Developing Verbal Health Literacy with Adult Learners Through Training in Shared Decision-Making

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ABSTRACT

Background: Health literacy skills are often assessed in relation to written health materials; however, many important communications are in other formats, especially verbal communication with health care providers. Objective: This qualitative study sought to examine adult learners' experiences of developing verbal health literacy skills within an Australian adult basic education program, and to explore verbal communication and shared decision-making as a constituent domain of health literacy. Methods: We conducted a semistructured qualitative interview study between September and November 2014 with adult learners who had participated in a single-semester health literacy program that included an integrated shared decisionmaking component. We analyzed interviews using the Framework method; a matrix-based approach to thematic analysis. A hybrid process of inductive and deductive coding was used to interpret raw data. Key Results: Interviewees were 22 students from six health literacy classes and ranged in age from 18 to 74 years (mean, 48.3). The majority were women (n = 15) and born outside Australia (n = 13). Health literacy was generally limited according to the Newest Vital Sign screening tool (n = 17). The health literacy program appeared to serve two key functions. First, it stimulated awareness that patients have the right to participate in decision-making concerning their treatment and care. Second, it facilitated verbal skill development across the domains of functional (e.g., communicating symptoms), communicative (e.g., asking questions to extract information about treatment options), and critical (e.g., integrating new knowledge with preferences) health literacy. Conclusions: Our findings support the conceptualization of health literacy as a modifiable health asset that is subject to change and improvement as a result of deliberate intervention. Results reinforce verbal health literacy as an important component of health literacy, and draw attention to the hierarchy of verbal skills needed for consumers to become more actively involved in decisions about their health. We present a revised model of health literacy based on our findings. [Health Literacy Research and Practice. 2017;1(4):e257-e268.]

Plain Language Summary: We developed a health literacy program for adults with lower literacy to help learners develop skills to talk to health care providers and share health decisions. The program was taught in Australian adult education settings. The article explores the range of health literacy skills needed for communication and decision-making in this study, and presents a model in which verbal skills are an important part of health literacy.

Globally, there have been calls for a "coordinated and collaborative approach to . . . systematically address health literacy" (Australian Commission on Safety and Quality in Healthcare, 2014; Sørensen et al., 2012). In response, many health care systems and organizations have adopted health literacy initiatives that take a risk/deficit approach, either intentionally or inadvertently. That is, they have focused on people and communities who lack skills and have applied top-down modifications to compensate for this, most often by developing and implementing plain-language written materials (Black, Balatti, & Falk, 2013). Although there is unquestionable value in modifying environmental determinants to decrease the literacy demands of our health care system, improving health literacy in a population requires a response that is more concerned with capacity building and social change (Nutbeam, 2000; Pleasant & Kuruvilla, 2008). In this framework, health literacy is seen as a personal asset that offers consumers greater autonomy and control over health care decisions. Health literacy, like general literacy, is therefore not a static construct. Rather, it is a modifiable determinant of health, subject to change as people build health knowledge, develop health-related skills and practices, take health actions, and make informed decisions (Edwards, Wood, Davies, & Edwards, 2012).

To describe and differentiate between levels of health literacy, Nutbeam (2000) proposes a three-level hierarchy of health literacy skill development: (1) functional health literacy refers to the basic skills for obtaining health information. (2) Communicative skills are those that can be used to participate actively in everyday situations, extract health information and derive meaning from different forms of health communication, and apply this to changing circumstances. (3) Critical health literacy refers to the cognitive and social skills needed to assess the applicability of health information to personal situations or its reliability. Some consider critical health literacy to be especially relevant for a person's ability to exert control over situations (Chinn, 2011).

Health literacy skills are often considered with respect to engaging with written health materials (Nielsen-Bohlman, Panzer, & Kindig, 2004), with print literacy dominating the discussion of health literacy to date (see, for example, Alsomali, Vines, Stein, & Becker, 2017; Foster, Idossa, Mau, & Murphy, 2016; Williams, Muir, & Rosdahl, 2016). However, skills are also required to obtain, understand, and use health information presented in other formats (e.g., verbal communication). In fact, speaking and listening skills have long been recognized as an important component of general literacy, and have been incorporated into national curricula such as the Australian Literacy Curriculum (Australian Curriculum, Assessment and Reporting Authority, 2010). Recognizing that health literacy extends beyond reading and writing to include verbal skills and competencies, Harrington and Valerio (2014) developed the "Verbal Exchange Health Literacy" model. This model positions "listening" and "speaking" skills as distinct health literacy skills for the verbal exchange between the patient and health professional. Jordan, Buchbinder, and Osborne (2010) similarly identify "verbal communication" as 1 of 7 key health literacy abilities. Although this work has begun to draw attention to the different health literacy skills needed to extract and understand information in a number of health contexts, existing models do not encompass the full range of capacities required to make informed decisions in the verbal exchange

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Disclosure: The authors have no relevant financial relationships to disclose. Received: July 30, 2017; Accepted: October 27, 2017 doi:10.3928/24748307-20171208-02 (e.g., advanced skills to contextualize and critically evaluate verbal health information [Dawkins-Moultin, McDonald, & McKyer, 2016; Smith, Nutbeam, and McCaffery, 2013; Rubinelli, Schulz, & Nakamoto, 2009]). To this end, work is needed to explore the concept of health literacy from a verbal communication perspective, further defining the parameters and constituent skills.

