EMPIRICAL/THEORETICAL STUDY

Medication use in the context of everyday living as understood by seniors

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Abstract

Recognizing that older adults are among the biggest consumers of medication, and the demographic group most likely to suffer an adverse drug reaction (ADR), this paper details the findings from a recent study on how older adults come to understand medication and its related use. Using a qualitative content analysis method, semi-structured interviews were conducted with 21 individuals from British Columbia, Canada. Study participants ranged in age from 65 to 89 years (male = 9, female = 11). Using NVIVO® 7 software, data were subjected to comparative thematic content analysis in an effort to capture the role of medication use in the context of everyday living as understood by older adults. While there was variability in how older adults come to understand their medication use, an overarching theme was revealed whereby most participants identified their prescription medications as being life-sustaining and prolonging. Deeper thematic content analysis of participant narratives drew attention to three key areas: (A) medications are viewed as a necessary, often unquestioned, aspect of day-to-day life (B) a relationship is perceived to exist between the amount of medications taken and ones current state of health (C) the overall medication experience is positively or negatively influenced by the doctor patient relationship and the assumption that it is the physicians role to communicate medication information that will support everyday living. The article concludes that medical authority and the complexities surrounding medication use need to undergo significant revision if community dwelling older adults are to experience greater success in safely managing their health and medication-related needs.

Key words: *Medications, older adults, community dwelling, chronic illness*

(Accepted: 17 April 2012; Published: 11 May 2012)

Over the past two decades, a growing body of research has added to our understanding of older adults and their use of both prescription and non-prescription medications; the latter can be either conventional over-the-counter (OTC) or alternative medications. By alternative medications we mean those purchased from health food stores, self-made medications concocted from local gardens, and those available as "ethnic" medications, which are often obtained from herbalists and associated with one of the major non-allopathic medical traditions (e.g., Traditional Chinese medicine and Ayurvedic medicine). What is apparent from this growing body of research is that all of these types of medications are widely used by older adults throughout the developed world (Budnitz, Shehab, Kegler, & Richards, 2007; Courtman & Stallings, 1995; Hippisley-Cox, Pringle, & Ryan, 2008; Patel, 2003; Ramage-Morin, 2009; Wooten & Galavis, 2005). Recognizing that older adults are among the biggest consumers of medication, and hence most likely to suffer from an adverse drug reaction (ADR), this study was intent on gathering knowledge about how community dwelling older adults with one or more chronic illnesses come to understand medication and its related use (Stephenson, 2009). The multitude of ways in which older adults understand medication; how they come to accept it as part of normal experience; and what they want, expect, or hope medication to do for them in their everyday lives will be explored in this paper.

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Citation: Int J Qualitative Stud Health Well-being 2012, 7: 10451 - http://dx.doi.org/10.3402/qhw.v7i0.10451

Background

Medication use by older adults is undoubtedly a growing concern. By understanding the experiences of older adults prescription and non-prescription medication use health professionals, most notably physicians and nurses, are provided with an opportunity to create appropriate strategies that will safely support older adults to maintain the best quality of life possible while residing in the community. A recent Canadian study found that 76% of older adults living in the community were current medication users and, among this same group, women were more likely than men to take medications (Ramage-Morin, 2009). According to Ramage-Morin (2009), of the older adults living in the community (not institutionalized), 17% were identified as multiple medication users—taking on average more than five prescription medications. Community-dwelling older adults in the 75 to 84-year age group were more likely to be multiple prescription medication users than were younger seniors in the 65 to 74-year age group (16% compared with 11%). Most studies of older adults' use of medication and their relative adherence to prescription drug regimes are taken from the perspective of the health professional under what could be framed as the "compliance rubric" (Belcher, Fried, Agostini, & Tinetti, 2006; Hughes, 2004; Lorenc & Branthwaite, 1993; Mirza, 2006). A small body of work examines seniors' use of medication from a social and cultural perspective associated with their roles as consumers in a commoditized and heavily advertised milieu (Cruikshank, 2003; McKim & Mishara, 1987).

