph: ok can you tell me how your taken it? =
58. Ph: [and what before
59. Pt: [this one
60. Pt: morning one
61. Ph: morning one
62. Pt: um
63. Ph: ok
64. Pt: this one (.) umm night one
65. Ph: ok night one

66. Pt: this one is morning one and night one
67. Ph: ok

In line 57, the pharmacist initiates verification of the patient's medication intake by asking the patient to explain how he takes his medication. In lines 59 and 60, the patient refers to one of his medications and informs the pharmacist of the timing of his medication, saying, "*morning one*." The pharmacist repeats the patient's utterance in the next turn to confirm that the medication is to be taken in the morning. In line 64, the patient refers to another medication and says that he takes it at night. Again, the pharmacist repeats the patient's utterance, saying, "*ok, night one*". In both cases, the pharmacist aligns with the patient by repeating his utterance in the next turn to acknowledge and confirm that the medication is being taken correctly at the right time of the day. According to Nabila et al. (2020), repetition displays convergence features; participants repeat to show agreement and provide confirmation before continuing the conversation (Elhami, 2020). The confirmation provided reinforces that the patients are taking their medication correctly and helps build patient confidence; this may positively impact patients' adherence to treatment and contribute to medication safety.

DISCUSSION

The analysis reveals that pharmacists use accommodation strategies such as avoiding medical abbreviations, avoiding medical jargon, clarifying medication indication, providing explanation, and repetition to increase communicative clarity and enhance patient understanding of their medication. As the intervention aimed to minimize medication error, the pharmacist's review of the patient's medication prior to the doctor-patient consultation is significant. It provides the pharmacist with the opportunity to not only verify medication intake and identify medication-related issues but also increase the patient's knowledge and understanding of their medication.

The analysis shows that the pharmacists opt for non-specialist language – unmarked by medical abbreviation and jargon – to get their message across. Using simple and clear language reduces misunderstandings and may prevent medication errors (Shitu et al., 2018). The pharmacists also provide clarification and explanation in simple everyday language to increase the patient's understanding of their medication when there is a need for it (e.g., when referring to new medication or when the patient displays lack of familiarity with a medication). In addition, they repeat the patient's prior utterance to confirm and reinforce the patient's medication intake. These strategies, which display features of convergence and interpretability, contribute to medication safety as they reduce the communication barriers that lead to medication error. A notable finding of the study is that the pharmacists adopt downward convergence and simplify their language to attune to the patients' level of knowledge and understanding of health-related information. This is in line with Chevalier et al.'s (2017) findings, whereby most of the pharmacists in their study reported accommodating patients by using easy-to-understand language in their interactions. Avoiding the use of medical jargon not only averts medication error but also improves the patient's adherence to treatment (Maguire & Pitceathly, 2002). It is therefore essential that pharmacists take into account the

patient's health literacy when communicating with them; communication should be clear and straightforward to ensure that all health information provided is comprehended (Bell & Condren, 2016).

In their interactions with patients, the pharmacists display attentiveness to the patient's communicative behavior and address any subtle signals of non/misunderstanding (MacLeod-Glover, 2006). Patients are sometimes unwilling to reveal their lack of knowledge or understanding of their treatment (Bridson, 2003). Hence, close monitoring of patient responses is necessary for the pharmacist to assess the patient's level of understanding of their medication and determine if repetition, explanation, or clarification is required. As Kemp et al. (2008) affirm, different strategies are needed to address different issues. Identifying the nature of a problem may simply require a targeted question to check on the patient's understanding (Watermeyer & Penn, 2009); once the problem is identified, the pharmacist can then deploy a suitable strategy to increase understanding and avert the possibility of error. Communication accommodation is key to improving medication safety in the healthcare setting.

Practice Implications
The findings have implications for practice and training in the healthcare setting. They may be used to inform guidelines developed for pharmacists when counselling patients. Pharmacists must pay heed to potential communication barriers and take pre-emptive measures through communication accommodation to improve medication safety. Using strategies that allow the pharmacist to modify talk in the direction of increased explicitness and communicative clarity will enhance the patient's understanding of their medication. As such, pharmacists should be encouraged to adjust their communicative behaviors to align with the patient's capability for understanding. In this regard, the skilled use of accommodation strategies paves the way for clearer understanding of health and medication-related information (Nkanunye & Obiechina, 2017).