When verbal communication skills are conceptualized as a constituent domain of health literacy, it becomes evident that health literacy and shared decision-making are "overlapping constructs" (McAllister, 2016). Shared decisionmaking is an approach to medical decision-making that involves both the patient and health care professional(s) (Charles, Gafni, & Whelan, 1997). As the middle ground between a paternalistic approach and an informed choice approach, shared decision-making necessarily involves the exchange of information between professionals and patients, including a discussion of the best scientific evidence as well as the patient's concerns, goals, values, preferences, and circumstances (Kon, Davidson, Morrison, Danis, & White, 2016; Moumjid, Gafni, Bremond, & Carrere, 2007). Decisions are made collaboratively when evidence is integrated with patient factors (e.g., values and preferences) to seek agreement on a course of action (Hoffmann et al., 2014; Charles et al., 1997). An asset approach to health literacy recognizes efforts to improve functional, communicative, and critical health literacy, and shared decision-making can be integrated to support involvement in health care.

One practical approach to build the health literacy capacity of consumers is through established adult education programs (Rowlands & Nutbeam, 2013). Adult education is rooted in a historical context concerned with capacity building, empowerment, and social change (Martinez de Morentin de Goni, 2006). According to critical pedagogy theory, the role of education is to raise critical consciousness and develop strategies to overcome obstacles to good health (Freire, 1974; Wallerstein & Bernstein, 1988). The feasibility of health-education partnerships has been examined elsewhere and shown to facilitate meaningful support in health-related learning for those most in need. (Chen, Goodson, & Acosta, 2015; Chervin, Clift, Woods, Krause, & Lee, 2012; Santos, Handley, Omark, & Schillinger, 2014; Soto Mas, Ji, Fuentes, & Tinajero, 2015; Tavistock Institute and Shared Intelligence, 2008). Reported improvements in verbal communication include scheduling appointments, describing symptoms, and following medical directions (Chen et al., 2015; Chervin et al., 2012; Tavistock Institute and Shared Intelligence, 2008). However, thus far, adult education health literacy initiatives have narrowly focused on

functional verbal health literacy development, with less focus on communicative and critical health literacy for shared decision-making. Given that more advanced health literacy skills are intended to be transferable across health care conditions and contexts and can provide people with greater autonomy, it is important to explore how best to support the development of these skills within adult education.

Drawing on an asset-based model of health literacy, we developed a health literacy program including an integrated shared decision-making component for adults with lower literacy. The program was evaluated as a clusterrandomized controlled trial involving 308 adult learners across New South Wales, Australia (McCaffery et al., 2016). Within this trial we conducted a nested qualitative study to illuminate the subjective learner experience of engaging in shared decision-making training. The results of this qualitative study are reported here.

METHODS

Setting

The program was delivered in government-funded adult basic education settings across New South Wales, Australia. Australia has a universal public health system provided by the Commonwealth Government.

Participants and Recruitment

We recruited adult learners who had participated in a single-semester health literacy program during 2014. The program included completion of approximately 18 weeks of health literacy classes as part of an existing adult basic education program (McCaffery et al., 2016). Approximately 2 months after the end of the course, six health literacy classes were purposively selected to capture the experiences of participants from both English- and non-English-speaking backgrounds, as well as metropolitan and regional areas. Teachers identified potential participants from their cohort (n = 22) and invited them to participate in a 30-minute interview about their experiences of participating in the course. Informed consent was obtained from each participant in writing at the beginning of the semester and again verbally at the start of the interview. Ethical approval for the study was granted by the University of Sydney Human Research Ethics Committee and the Institutes of TAFE (Technical and Further Education) New South Wales.

Health Literacy Intervention

The health literacy program had 31 topics, of which 10 were core units, including shared decision-making (**Table 1**). The integrated shared decision-making compo-

| Health Literacy lop | ics included in the 2014 Program |
|--|---------------------------------------|
| Being Healthy (Teaching Manual 1) | Staying Healthy (Teaching Manual 2) |
| Taking temperature ^a | Getting involved |
| Checking medicine labels ^a | Food groups |
| Prescriptions | Food labels ^a |
| Dosage and timing | Nutritional information ^a |
| Health workers | Food temperature safety |
| Telling your doctor what is wrong ^a | Food date safety |
| Talking to your doctor ^a | What is a serving? ^a |
| Answering your doctor's questions ^a | Budgeting |
| Immunization and health screening | Understanding a diet |
| Asking questions ^a | Drinking enough fluids |
| Shared decision-making ^a | Heart rate and pulse |
| Completing medical forms | Being active |
| Emergency services | Watch first aid demonstrations |
| Advice from pharmacist | Follow written instructions |
| Saving lives | Talking on the telephone ^a |
| Follow emergency instructions | Revision/goal setting |