Prescribing the appropriate medications to older adults who are experiencing transitions in their health is a daunting, if not risky, task for physicians. The older person commonly presents to a doctor's office with one or more chronic health conditions (multiple co-morbidities) so that age-related pharmacokinetics and pharmacodynamics need careful consideration when choosing from the many pharmacological agents available (Hanlon, Schmader, & Gray, 2000; Patel, 2003; Wooten & Galavis, 2005). When age-related factors are combined, considerable stress is placed on the quality of care issues that older adults and their healthcare providers face on a daily basis, particularly in relation to drug administration and use. The belief that medications are a dangerous, yet necessary, element in the overall care and management of the top six prevalent and persistent illnesses in the older adult population is well supported in the literature (Ramage-Morin, 2009).

Belcher et al. (2006) explain that multiple conditions increase the likelihood of experiencing harmful drug effects and the benefits of many medications, even those that presume unquestionable benefit, are uncertain in older adults with multiple chronic conditions (p. 298). In the United States, it is estimated that deficits in pharmacological care can result in serious harm and sometimes death (Budnitz et al., 2006; Classen, Pestotnik, Evans, Lloyd, & Burke, 1997; Gandhi et al., 2003; Institute of Medicine, 2000; Shrank et al., 2006; White, Arakelian, & Rho, 1999). A similar trend is evident in a number of different countries throughout the world. In Canada there is a clear connection between the serious harm associated with medication use and older adults (Sikdar et al., 2010). Comprehensive studies in Norway identified that more than one out of six deaths in the elderly were judged to be caused by the drug treatment rather than the underlying illness (Ebbesen et al., 2001; Straand et al., 2006). In 2002, a Canadian-based literature review that focused on polypharmacy and the elderly noted that 28% of all emergency room visits were drug-related and 24% resulted in hospital admission (Patel & Zed, 2002). Studies in Australian (Chan, Nicklason, & Vial, 2001) and United Kingdom (Creswell, Fernando, McKinstry, & Sheikh, 2007) revealed a similar trend where at least 30% of hospital admissions for older adults were potentially related to ADRs. In the UK it is estimated that there are around 850,000 adverse drug events in the hospital setting each year costing the National Health Services $100 million in increased hospital stays (Creswell et al., 2007). US-based studies indicate that the overall cost of drug-related morbidity and mortality is estimated to be a staggering $177 billion annually (Ernst & Grizzle, 2001).

The Institute of Medicine (IOM) in the United States is an independent nonprofit organization that works outside of government to provide unbiased and authoritative advice to decision-makers and the public to improve health and quality of care. The IOM defines quality of care as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (Roth, Weinberger, & Campbell, 2009, p. 1096). Suboptimal prescribing of drugs is targeted as one of the most pressing quality of care issues in the older adult population. Suboptimal prescribing practices by physicians involve the overuse of drugs or polypharmacy and/or inappropriate use or underuse of specific drugs (Gurwitz, 1994; Hanlon, Schmader, Ruby, & Weinberger, 2001; Monane, Monane, & Semla, 1997). The complexity of the older adult's drug regime requires ongoing, comprehensive evaluations and consistent monitoring;

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in other words, such complexity necessitates that physicians engage in a type of practice that is becoming increasingly difficult as the patients they see become older and present with a growing list of co-morbidities that require timely, comprehensive evaluations, as well as consistent, ongoing or even increased monitoring.

Method

Methodology

Individuals from a local Health Authority and a seniors group approached the Centre on Aging at the University of Victoria, BC, Canada, about medication use in the older adult population and the value of conducting a study to learn about medication use in the community dwelling older adult population. Vancouver Island has a high percentage of older adults with chronic health conditions and there are many unnecessary hospital admissions each year that have been directly linked to adverse drug reactions. British Columbia Foundation for Aging Research and the Vancouver Island Health Authority provided a seed grant to conduct the study.

The goal within this study—to understand older adults experiences with medication uses in a natural setting—directed researchers to select qualitative content analysis as their research method Qualitative content analysis is defined as "a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005, p. 1278). Content analysis is also regarded as a flexible method for the analysis of textual data (Cavanagh, 1997) and is used in studies, such as this one, where a paucity of theory or research literature exists (Kondracki & Wellman, 2002). As the chosen research method, content analysis avoids the creation of preconceived categories and instead, allow categories and category names to flow from the data (Hsieh & Shannon, 2005).