The findings may also prove helpful when designing training programs for students of both medical and pharmacy schools that emphasize the development of communicative competence. Inclusion of modules on communication skills that highlight the importance of clarity-enhancing accommodative practices is necessary to maintain acceptable communication standards between pharmacists and patients. More effective pharmacist-patient communication will contribute to enhance medication safety in the healthcare setting.

CONCLUSION

The findings highlight the explanatory power of CAT to account for the pharmacists' accommodative behaviors in the context of improving medication safety. The pharmacists employ accommodation strategies such as avoiding medical abbreviations, avoiding medical jargon, clarifying medication indication, providing explanation, and repetition to clarify the information provided and enhance patients' understanding of their medication. The skilled use of these strategies increases the effectiveness of communication and contributes to the construction of medication safety.

Declaration of interest: none

References

Abu Seman, R. A., Md Syed, M.D., Aziz, A. A., Zuhdi, A. S., & Mohd Zamin, R. (2020). Fixing the communication gap through MHealth: The effects of attiude, perceived usefulness, and risks of MHealth on presecribed self-care among coronary heart disease patients in Malaysia. *SEARCH Journal if Media and Communication Research, 12*(3), 37-69.

Adler, D.A., Bungay, K.M., Wilson, I.B., Pei, Y., Supran, S., Peckham, E., Cynn, D., & Rogers, H. (2004). The impact of a pharmacist intervention on 6-month outcomes in depressed primary care patients. *Gen Hosp Psychiatry*, *26*(3), 199– 209. https://doi.org/10.1016/j.genhosppsych.2003.08.005

Bartlett, G., Blais, R., Tamblyn, R., Clermont, R.J., & MacGibbon, B. (2008). Impact of patient communication problems on the risk of preventable adverse events in acute care settings. *Canadian Medical Association Journal, 178*(12), 1555– 1562. https://doi.org/10.1503/cmaj.070690

Bell, J, & Condren, M. (2016). Communication strategies for empowering and protecting children. *J Pediatr Pharmacol Ther, 21*, 176-184. https://doi.org/10.5863/1551-6776-21.2.176

Bridson, J., Hammond, C., Leach, A., & Chester, M. (2003). Making consent patient centred. *Br Med J, 327*(7424), 1159–1161. https://doi.org/10.1136/bmj.327.7424.1159

Brunetti, L., Santell, J.P., & Hicks, R.W. (2007). The impact of abbreviations on patient safety. *Joint Commission on Accreditation of Healthcare Organizations, 33*(9), 576-583. https://doi.org/10.1016/S1553-7250(07)33062-6

Charles, C., Gafn, A., & Whelan, T. (2000). How to improve communication between doctors and patients. *BMJ, 320*(7244), 1220 – 1221. https://doi.org/10.1136/bmj.320.7244.1220

Chevalier, B., Watson, B., Barras, M., & Cottrell, W.N. (2016). Examining Hospital Pharmacists' Goals for Medication Counselling within the Communication Accommodation Theoretical Framework. *Res Social Adm Pharm, 12*(5), 747- 55. https://doi.org/10.1016/j.sapharm.2015.10.008

Chevalier, B., Watson, B., Barras, M.A., & Cottrell, W.N. (2017). Investigating strategies used by hospital pharmacists to effectively communicate with patients during medication counselling. *Health Expectations, 20*, 1121-1132. https://doi.org/10.1111/hex.12558

Clark, P.M., Karagoz, T., Apikoglu-Rabus, S., & Izzettin, F.V. (2007). Effect of pharmacist-led patient education on adherence to tuberculosis treatment. *Am J Health Syst Pharm, 64*(5), 497–506. https://doi.org/10.2146/ajhp050543

Cohen, M.R. (2007). Medication errors. *Washington, DC: American Pharmaceutical Association, 2*, 55-66.

Coupland, N., Coupland, J., Giles, H., & Henwood, K. (1988). Accommodating the elderly: Invoking and extending a theory. *Language in Society, 17*(1), 1-41.

Dragojevic, M., Gasiorek, J., & Giles, H. (2016). Accommodative strategies as core of the theory. In H. Giles (Ed.), *Communication accommodation theory: Negotiating personal relationships and social identities across contexts* (pp. 36–59). Cambridge University Press. https://doi.org/10.1017/CBO9781316226537.003

Elhami, A. (2020). Communication accommodation theory: A brief review of the literature. *J Adv Educ Philos, 4*, 192-200.