TABLE 1 Health Literacy Topics Included in the 2014 Program

Note. The program consisted of two teaching manuals: "Being Healthy," which covered health skills, and "Staying Healthy," which focused on maintaining a healthy lifestyle. Adapted from "Evaluation of an Australian health literacy training program for socially disadvantaged adults attending basic education classes: study protocol for a cluster randomised controlled trial," by K. McCaffery et al., 2016, *BMC Public Health*, 16, p. 454. "Core unit.

nent was designed to be completed in 6 hours and cover (1) shared decision-making concepts and terminology, (2) health risks and benefits including numeric and graphical risk information, (3) the role of values and preferences in decision-making, and (4) tools to facilitate shared decision-making (Muscat et al., 2015). Specifically, the "AskShareKnow" question set was taught to participants as a tool to facilitate the exchange of personally-contextualized information about test and treatment options, and their benefits and harms during future health care consultations (Table 2). The Ask-ShareKnow questions have been found to increase the amount and quality of information about treatment options provided by health care professionals (Shepherd et al., 2011) and shown to be feasible and acceptable among patients in women's health clinics in Australia (Shepherd et al., 2015). In a qualitative interview study exploring the relative difficulty of decision-making support tools among adults with lower literacy, the AskShareKnow question set was found to be easier for participants than alternative question sets, and clarification of the questions' meaning using a structured response was reasonably effective (Muscat et al., 2016).

Interviews

Trained researchers (D.M.M., S.M.) conducted semistructured interviews with participants individually either by telephone or in person at their adult education institution between September and November 2014. Interviewers used a topic guide covering participants' experience of learning about shared decision-making, and recall and use of program content. The guide was applied flexibly in that researchers were able to adapt it (e.g., add or remove questions as needed) so that participants' experiences shaped the specific content and direction of the interviews.

Data Analysis

We analyzed interviews using the Framework method, which is a matrix-based approach to thematic analysis (Ritchie, Spencer, & O'Connor, 2003). A hybrid process of inductive and deductive coding was used to interpret raw data (Muir-Cochrane & Fereday, 2006) (Figure 1).

RESULTS

Interviewees were 22 students from six health literacy classes and ranged from age 18 to 74 years (mean, 48.3). The majority were women (n = 15), born outside Australia (n = 13), spoke a language other than English (LOTE) at home (n = 13), and reported that they needed help with English (n = 15). Health literacy was generally "limited" according to the Newest Vital Sign (n = 17) screening tool and the Single Item Literacy Screener (n = 16). Almost one-half of the interviewed participants (n = 13) were caring for parents and/or children.

We identified three themes from the data: (1) participating in health care decision-making: a new right and responsibility; (2) facilitating functional, communicative, and critical skill development; and (3) the limits of language. Participant quotes are followed by an identification number, gender, age, and language spoken at home (English [Eng] or LOTE). Students with the same letter at the end of their ID were enrolled in the same class.

Participating in Health Care Decision-Making: A New Right and Responsibility

A large proportion of participants expressed that prior to the course they did not realize they had a right to be actively involved in health care consultations and decision-making concerning their treatment and care. Participation in the shared decision-making program facilitated awareness that patients have the right to do so, offering new opportunities for them to contribute during consultations. "But now we understand that we have an option where we can talk to the doctor." (HL L14 D; F, 65, Eng)

After the program, a number of adult learners conceptualized participation in health care decision-making as a responsibility of the patient, enacted to ensure they receive information and the correct treatment. This sense of ownership over decision-making offered participants an increased sense of control. "And I make sure I ask the questions. And I make sure I get the right answers. And, so I make sure I get treated right." (HL L5 B; F, 25, LOTE)

Participants' new appreciation of the right to participate in decision-making was mirrored by self-reports of increased assertiveness and self-efficacy for health consultations. Participants reported that before the course they had felt "nervous," "scared," "stupid," and "shy" during their interactions with health professionals, and that those feelings acted as explicit communication barriers. However, these feelings were

TABLE 2

The "AskShareKnow" Question Set

Question 1: What are my options?

Question 2:What are the benefits and harms of those options? Question 3:How likely are each of those benefits and harms to happen to me?

Adapted from "Three questions that patients can ask to improve the quality of information physicians giveabout treatment options: A cross-over trial," by H. L. Shepherd et al., 2011, *Patient Education and Courseling*, 84, pp. 379-385.

not expressed as an intrinsic aspect of low literacy, but rather as a context-specific capability supported and promoted through participation in the health literacy program.

Before I was very nervous . . . And my words wouldn't come out properly...But now I feel I can do this . . . Before I used to be scared and say, oh, no, she (healthcare provider) doesn't want to know that, or I don't need to know that, but they do need to know that. (HL L10 B; F, 39 Eng)

Facilitating Functional, Communicative, and Critical Skill Development

One participant did not recall the shared decision-making component of the health literacy program and did not discuss the health care interactions experienced since program completion. As such, the participant's transcript did not contain any references to health literacy skills for verbal communication and shared decision-making.

However, most participants within the sample spoke about developing new skills for the verbal exchange. These skills mapped to Nutbeam's (2000) three-tiered model, representing functional, communicative, and critical skills for communication and decision-making.