Recruitment and sample

Researchers used a combination of purposive and snowball sampling to recruit older adults with multiple chronic conditions who were consuming one or more prescription medications. Our sample was purposive because we were drawing on an older adult population from two publicly funded community seniors' centers and a local community seniors group living in a community on Vancouver Island with the oldest age profile in Canada. After receiving ethics approval from the University of Victoria, Vancouver Island University, and the Vancouver Island Health Authority, leaders at the seniors' centers and seniors group were provided with details of the study. With the assistance of the seniors' centers leaders and community group leaders, posters were placed in visible, publicly accessible locations in the local community civic center, and emails were sent to members of a community seniors' group. Finally, researchers also used snowball sampling as earlier study participants identified other older adults who may be interested in the research and who fit the inclusion criteria: aged 65 years or older who were consuming one or more prescription medications and were able to participate in an English-language interview.

A total of 21 participants were involved in the study: nine participants were male and 12 participants were female. Fifteen were recruited from seniors' centers, three from Internet bulletins, and three from a seniors' group. Participants took a mean of five prescription medications regularly and a mean of seven OTC and herbal medications intermittently. Participants had the choice of where they would prefer to be interviewed. Ten participants were interviewed in their homes; the remaining eleven participants were interviewed at one of the two seniors' centers. Participants reflected a mix of educational levels that ranged from high school graduates to university educated—up to the completion of a doctorate. Other participant characteristics are displayed in Table I.

Ethical considerations

The study was designed to achieve an in-depth understanding of older adults' experiences with medications. Researchers followed the standard ethical guidelines including informed consent, both verbal and written, with full disclosure of the research purpose and scope, type of questions and what the results of the research may be used for. Participants received written information on the study at least 7 days before the research interview. To minimize the risk of exploitation or coercion, the professional background of each researcher was made clear to the participants, including the fact that one of the researchers was a health professional. Participants were informed that the researchers had no intention of being therapeutic or being an adjunct to their medical care. Also, participants were informed that refusal to participate or the need to withdraw at any time during the study would in no way influence their current health care. The research questions utilized in the study were of a probing nature and could potentially provoke anxiety and distress in the participants, especially when discussing their chronic

Table I. Demographic profile of research participants.

Characteristics of participants ($n = 21$)	
Age	(Mean)
Female gender	73
Male gender	75
Marital status	(Number)
Married	14
Single or divorced	2
Widowed	5
Education	
High school	11
Some college	3
University degree	7
Location of recruitment	
Seniors' center	15
Email posters	3
Seniors' group	3
Self-reported chronic conditions	
Hypertension	9
Cardiovascular disease	11
Arthritis	7
Cancer	3
Diabetes mellitus	5
Pain	6
Number of prescription medications (mean)	5
65–74 (<6 prescribed medications)	5
65–74 (6 or >prescribed medications)	4
75–84 (<6 prescribed medications)	4
75–84 (6 or >prescribed medications)	8
Number of OTC and herbal medications	Mean = 7
Number of self reported adverse drug reactions	9

health challenges. Additionally, when participants recognized that the interviewer was a health professional it could raise expectations that help is forthcoming or may bring about a dialogue recognizing that participants are in need of health care. Although this did not occur in this study, role boundaries were carefully articulated and researchers prepared a list of resources that could be used by older adults to gain appropriate information and support should the need have arisen.

Data collection and analysis

Data collection and concurrent analysis occurred over a 14-month period.

The original questions used in the interviews were co-developed by the research team and then refined by PI and three volunteer seniors affiliated with the Centre on Aging at the University of Victoria. There were 21 subsequent one-on-one interviews that took an average of 90 min each to complete and were conducted by two co-investigators (AMH and BV). Participants were asked for demographic and health data that included age, gender, education, employment status, and a list of any medications they were currently taking. Participants were instructed to include any OTC medications and alternative medications. In addition, participants were asked to provide information on any diagnosed medical conditions.

The interview guide was designed in such a way that participants were given considerable opportunity to elaborate on their lived experiences related to their medication and its related uses. As is common in qualitative research, the interview guide was iterative and although all participants were asked similar questions, interpretation of the question being offered and the degree of attention it was given very much depended on the individual participant and their unique experiences with medication. The interview questions and probes can be found in Appendix A. Handwritten notes were taken after each interview by both of the interviewers. The interview tapes were transcribed verbatim by the Co-Investigators during which time each participant was given a pseudonym that was used throughout the study. The transcripts, including handwritten notes, were then analyzed with multiple close readings by two of the researchers (AMH and BV).