Farrington, C. (2011). Reconciling managers, doctors, and patients: The role of clear communication. *J R Soc Med, 104*(6), 231–236. https://doi.org/10.1258/jrsm.2011.100401

Gallois, C., Ogay, T., & Giles, H. (2005). Communication Accommodation Theory: a look back and a look ahead. In W.B. Gudykunst (Ed.), *Theorizing about intercultural communication* (pp. 121-148). Sage.

Genc, B. (2007). *An analysis of communication strategies employed by Turkish speakers of English*. University of Çukurova.

Giles, H., Ogay, T. (2007). Communication Accommodation Theory. In B.B. Whaley, W. Samter (Ed.), *Explaining communication: Contemporary theories and exemplars* (pp. 293-310). Mahwah, NJ: Lawrence Erlbaum.

Giles, H., & Powesland, P.F. (1975). *Speech style and social evaluation.* Academic Press.

Graham, S., & Brookey, J. (2008). Do patients understand?. *The Permanente Journal, 12*(3), 67-69. https://doi.org/10.7812/TPP/07-144

Griffin, E. (2012). Communication accommodation theory of Howard Giles. In E. Griffin (Ed.), *A first look at communication theory* (pp. 394-406). McGraw-Hill.

Hajek, C., Villagran, M., & Wittenberg-Lyles, E. (2007). The relationships among perceived physician accommodation, perceived outgroup typicality, and patient inclinations toward compliance. *Communication Research Reports, 24*, 293-302. https://doi.org/10.1080/08824090701624189

Hill, H. (2006). A career as a . . . specialist HIV pharmacist. *Hosp Pharm*, *1*, 15–6. [SEP]

Hutchby, I., & Wooffitt, R. (1998). *Conversation analysis: principles, practices and applications*. Polity Press.

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G.H. Lerner (Ed.), *Conversation analysis: Studies from the first generation* (pp. 13-23). John Benjamins.

Johari, H., Shamsuddin, F., Idris, N., & Hussin, A. (2013). Medication errors among nurses in government hospital. *OSR Journal of Nursing and Health Science (IOSR-JNHS), 1*(2), 18-23.

Johnstone, B. (1994). *Repetition in discourse: Interdisciplinary perspectives 112*. Ablex Publishing Co.

Jones, E, Gallois, C., Callan, V., & Barker, M. (1999). Strategies of accommodation: Development of a coding system for conversational interaction. *Journal of Language and Social Psychology, 18*(2), 123–151. https://doi.org/10.1177/0261927X99018002001

Kemp, E.C., Floyd, M.R., McCord-Duncan, E., & Lang, F. (2008). Patients prefer the method of 'tell back-collaborative inquiry' to assess understanding of medical

information. *J Am Board Fam Pract, 21*(1), 24–30. https://doi.org/10.3122/jabfm.2008.01.070093

Khoo, E. M., Lee, W. K., Sararaks, S., Samad, A. A., Liew, S. M., Cheong, A. T., Ibrahim, M. Y., Su, S. HC., et al. (2012). Medical errors in primary care clinics– a cross sectional study. *BMC Family Practice, 13*(1), 127-132.

Koh, K.C., Lau, K.M., Yosof, S.A., Mohamad, A.I., Shahabuddin, F.S., & Ahmat, N.H. (2015). The PC A study on the use of abbreviations among doctors and nurses in the medical department of a tertiary hospital in Malaysia. *Med J Malaysia, 70*(6), 334-340.

Kuhn, I.F. (2007). Abbreviations and acronyms in healthcare: When shorter isn't sweeter. *Pediatr Nurs, 33*(5), 392-8.

Littlejohn, S.W., & Foss, K.A. (2005). *Theories of communication* (8th ed.). Wadsworth.

MacLeod-Glover N. (2006). *Communication in pharmacy practice: An overview*. Communication Center (CE).

Maguire, P., & Pitceathly, C. (2002). Key communication skills and how to acquire them. *BMJ, 325,* 697–9. https://doi.org/10.1136/bmj.325.7366.697

Makeham, M., Dovey, S., Runciman, W., & Larizgoitia, I. (2008). *Method and measures used in primary care patient safety research*. World Health Organization.