Functional skills. For five of the participating learners, the focus was on building and refining functional oral (speaking) and aural (listening) health literacy skills to facilitate the exchange of basic health information. For example, for the participant in the following text, learning to report symptoms in a way in which the health care professional would understand was a necessary skill developed through program participation. "And she (healthcare provider) says yes, she can understand my symptoms when I explain them to her." (HL L10 B; F, 39 Eng)

Functional question-asking skills learned throughout the program were also used as a clarification tool during consultations to ask health professionals to adjust their communication style and explain incomprehensible terms. "And, er... yeah, we can ask more questions for doctors....



Independent reading and re-reading of interview material by two researchers

 Two researchers familiarised themselves with interview material through a "careful reading and re-reading of the data" (Rice & Ezzy, 1999)

Independent, inductive coding

Two researchers independently coded a sample of transcripts using inductive, open coding.

Codes compared with feedback from all authors

Independent, deductive coding

- Authors identified that codes for data pertaining to skill development aligned with Nutbeam's functional, communicative and critical skill categories
- Inductive analysis of the raw data progressed toward the deductive identification of health literacy categories (Muir-Cochrane & Fereday, 2006)

Independent, inductive coding

 For all other data not pertaining to skill-development authors agreed on a set of inductive codes to apply to subsequent transcripts

↓

Refined framework

- Refined framework (including inductive and deductive themes) applied by indexing subsequent transcripts using the categories.

\checkmark

Charting

- A spreadsheet was used to generate a matrix and the data was 'charted' into the matrix.

Figure 1. Data analysis process using the Framework method including both inductive and deductive coding.

I ask again, what's this mean? Can you explain for me?" (HL L19 E; F, 54, LOTE)

Participants reported that the functional skills enabled them to better follow providers' instructions (e.g., fill a prescription). For these participants, there was often no accompanying discussion about the prescribed medication (e.g., benefits and harms). Rather, the emphasis was on skills they had gained to enact the decision the provider had made.

Communicative skills. Although a minority of interviews indicated that some participants developed and refined only functional skills, the majority exhibited some communicative-level health literacy skill development. Question-asking in this context was used to extract health information (e.g., information about options, benefits, and harms). "With doing that course if you if I get something I, I question him about it and say, you know, there's a right thing for it, is there any downsides? You know?" (HL L11 C; M, 60, Eng)

The program appeared to support participants to extract information in the verbal exchange in two distinct ways. Some participants recalled the three AskShareKnow questions verbatim and reported using the questions in their exact (or "surface" [Lloyd & Reyna, 2009]) form to facilitate information exchange within the consultation. "I can talk, er... talk with, with my doctor... example, er... what are my options? what are the possible benefits and harms, er... of those options?" (HL L21 F; M, 74, LOTE)

Other participants explicitly stated that they did not recall the AskShareKnow questions or reported that they had not used the questions in their exact form in subsequent health care consultations. However, it was evident that they had understood the sentiment of AskShareKnow in that they reported asking questions that captured the meaning of the original questions, simply using alternative terms. For these participants, the course appeared to facilitate a representation of concepts embodied within the AskShareKnow questions (Lloyd & Reyna, 2009). "We can talk to the doctor and say, well, I would like to have a bit more information, could you tell me what my choices are?" (HL L14 D; F, 65, Eng)

Four participants reported that the course provided them with opportunities to facilitate the exchange of information within family members' consultations. For example, one participant reported using the AskShareKnow questions within a consultation he had attended with his wife. Others reported sharing tips, skills, and specific questions for eliciting information with family and friends for them to use independently. "I give ideas about this one to my friend. And I say to her, you have to do this one, you have to ask the doctor what's, what effect [sic] you, yeah." (HL L8 B; F, 48, LOTE)

Critical skills. Although many participants within the sample reported developing communicative-level skills for the verbal exchange, fewer exhibited critical health literacy skills. Those who did were not only able to elicit information from health care professionals, but also critically reflect on the information and advice received. These participants were able to integrate new knowledge with personal preferences to make an informed, shared decision. In the examples below, two participants who had a similar medical condition both exhibited critical health literacy skills for decision-making. Both participants spoke about incorporating their preferences into the decision from one another.

... the benefits I have with getting my eyes fixed is, is a really, really good... good... and the harm of not getting them fixed is, was then... er, the middle of next year I could end up losing my eyesight ... And [I] says, ok, go ahead with it." (HL L14 D; F, 65, Eng)

I go to see doctor and I ask the doctor, my eyes, er... needed to, er, operation... the doctor say maybe after one or two years you needed to op, op, operation...I ask, maybe can more long, more long time? I don't want to operation to my eyes... the doctor, the doctor say that, er, you can wait and watch. (HL L21 F; M, 74, LOTE)

Reflections on skill-development. Across all levels of health literacy skill-development, participants were enthusiastic about developing new skills for the verbal exchange. Most reported feeling positive about having greater control and ability to influence clinical dialogue and extract information for enhanced understanding. "I think it's a good idea because . . . you can walk out of there without an understanding and then if you talk to your doctor, well you're going to walk out feeling a lot better" (HL L13 D; F, 35, Eng).

