



Exploring community pharmacists' use of health literacy interventions in their everyday practice

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ABSTRACT

Background: Limited health literacy often results in people inadequately understanding medicines-related information and subsequently not taking medicines as prescribed. Using health literacy interventions is important for community pharmacists, as they are increasingly managing long-term conditions. However, there appear to be no previous studies of community pharmacists' everyday use of health literacy interventions in the UK.

Objectives: To explore UK community pharmacists' perspectives on the usability of health literacy interventions in their everyday practice.

Methods: Semi-structured interviews were conducted with participants, following attendance at health literacy training that included practicing the use of four health literacy interventions (Teach-Back, Chunk and Check, Simple Language and visual aids) and two months experience of attempting to use them in their everyday practice. Participants were pharmacists from community pharmacies in Staffordshire, England who were invited to participate by an email sent to the pharmacy. Interviews were audio-recorded, transcribed verbatim and analysed using the Framework Analysis technique.

Results: Four themes emerged from 11 interviews undertaken: intervention appeal, limitations, adaptations and continued use. Participants reported using all four health literacy interventions in their everyday practice but Teach-Back appeared to be favoured most. Most participants talked about practicing Teach-Back before using it with patients but described it as useable with patients of all ages, without being prohibitively time consuming. Chunk and Check seemed to be viewed as a type of Teach-Back, whilst visual aids were reported as being used in conjunction with Teach Back rather than as a standalone intervention. Participants reported that Simple Language was an easy concept but easily 'slipped back' into medical jargon and were challenged to use simple enough words. All participants said they would continue to use all four health literacy interventions.

Conclusions: The findings suggest that with training, community pharmacists can successfully incorporate these four health literacy interventions into their everyday practice.

1. Introduction

Health literacy is commonly defined as, "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions".¹ Limited health literacy occurs when an individual's literacy and numeracy skills are poorly matched with the often technical, complex, and unfamiliar information that healthcare professionals and organisations make available.²

Low health literacy has been shown to be a reason why patients do not take their medicines as prescribed.³ Despite many healthcare professionals' sophisticated efforts to encourage safe medication use,

current strategies are often insufficient and ineffective, especially for patients with limited health literacy.³ Previous studies have provided useful pointers to indicate that patients' health literacy has a significant impact on the likelihood of them taking their medicines as prescribed for reasons such as not adequately reading, understanding and comprehending medicine-related information.^{4–8}

Therefore, supporting people with low health literacy may increase their adherence to medicines, which may in turn improve or stabilise the conditions the medicines were prescribed for. Whilst this involves all patient-facing health professionals, it is particularly relevant for community pharmacists, as they are increasingly taking on more of the clinical roles that have traditionally been undertaken by doctors, such as

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the management and monitoring of long-term conditions. Doing this, will require adequately accommodating the needs of people with low health literacy and there is a growing body of literature exploring the role of healthcare professionals in identifying, supporting and building people's 'health literacy'.

The health literacy interventions that can be used by health professionals include Teach-Back, Simple Language, and Chunk and Check, all of which can be used in conjunction with visual aids. Teach-Back is a technique that can be effectively used to confirm that the information given by healthcare professionals has been understood by patients, by asking patients to 'teach back' what has been discussed.^{9–11} Chunk and Check is similar but involves information being given to patients in small sections or 'chunks' and checking the patient's understanding of what was said at the end of each chunk.¹² The breaks between chunks in this intervention also provides patients with opportunities to ask questions during a complex consultation with the healthcare professional. The Simple Language or Living Room Language intervention is aimed at replacing the jargon and acronyms that are used regularly by healthcare professionals with readily understandable everyday words and phrases in communication with patients. This is because patients are often unfamiliar with medical and technical terms.^{13,14} The use of visual aids such as pictures in conjunction with text or spoken information can be used to enhance understanding.¹⁵ It has been shown that, in practice, visual aids can improve the usability and quality of written information about medicines^{16–18} and patients are more likely to read text with visual aids, compared to text-only information.¹⁷