Manojlovich, M, & DeCicco, B. (2017). Healthy work environments, nurse-physician communication, and patients' outcomes. *American Journal of Critical Care, 16*(6), 536-543. https://doi.org/10.4037/ajcc2007.16.6.536

Maynard, D.W. (1997). The news delivery sequence: Bad news and good news in conversational interaction. *Res. Lang. Soc. Interact*, *30*, 93–130. https://doi.org/10.1207/s15327973rlsi3002_1

Maziah, A. M., Wichaikhum, O., & Nantsupawat, R. (2012). Nursing practice environment and patient outcomes in university hospital in Malaysia. *Health and the Environment Journal*, *3*(1), 16-26.

Murphy, J.G., & Dunn, W.F. (2010). Medical errors and poor communication. *Chest, 138*(6), 1292–1293. https://doi.org/10.1378/chest.10-2263

Nabila, A.R., Munir, A., & Anam, S. (2020). Teacher's motives in applying communication accommodation strategies in secondary ELT class. *Linguistic, English Education and ART (LEEA), 3*(2), 373-384. https://doi.org/10.31539/leea.v3i2.1248

Nkanunye, C.C., & Obiechina, G.O. (2017). Health communication strategies as gateway to effective health promotion and well-being. *The Journal of Medical Research, 1*(3), 1-3.

Orestrom, B. (1983). *Turn-taking in English conversation*. CWK Gleerup.

Rajah, R, Hassali, M.A., & Lim, C. (2017). An Interprofessional evaluation of health literacy communication practices of physicians, pharmacists, and nurses at public hospitals in Penang, Malaysia. *Ann Pharmacother, 52*(4), 345-351. https://doi.org/10.1177/1060028017739031

Schegloff, E.A., & Sacks, H. (1977). Opening up closings. *Semiotica, 7,* 289–327. https://doi.org/10.1515/semi.1973.8.4.289

Shitu, Z., Hassan, I., Aung, M.M., Kamaruzaman, T.H.T., & Musa, R.M. (2018). Avoiding medication errors through effective communication in healthcare environment. *Movement, Health & Exercise, 7*(1), 113-126. http://dx.doi.org/10.2139/ssrn.3573437

Skoglund, P., & Isacson, D., (2003). Kjellgren, K. Analgesic medication-communication at pharmacies. *Patient Educ Couns*, *51*(2), 155–161.

Sleath, B., Roter, D., Chewning, B., & Svarstad, B. (1999). Asking questions about medication: Analysis of physician-patient interactions and physician perceptions. *Medical Care, 37*(11), 1169-1173. https://doi.org/10.1097/00005650-199911000-00009

Tannen, D. (1989). *Talking voices: Repetition, dialogue, and imagery in conversational discourse.* Cambridge University Press.

ten Have, P. (1999). *Doing conversation analysis: A practical guide*. London: Sage.

Thomas, M. T., Hariharan, M., Rana, S., Swain, S., & Andrew, A. (2014). Medical jargons as hindrance in doctor-patient communication. *Psychological Studies*, *59*, 394 - 400. https://doi.org/10.100/s12646-014-0262-x.

Watermeyer, J., & Penn, C. (2009). Tell me so I know you understand: pharmacists' verification of patients' comprehension of antiretroviral dosage instructions in a cross-cultural context. *Patient Education and Counselling, 75*(2), 205-213.

Yngve, V. (1970). On getting a word in Edgewise. *In Papers from the Sixth Regional Meeting of the Chicago Linguistic Society*, 567–577.

Zolnierek, K.B.H., & DiMatteo, M.R. (2009). Physician communication and patient adherence to treatment: a metaanalysis. *Med Care, 47*(8), 826– 834.

Appendix

Transcribing Conventions

Symbol	Description
[	A left bracket indicates the point of overlap onset.
=	Equal signs indicate no break or gap.
(.)	A dot in parentheses indicates a brief interval (± a tenth of a second) within or between utterances.
::	Colons indicate prolongation of the immediately prior sound.
°word°	Degree signs bracketing an utterance or utterance-part indicates that the sounds are softer than the surrounding talk.
.hhh	A dot-prefixed row of 'h's indicates an inbreath. Without the dot, the 'h's indicate an outbreath.
(word)	Parenthesized words and speaker designations are dubious.