However, one participant felt that skills for shared decision-making were only necessary for "big" health decisions rather than commonly managed problems, including "just (a) cold." For another student from the class, although they reported seeing value in asking questions to get more information, they still preferred that the health care professional made the final decision about treatment or care. "But at the end of the day they sort of know what's what . . . how are you going to be able to tell what's right for you and what's not?" (HL L11 C; M, 60, Eng)



Figure 2. Adapted Verbal Exchange Health Literacy model. Adapted from "A conceptual model of verbal exchange health literacy," by K. F. Harrington and M. A. Valerio, 2014, *Patient Education and Counseling*, 94, pp. 403-410.

The Limits of Language

The majority of participants from non-English speaking backgrounds shared enthusiasm about asking questions and participating more actively in health care decision-making. However, as summarized by the participant in the following text, although conceptually the idea of shared decisionmaking was not problematic, enacting this in an Englishlanguage consultation remained a challenge.

. . . it's not about the topic. It's from the language problem... when we, er, talk to the doctor and sometimes we have same language and we can share it...we can sharing idea, um, what's the problem for us, or, er . . . how can we, er . . . fix, fix these problems . . . And then it's much easier. Otherwise if we talking about English, that's a . . . trouble. (HL L1 A; F, 44, LOTE)

Although the language of the AskShareKnow questions was considered to be "quite hard," many participants could recall the questions throughout the interview, indicating that the course had facilitated relevant vocabulary acquisition. There was also a more general acknowledgment that learners' English language skills had been improved by course participation. One participant reinforced the importance of the adult education teacher in facilitating such language development and related learning. "…like the teacher explain what, er, what is this word's meaning, and what is this question to cover what kind of thing, then after explaining, every people can understand." (HL L13 D; F, 35, Eng)

A continued challenge to participation in consultations and decision-making was understanding the unscripted responses of health care professionals. "The doctor say some word I can't understand exactly." (HL L19 E; F, 54, LOTE)

DISCUSSION

This qualitative study examined the experience of developing health literacy skills within an adult basic education program and explored verbal communication and shared decision-making as a component of health literacy. We found our program served two key functions. First, it stimulated awareness that patients have the right to contribute to health care consultations and participate in decision-making concerning their treatment and care. Second, it facilitated verbal skill development across the domains of functional (e.g., communicating symptoms), communicative (e.g., asking questions to extract information about treatment options), and critical (e.g., integrating new knowledge with preferences) health literacy. Although participants were positive about gaining skills for participation in the "verbal exchange,"

| | Prop | oosed Modifications | TABLE 3 to the Verbal Exchange Health Litera | icy Model |
|--------|---|--|--|---|
| Change | Original Model (Harrington & Valerio, 2014) | Modified Model | Justification | Implications for Research and Practice |
| - | Positions "skills" (language, communication, interpersonal) as a "patient characteristic" | Integrates "skills" within the center health literacy circle | Embodies an asset approach to health literacy and health promotion (Whiting, Kendall, & Wills, 2012). Positions health literacy as a modifiable skill that can be built upon to support engagement in health-care decision-making rather than a static patient character- istic. | Challenges researchers and health care profes- sionals to consider how we can develop interven- tions to accentuate the positive ability of people and build their capacity as health care users and decision-makers |
| 2 | Includes only "speaking" and "listening" within verbal ex- change health literacy | Embodies a broader range of health literacy skills need- ed for the verbal exchange by proposing a hierarchy of functional, communicative, and critical verbal skills | More clearly reflects that decision-making in the verbal exchange encompasses all three health literacy levels, which progressively allow patients to exert greater control over health care decisions in the verbal exchange (Rubinelli, Schulz, & Nakamoto, 2009; Smith, Nutbeam, & McCaffery, 2013) | Future research should expand on this model by investigating other verbal health literacy skills within each category that support decision- making; for example, although there was no discussion of critically appraising verbal informa- tion received from providers in terms of its reliabil- ity and accuracy, this is conceivably an important critical skill in this context |
| m | "Speaking and listening" skills presented in random order | Functional, critical, and com- municative health literacy are presented in a hierarchi- cal structure | Learners' reports suggest that skills within each level progressively allowed for greater autonomy and control in health decision-making. Although functional health literacy skills for the verbal exchange helped partici- pants to clarify the information offered and enact the recommendations of health care providers, communica- tive skills supported people to obtain new information about options to treat symptoms, including treatment benefits and harms | It may be necessary to develop functional listening and speaking skills as a foundation to further skill development |
| 4 | Positions health decision behaviors as external to health literacy | Positions health decision behaviors as a constituent domain of health literacy | Participants in this study developed skills that allowed them to become more actively involved in their care and shared decisions with health professionals. As such, the model reflects health literacy developing along a trajectory toward greater participation in (shared) decision-making. This is in line with definitions of health literacy that encompass decision-making (see, for exam- ple Office of Disease Prevention and Health Promotion [2010], as well as the Health Literacy Pathway Model [Edwards, Woods, Davies, Edwards, 2012]). In this way, our revised model recognizes health literacy and shared decision-making as overlapping constructs | Efforts to improve functional, communicative, and critical health literacy and shared decision-making can be integrated to support involvement in health care |

those from non–English-speaking backgrounds reported that language was an ongoing barrier to meaningful engagement in English-language consultations.