However, whilst numerous studies have been conducted on the effectiveness of these interventions, fewer studies have focused on their use in specific health environments. In relation to pharmacy, previous studies have included evaluations or randomised controlled trials of the use of a health literacy intervention as part of an Australian or US health education programme for a specific group of patients,^{19–21} and the self-reported frequency of use of health literacy interventions in day-to-day professional practice in the US.^{22,23} However, there appear to be no previous studies of community pharmacists' everyday use of health literacy interventions and no studies of the use of health literacy interventions in UK pharmacy environments. As such, this study aimed to explore UK community pharmacists' perspectives on using the Teach Back, Chunk and Check, Simple Language and visual aids health literacy interventions in their day-to-day practice, following training about their use.

2. Methods

2.1. Study design

The study involved community pharmacists being trained on how to use the health literacy interventions, then using them for a period of at least two months before participating in a semi-structured, in-depth qualitative interview about their experiences of using them. A reflexive qualitative approach using interviews was selected for the study on the basis of being well-suited to exploring the breadth and depth of participants' perspectives.

2.2. Sampling and participant recruitment

Following a favourable ethical opinion being received from an Institutional Research Ethics Committee, an email was sent to all community pharmacies in Staffordshire in England to invite registered pharmacists to attend a free health literacy training session. Email contact details for the pharmacies were obtained from the Local Pharmaceutical Committee.

The training session was developed and delivered by a local community pharmacy leader with expertise in health literacy, whose roles included being a local City Council Health Literacy Steering Group member and a Health Literacy UK Steering Group member. It was run as

a 3-h evening session, which in addition to a general overview of the prevalence and impact of low health literacy, also covered the use of the four health literacy interventions. To embed attendees' learning, this included practical reflective activities and role play with feedback for them to practice each of the interventions in turn, but no formal assessment of proficiency.

At the end of the training session, attendees were informed about the study and invited to participate. Participation included attempting to use each of the four health literacy interventions. Those who consented to participate were then interviewed approximately two months later to give them sufficient time and opportunity to use the health literacy interventions in their everyday practice.

2.3. Data collection

Following training on qualitative interviewing completed as part of a doctoral degree, face-to-face interviews were conducted with participants using an interview guide. The interview guide was developed from the objectives of the study and a review of the literature to ensure that the broad topics of interest were covered with a series of open, non-leading questions, and also to serve as a reminder and prompts for the interviewer. The broad topics included the pharmacist's experiences in using each of the health literacy interventions with their patients, and whether they would continue to use the health literacy interventions in their everyday practice. Due to the iterative approach to this study, the interview guide evolved during the study to ensure that emerging issues were covered in subsequent interviews. Interviews were audio-recorded and transcribed verbatim.

2.4. Data analysis

The transcripts were analysed using the Framework Analysis technique,²⁴ whereby the first author read and re-read the interview transcripts several times to ensure accuracy of transcription and to identify key thoughts and concepts. These were allocated initial codes or labels and grouped according to the broad topics in the interview guide to form a coding frame, but the analytical approach was also inductive in that codes that did not readily fit the broad topics were allocated to new categories. This coding frame was agreed with the research team and was then applied to all transcripts. The final framework was discussed between research team members to identify connections and refined to avoid overlap between themes. The first author also kept a reflexive journal of thought and reflections about each interview and influences on and interpretations of the data to guide the analysis. This included determining when the point of data saturation had been reached.

3. Results

From the initial email sent to 251 community pharmacies, 27 pharmacists attended the training and interviews were conducted with 11 participants (Table 1). Participants were from a range of different types

Table 1
Demographics of participants.