Emerging insights from this qualitative study have led to a refined understanding of verbal health literacy skills and competencies, and the relationship between health literacy and shared decision-making. A proposed model synthesizing findings from this study with previous work in health literacy is presented in **Figure 2**. The adapted model builds on the Verbal Exchange Health Literacy model (Harrington & Valerio, 2014), integrating five key modifications based on our findings (**Table 3.**).

In addition to skill development, our findings reinforce the importance of "role expectations" (see Relationships Characteristics box in Figure 2) as a component of the Verbal Exchange Health Literacy model, albeit positioning it as a malleable variable that can be influenced by training. A person's confidence to engage in decisions may be unrelated to their cognitive skills if they are unaware of their right to participate or if they perceive asking questions to be unacceptable (Joseph-Williams, Elwyn, & Edwards, 2014). This is consistent with a range of social-cognitive theories that posit behavior (e.g., asking questions or participating in consultations) is not only influenced by a person's skills and selfefficacy, but also by attitudes toward the behavior and social influences (De Vries, Dijkstra, & Kuhlman, 1988). Our program influenced participants' attitudes toward questionasking by positioning it as a consumer right and presenting decision-making as a joint venture between patients and providers. It also included activities in which participants reflected on and discussed the potential contributions of both patients and providers in the verbal exchange. Specific cognitive skills were then taught to enable participation. Our findings suggest that it is important to embed skill development within a larger program emphasizing patients' right to participate and addressing role expectations and attitudes toward the behavior to facilitate empowerment.

There are strengths and limitations of this study. The exploratory nature of this qualitative study enabled us to explore the development of health literacy skills for the verbal exchange, which cannot be captured by quantitative assessments. Although we did not include participants from all adult education sites involved in the randomized trial, purposive sampling enabled us to capture the experiences of participants from both English-speaking and non–English-speaking backgrounds, as well as those from metropolitan and regional areas. Similarly, although a mixed methods data-collection strategy (including face-to-face and phone interviews) extended access to participants from varied geo-

graphical locations (Opdenakker, 2006), inherent biases associated with phone interviews (e.g., absence of information about facial and body expression, challenges establishing rapport) may have biased the results (Roberts, 2007). Overall, findings were consistent with those from interviews with adult educators that were conducted across a larger number of sites (Muscat et al., 2017).

The shared decision-making component of the program was embedded within a larger health literacy course. In our analyses of interviews, we looked for any content relating to the verbal exchange that may have been taught within the shared decision-making unit or in the wider program. It would be interesting to evaluate the impact of shared decision-making training that is not delivered as part of a larger program. Finally, although participants reported increased skills for extracting information (and many provided examples of having done so), consultation recordings would have helped to quantify any improvement in the amount and content of information patients obtained during consultations after training (Kinnersley et al., 2008) and could also provide useful insights into the application of these skills in exchanges in which patients perceive a power differential.

CONCLUSION

Lower health literacy has often been viewed as an individual risk factor associated with lower preferences for, and participation in, shared decision-making. However, rather than focusing on absolute differences in literacy as an individual attribute that can be identified as present or absent, we looked at how health literacy skills can be developed for the verbal exchange, which is an integral feature of the health care experience. Our qualitative study has suggested that tailored training in health literacy skills can progressively develop skills to communicate, extract information, and integrate new knowledge with personal preferences. These insights have refined the Verbal Exchange Health Literacy model to better reflect the overlapping constructs of health literacy and shared decision-making for greater alignment between the two research fields.

REFERENCES

- Alsomali, H. J., Vines, D. L., Stein, B. D., & Becker, E. A. (2017). Evaluating the effectiveness of written dry powder inhaler instructions and health literacy in subjects diagnosed with COPD. *Respiratory Care*, 62(2), 172-178. doi:10.4187/respcare.04686
- Australian Curriculum, Assessment and Reporting Authority. (2010). The Australian curriculum: Literacy. Retrieved from https://www. australiancurriculum.edu.au/f-10-curriculum/general-capabilities/literacy
- Australian Commission on Safety and Quality in Healthcare. (2014). National statement on health literacy. Retrieved from https://www. safetyandquality.gov.au/wp-content/uploads/2014/08/Health-

Literacy-National-Statement.pdf

- Black, S., Balatti, J., & Falk, I. (2013). Health literacy and social capital: What role for adult literacy partnerships and pedagogy? *Studies in Continuing Education*, 35(2), 146-164. doi:10.1080/ 0158037X.2012.712038
- Charles, C., Gafni, A., & Whelan, T. (1997). Shared decision-making in the medical encounter: What does it mean? (or it takes at least two to tango). *Social Science & Medicine*, 44(5), 681-692.
- Chen, X., Goodson, P., & Acosta, S. (2015). Blending health literacy with English as a second language curriculum: A systematic review of the literature. *Journal of Health Communication*, 20(2), 101-111. doi:10.1080/10810730.2015.1066467
- Chervin, C., Clift, J., Woods, L., Krause, E., & Lee, K. (2012). Health literacy in adult education: A natural partnership for health equity. *Health Promotion Practice*, 13(6), 738-746. doi:10.1177/1524839912437367
- Chinn, D. (2011). Critical health literacy: A review and critical analysis. Social Science & Medicine, 73(1), 60-67. doi:10.1016/j. socscimed.2011.04.004
- Dawkins-Moultin, L., McDonald, A., & McKyer, L. (2016). Integrating the principles of socioecology and critical pedagogy for health promotion health literacy interventions. *Journal of Health Communication*, 21(2), 30-35. doi:10.1080/10810730.2016.1196273
- De Vries, H., Dijkstra, M., & Kuhlman, P. (1988). Self-efficacy: The third factor besides attitude and subjective norm as a predictor of behavioural intentions. *Health Education Research*, 3(3), 273-282.
- Edwards, M., Wood, F., Davies, M., & Edwards, A. (2012). The development of health literacy in patients with a long-term health condition: The health literacy pathway model. *BMC Public Health*, *12*, 130. doi:10.1186/1471-2458-12-130
- Foster, J., Idossa, L., Mau, L. W., & Murphy, E. (2016). Applying health literacy principles: Strategies and tools to develop easy-to-read patient education resources. *Clinical Journal of Oncology Nursing*, 20(4), 433-436. doi:10.1188/16.CJON.433-436
- Freire, P. (1974). Education for critical consciousness. London, UK: Sheed and Ward.
- Harrington, K. F., & Valerio, M.A. (2014). A conceptual model of verbal exchange health literacy. *Patient Education and Counseling*, 94(3), 403-410. doi:10.1016/j.pec.2013.10.024
- Hoffmann, T. C., Legare, F., Simmons, M. B., McNamara, K., McCaffery, K., Trevena, L. J., . . . Del Mar, C. B. (2014). Shared decision making: What do clinicians need to know and why should they bother? *Medical Journal of Australia*, 201(1), 35-39.
- Jordan, J. E., Buchbinder, R., & Osborne, R. H. (2010). Conceptualising health literacy from the patient perspective. *Patient Education* and Counseling, 79(1), 36-42. doi:10.1016/j.pec.2009.10.001
- Joseph-Williams, N., Elwyn, G., & Edwards, A. (2014). Knowledge is not power for patients: A systematic review and thematic synthesis of patient-reported barriers and facilitators to shared decision making. *Patient Education and Counseling*, 94(3), 291-309. doi:10.1016/j.pec.2013.10.031
- Kinnersley, P., Edwards, A., Hood, K., Ryan, R., Prout, H., Cadbury, N., . . . Butler, C. (2008). Interventions before consultations to help patients address their information needs by encouraging question asking: systematic review. *British Medical Journal*, 337, a485. doi:10.1136/bmj.a485
- Kon, A. A., Davidson, J. E., Morrison, W., Danis, M., White, D. B. (2016). Shared decision making in ICUs: An American College of Critical Care Medicine and American Thoracic Society policy statement. *Critical Care Medicine*, 44(1), 188-201. doi:10.1097/CCM.00000000001396

- Lloyd, F. J., & Reyna, V. F. (2009). Clinical gist and medical education: Connecting the dots. *Journal of the American Medical Association*, 302(12), 1332-1333. doi:10.1001/jama.2009.1383
- Martinez de Morentin de Goni, J. I. (2006). What is adult education? UNESCO answers. Retrieved from San Sebastian UNESCO website: http://unesdoc.unesco.org/images/0014/001494/149411e.pdf
- McAllister, M. (2016). Shared decision making, health literacy and patient empowerment. In G. Elwyn, A. Edwards, & R. Thomson (Eds.), Shared decision making in healthcare: Achieving evidencebased patient choice (pp. 234-238). New York, NY: Oxford University Press.
- McCaffery, K., Morony, S., Muscat, D. M., Smith, S. K., Shepherd, H. L., Dhillon, H., . . . Nutbeam, D. (2016). Evaluation of an Australian health literacy training program for socially disadvantaged adults attending basic education classes: Study protocol for a cluster randomised controlled trial. *BMC Public Health*, 16, 454. doi:10.1186/s12889-016-3034-9
- Moumjid, N., Gafni, A., Bremond, A., & Carrere, M. O. (2007). Shared decision making in the medical encounter: Are we all talking about the same thing? *Medical Decision Making*, 27(5), 539-546. doi:10.1177/0272989X07306779
- Muir-Cochrane, E. C., & Fereday, J. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80-92.
- Muscat, D. M., Morony, S., Shepherd, H. L., Smith, S. K., Dhillon, H. M., Trevena, L., . . McCaffery K. (2015). Development and field testing of a consumer shared decision-making training program for adults with low literacy. *Patient Education and Counseling*, 98(10), 1180-1188. doi:10.1016/j.pec.2015.07.023
- Muscat, D. M., Morony, S., Smith, S. K., Shepherd, H. L., Dhillon, H. M., Hayen, A., . . . McCaffery K., J. (2017). Qualitative insights into the experience of teaching shared decision-making within adult education health literacy programs for lower-literacy learners. *Health Expectations*, 20(6), 1393-1400. doi:10.1111/hex.12580
- Muscat, D. M., Shepherd, H. L., Morony, S., Smith, S. K., Dhillon, H. M., Trevena, L.,. . McCaffery K. (2016). Can adults with low literacy understand shared decision making questions? A qualitative investigation. *Patient Education and Counseling*, 99(11), 1796-1802. doi:10.1016/j.pec.2016.05.008
- Nielsen-Bohlman, L., Panzer, A. M., & Kindig, D. A. (Eds.), (2004). *Health literacy: A prescription to end confusion*. Retrieved from National Academies Press website: https://www.nap.edu/ catalog/10883/health-literacy-a-prescription-to-end-confusion
- Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15(3), 259-267. doi:10.1093/heapro/15.3.259
- Office of Disease Prevention and Health Promotion. (2010). *National action plan to improve health literacy*. Retrieved from https://health.gov/communication/initiatives/health-literacy-action-plan.asp
- Opdenakker, R. (2006). Advantages and disadvantages of four interview techniques in qualitative research. Retrieved from Qualitative Social Research website: http://www.qualitative-research.net/index.php/ fqs/article/viewArticle/175/391&sa=U&ei=FdsJTdDCGYOnrAer0 YjVDg&ved=0CP4BEBYwXg&usg=AFQjCNEsC2J0wILvNuH7LE hQaA2znBkKvw
- Pleasant, A., & Kuruvilla, S. (2008). A tale of two health literacies: Public health and clinical approaches to health literacy. *Health Promotion International*, 23(2), 152-159. doi:10.1093/heapro/dan001
- Rice, P., & Ezzy, D. (1999). *Qualitative methods: A health focus.* Melbourne, Australia: Oxford University Press.