Community pharmacist	Gender	Years registered	Role at the pharmacy
PH1	Male	4	Locum
PH2	Male	20	Owner
PH3	Male	8	Second pharmacist
PH4	Female	6	Manager
PH5	Male	15	Manager
PH6	Female	9	Manager
PH7	Female	22	Owner
PH8	Male	29	Manager
PH9	Female	26	Manager
PH10	Female	10	Locum
PH11	Female	15	Owner

of pharmacy (e.g., urban and rural), who each gave an account of their experiences of using all four health literacy interventions with their patients. The research team agreed that saturation of the broad topics in the interviews had been reached by the ninth interview and no new themes emerged during the final two interviews. Four categories of themes were identified from the interview transcripts, which were termed the appeal of intervention, limitations, adaptations and continued use.

3.1. Perspectives on using the Teach-Back intervention

The researcher asked participants, during the interviews about their use of each of the four interventions. All participants began by discussing the Teach-Back intervention, suggesting either that this intervention had the most impact on them during the training session or it was the intervention that was most useable for them. All participants appeared to like the Teach-Back intervention and reported now using it most of the time in their practice, as the following quote illustrates.

“... I’ve been on lots of courses to help pharmacists communicate with patients better over the years ... I use it [Teach-Back] a lot now I have mastered it ... I like that I have a structured process I can follow now ... I can see the benefits from it ...” (Participant 6)

Another participant said that she had a lot of experience counselling patients during her time as a pharmacist. Yet on discovering Teach-Back she spoke very favourably about how it had changed her practice.

“I love it ... I mean really love it ... I feel so fulfilled as a pharmacist, as I feel I am really helping patients to understand their medicines ... it’s like a breath of fresh air ... something so easy to use yet so effective ...” (Participant 9)

A similar view was expressed by a younger participant, who explained how they had now found an intervention they could “actually use”:

“It is so fantastic ... it’s great to be taught something that we can actually use and see working. It’s a really easy process to follow once you get used to it” (Participant 4)

Three participants specifically mentioned that it is a good intervention because it can be used with ‘almost everyone’.

“It’s great as you can use it with almost everyone ... I had a 6-year-old in with Ventolin [inhaler] and a spacer the other day ... so I used it [Teach-Back] with her mum first and then, so to include the little girl and used it on her. I got her to tell me how she was going to breathe in the spacer ... it was really effective ... I was really happy how it all went ...” (Participant 8)

However, it was frequently reported that to begin with participants had not been as confident in using the intervention as they would have liked. Many participants said that they felt they needed to develop their skills more before trying the intervention with a patient and several participants talked about practicing the intervention on their staff before using it with patients.

A common view expressed by several participants was that it seemed best to use Teach-Back when doing longer consultations with patients, such as medicines reviews:

“... the best place to use this [Teach-Back] is during an MUR [Medicines Use Review]. We are sitting with the patient for longer and they are expecting to be with you longer and sort of ... well be tested on their understanding ... I know tested is not the right word but ... well they know we are going to check they have understood everything. So, if the patient is having a longer conversation with you, I feel it [Teach Back] works brilliantly” (Participant 11)

It was suggested by around half the participants that the intervention was more difficult to use in short interactions with patients. This was

mainly because there did not seem to be enough time to engage the patient in the conversation and to initiate Teach-Back when handing out patients’ prescription medicines.

Participants commonly reported that they associated using Teach-Back with increasing medicines adherence in patients, and possibly reducing potential harm from lack of understanding about medicines. Participants mentioned that by using the intervention they had almost certainly picked up on patients misunderstanding medicine instructions, which could have been detrimental to the patients’ health if the medicines had been taken incorrectly.

“I am almost certain that using this Teach-Back helped me stop an overdose in one of my patients ... well a patient repeated back to me and happened to double the dose from what I said ... not sure how that happened? ... but can you imagine if they went home and took that amount ...” (Participant 7)

Overall, there were mixed messages from participants about the time the Teach-Back intervention took during their consultations. Some mentioned that no extra time was needed, whereas other clearly mentioned that more time was needed in order to perform the intervention. However, all participants said they would continue to use the Teach-Back intervention. Indeed, many of them reported that it would be difficult for them to not to use it now, as it was now incorporated into their general approach to consultations.