- Ritchie, J., Spencer, L., & O'Connor, W. (2003). Carrying out qualitative analysis. In J. Ritchie, & L. Spencer (Eds.), Qualitative research practice: A guide for social science students and researchers. London, England: Sage.
- Roberts, C. (2007). Mixing modes of data collection in surveys: A methodological review. Retrieved from National Centre for Research Methods website: http://eprints.ncrm.ac.uk/418/1/ MethodsReviewPaperNCRM-008.pdf
- Rowlands, G., & Nutbeam, D. (2013). Health literacy and the 'inverse information law.' British Journal of General Practice, 63(608), 120-121. doi:10.3399/bjgp13X664081
- Rubinelli, S., Schulz, P. J., & Nakamoto, K. (2009). Health literacy beyond knowledge and behaviour: Letting the patient be a patient. *International Journal of Public Health*, 54(5), 307-311. doi:10.1007/ s00038-009-0052-8
- Santos, M. G., Handley, M. A., Omark, K., & Schillinger, D. (2014). ESL participation as a mechanism for advancing health literacy in immigrant communities. *Journal of Health Communication*, 19(Suppl. 2), 89-105. doi:10.1080/10810730.2014.934935
- Shepherd, H. L., Barratt, A., Jones, A., Bateson, D., Carey, K., Trevena, L. J., . . . Weisberg, E. (2015). Can consumers learn to ask three questions to improve shared decision making? A feasibility study of the ASK (AskShareKnow) Patient-Clinician Communication Model intervention in a primary health-care setting. *Health Expectations*, 19(5), 1160-1168. doi:10.1111/hex.12409
- Shepherd, H. L., Barratt, A., Trevena, L. J., McGeechan, K., Carey, K., Epstein, R.M., . . . Tattersall, M. H. (2011). Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial.

Patient Education and Counseling, 84(3), 379-385. doi:10.1016/j. pec.2011.07.022

- Smith, S. K., Nutbeam, D., & McCaffery, K. J. (2013). Insights into the concept and measurement of health literacy from a study of shared decision-making in a low literacy population. *Journal of Health Psychology*, 18(8), 1011-1022. doi:10.1177/1359105312468192
- Sørensen, K., Van Den Broucke, S., Fullam, J., Doyle, G., Pelikan, J., Slonska, Z., Brand, H. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health*, 12(80). doi:10.1186/1471-2458-12-80
- Soto Mas, F., Ji, M., Fuentes, B. O., & Tinajero, J. (2015). The Health Literacy and ESL study: A community-based intervention for Spanish-speaking adults. *Journal of Health Communication*, 20(4), 369-376. doi:10.1080/10810730.2014.965368
- Tavistock Institute and Shared Intelligence. (2009). Evaluation of the second phase of the Skilled for Health programme. Retrieved from http://www.tavinstitute.org/wp-content/uploads/2013/01/ Tavistock_Report_Evaluation_of_the_Second_Phase_of_the_ the_Skilled_for_Health_Programme_2008.pdf
- Wallerstein, N., & Bernstein, E. (1988). Empowerment education: Freire's ideas adapted to health education. *Health Education Quarterly*, 15(4), 379-394.
- Whiting, L., Kendall, S., & Wills, W. (2012). An asset-based approach: An alternative health promotion strategy? *Community Practitioner*, 85(1), 25-28.
- Williams, A. M., Muir, K. W., & Rosdahl, J. A. (2016). Readability of patient education materials in ophthalmology: A singleinstitution study and systematic review. BMC Ophthalmology, 16, 133. doi:10.1186/s12886-016-0315-0