“it’s like second nature now, I don’t realise I am using it, I just go ahead and use it throughout the MUR with all my patients ... so yes I will continue to use, always” (Participant 5)

3.2. Perspectives on using the Chunk-and-Check intervention

In contrast to how participants spontaneously spoke first about using Teach Back when asked about using of health literacy interventions, most participants needed to be specifically prompted to talk about their experiences of using Chunk and Check. This suggested that it may not have been as popular with participants as the other interventions or effectively indistinguishable from Teach Back. This finding was highlighted by some participants needing a reminder of what the intervention was and that once prompted or reminded, all participants recognised the intervention, but in terms of being Teach-Back broken down into small sections, rather than as the name Chunk and Check. Many participants then described using this intervention for complex or long instructions that they needed the patients to understand:

“This [Chunk-and-Check] is excellent when I have lots to tell the patient ... say when they have a couple of new medicines and I’ve to tell them the dose, side effects, how to store for each one ...” (Participant 7)

Other participants spoke about how this intervention was useful for elderly patients during medicines use review consultations. None of the participants mentioned using the intervention during shorter, over-the-counter discussions with patients. Participants also did not mention any challenges they faced with using this intervention. The common view regarding the usability of this intervention was that pharmacists would continue to use it, as they saw it as an extension or component of the Teach-Back intervention.

3.3. Perspectives on using the simple language intervention

There was much similarity between participants in their reported experiences of using the Simple Language health literacy intervention. For example, one participant explained how he used this intervention to help a patient understand how his heart worked, by saying, “I used the word ‘pump’ to explain the heart working” and so using common words that the patient would understand.

The majority of participants said they used the intervention to explain dosages of medicines. Participant 4 related this intervention to

counselling patients on dose intervals:

“Now instead of saying take one twice a day when giving out a prescription, I tend to say take one with your breakfast and one with your tea ... I also write this on the label so they can understand it better” (Participant 4)

Many participants reported that this health literacy intervention was an easy and obvious concept, but they noted that they seemed to find it easy to ‘slip back’ into medical jargon, with many participants stating that it took a “little practice” not to revert back to using difficult words. Some participants initially thought they were using uncomplicated words already, but realised that they could use simpler language, as the following quote illustrates:

“I am now constantly looking for plain, simple words to replace what I thought were plain, simple words!” (Participant 1)

All participants agreed that no additional time was needed in any consultation to use this intervention and most participants said that the intervention could be used in both short conversations with patients and during longer consultations. All participants reported that they would continue to use the Simple Language intervention.

3.4. Perspectives on using visual aids

Many participants reported that they used visual aids only rarely before the training session but had since tended to use pictures and diagrams to demonstrate instructions to patients. All participants reported that pictures were particularly useful with dealing with complex issues for patients and no participant said it took extra time or effort to produce a diagram, suggesting only simple drawings were used. However, most participants reported using this intervention in conjunction with Teach-Back, rather than as a standalone intervention:

“I used a picture with a patient ... a clock it was, to explain dose times, but I also used Teach-Back to ensure he really understood” (Participant 9)

All participants said they would continue to use pictures and diagrams to enhance instructions to patients and many participants described now routinely using pictures when talking to patients about medicines.

4. Discussion

This study sought to explore whether health literacy interventions, often developed in other countries, could be routinely used by UK community pharmacists. The findings suggest that whilst all four health literacy interventions could be and were used by participants in their everyday practice, the Teach-Back intervention appeared to be the one they favoured most. In contrast, the Chunk and Check intervention seemed to be viewed as being a type of Teach-Back, visual aids were reported as being used in conjunction with Teach Back rather than as a standalone intervention, whilst the Simple Language intervention appeared to challenge participants to actually use simple language.

Participants described the Teach-Back intervention as being easy to use with all patients irrespective of age, without being prohibitively time consuming for regular use and that it had avoided medicines-related harm (e.g., preventing an overdose of a medicine). These findings add to the findings of a 2016 systematic review of the effectiveness of Teach-Back as a health education intervention, which showed that when healthcare professionals employed Teach-Back, improvement was seen in self-care, hospital readmission and hospitalisation.²⁵ The systematic review included three pharmacy-related studies, but none with directly comparable findings to those of this study, since they did not involve community pharmacists or everyday use of the health literacy intervention. Instead, they were randomised controlled trials or evaluations of pharmacy students using Teach-Back in patient education on inhaler use,¹⁹ or GP surgery-based pharmacists using Teach-Back in patient

education programmes on diabetes or heart failure.^{20,21} Similarly, the findings of other pharmacy-related studies that suggested low use of Teach-Back by pharmacists are not directly comparable to the findings of this study since they did not specifically involve community pharmacists and there was no indication of participants having received instructions or training on how to use the intervention.^{22,23}

The use of visual aids, in conjunction with Teach-Back or other health literacy interventions, were reported by participants as being useful for enhancing comprehension of complicated pharmaceutical instructions. This supports the findings of previous studies that have found that pictograms printed directly on to medicine labels can have a positive influence on patients’ understanding of medicines instructions and their subsequent adherence.^{13,26}

The findings in relation to reasons why participants seemed to find the Simple Language intervention challenging highlight the likelihood of disparity between language that health professionals may view as being simple and language that is actually simple enough for patients with low health literacy to understand. In this study participants had practiced thinking about their word choices at the training session, but still reported that they inadvertently ‘slipped back’ into medical jargon and that they had to think whether the apparently simple words they used were simple enough. These findings resonate with previously reported study findings, for example a study of health professionals’ communication with patients found that physicians reported having switched to simple language, but the patients they had communicated with did not perceive this to have been so.²⁷ Nevertheless, the use of simple language does not appear to increase the length of consultations and appears to be suitable for community pharmacists to use with all patients and customers irrespective of their level of health literacy.

From a reflexive viewpoint, the first author has many years of experience of working as a community pharmacist in the UK, which can be seen to have enhanced the credibility and trustworthiness of the findings of this study. This aligns with the identified need for adequate engagement with the culture under study in qualitative pharmacy research for establishing trustworthiness.²⁸ In the interviews in this study, the first author’s depth of engagement with community pharmacy culture in the UK led to shared understandings with participants about their experiences of using the health literacy interventions in everyday practice. This was seen, for example, when participants talked about specific instances of when and how they had used them, as the lead author could relate to what participants said about, for example, the type of conversation held with the patient, the time that this likely took, the expected benefits for the patient and any benefits or drawbacks for the participant. In addition, it was recognised that the issues covered by the findings were not specific to the study locality and so could likely be transferable to other community pharmacy situations where staff communicate directly with patients.

However, limitations of this study include that despite saturation of the broad topics of interest in the interviews, the findings are not necessarily widely transferrable in community pharmacy. This is partly because of the self-selected nature of the sample of participants, and it is also acknowledged that participants’ proficiency in the use of the health literacy interventions may have varied and their reports, for example, of how frequently they used the health literacy interventions may not have reflected their actual behaviour.

Work in this area is further complicated by factors such as language and cultural differences, there being no universally agreed definition of health literacy and no UK health literacy standards to guide patient assessment and communication support. Subsequently, there appears to be variation in the policies, procedures and definitions that health professions have developed in relation to health literacy. Nevertheless, the findings of this study suggest that community pharmacists can use health literacy interventions such as Teach-Back, Chunk and Check, Simple Language and visual aids in their everyday practice. The findings also suggest that these interventions were not prohibitively time consuming for participants to use and that they are likely to report

intending to continue using them. This suggests that community pharmacists should incorporate health literacy interventions in their interactions with patients as a matter of routine to support the development of user-friendly, shame-free health environments.

Author statement

I, Tania Anne Cork, can confirm that the other author, Simon White, has agreed to be part of this paper and agrees for it to be published.

We both declare no interests or conflict of interests.

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