Qualitative content analysis was utilized as the analytic tool because of its ability to go beyond extracting objective content to examining meanings, themes and patterns that emerge from the text (Zhang & Wildemuth, 2009). Content analysis is commonly used with a study whose intent is to describe a phenomenon (Hsieh & Shannon, 2005), and in this case, community dwelling older adults experience with medication use.

Utilizing NVIVO 7 for the content analysis, the researchers shifted back and forth between the statements made by the research participants and the interpretations that were coming forth from the narrative material. This initial simple coding approach was followed with an advanced coding approach that included the use of tree nodes (child and parent) as a way of moving from specific to general categories. Through continuous and repetitive immersion in the narrative material, several categories initially emerged. The categories were then considered for their possible meanings and how this fit with early developing themes. Eventually, within this iterative coding method the main themes became known. All authors then reviewed the interpretations that were presented within the coding to reach a consensus of themes.

Findings

While there was variability in how older adults come to understand their medication use, an overarching theme was revealed whereby most participants identified their prescription medications as being life-sustaining and prolonging. Deeper thematic content

Citation: Int J Qualitative Stud Health Well-being 2012; 7: 10451 - http://dx.doi.org/10.3402/qhw.v7i0.10451

analysis of participant narratives drew attention to three primary theme areas: (A) medications are viewed as a necessary aspect of day-to-day life (B) a perceived relationship exists between number of medications and a person's health status (C) the belief that the doctor patient relationship influences the medication experience. Within each of the three primary themes, several subthemes were identified and these are elaborated below.

Theme A: Medications are necessary

For participants, the actual ingestion of medications was something they identified as keeping them alive and helping maintain a certain state of health. What follows from this overarching theme is the fact that the other themes and subthemes only can exist if an older adult actually decides to take their medications—and that is not necessarily a given. Older adults in this study framed the taking of their prescription medications as a necessary evil. The subthemes emerging within the first primary theme include the following:

Medication knowledge. Participants revealed that they did not know how medication works in the body, other than its basic influence on certain body organs. Knowledge that was limited to the basic influence of medication on one's body motivated participants to continue taking their prescribed medications, even when they created negative physical symptoms. Such embodied experiences were either dismissed as "side effects" or served as actual proof that the medication were working. Participants felt confident that they knew enough about their medications but, when prompted by the interviewer to offer some details on their medications, few could offer substantive information beyond the medication's basic actions on certain body processes. One of the participants, when asked about how she gains information on her medication, stated "I can't see wanting to know that. I am not a scientist [. . .] I just have to trust. Am I going to be any better off knowing how it works? NO!" This notion of trusting that you are receiving the right medication for the right problem was commonly expressed by participants.

Medications and self-adjusting. Although participants strongly stated that ingesting less medication is better for their overall health, they also expressed confidence in occasionally self-adjusting their drug dose upward, but rarely downward. This confidence in going up in their drug dose was related to the notion that medications are helpful to their health conditions, and—in some rare instances—more is actually better. One participant described adjusting her anti-seizure medication, based on a body sensation: "Sometimes at lunch, I almost felt like I hadn't taken my medication . . . and once in a while, not very often, I would have another half of a tablet." Other participants expressed a certain degree of fear associated with adjusting their own medications. One participant stated, "I would be fearful that I wouldn't be getting enough." Another participant stated that "some of these drugs have been pretty dangerous and we don't mess with danger."

Medications perform a critical task. There were expressions of curiosity about what would happen if and when one stopped taking medications, but this was balanced against the teetering presumption that pills may be performing a critical task—as one participant stated—"keeping me alive." One participant recalls the onset of a heart condition and his need to start taking medications. He was grateful toward his medication and what they offered to his quality of life, stating, "They offer a sense of security [. . .] they also make life worth living again." Participants expressed a sense of relief when given medications that are specifically targeted at their chronic health conditions. "I am concerned about my heart condition but I don't have to worry about it on a day-to-day basis. As long as I take my medications, I can live longer." Although participants felt curious about what would happen if they stopped taking their pills, in actuality no participants reported stopping medications. Nine of the participants spoke about their own experiences with adverse drug reactions that resulted in hospitalizations.

Medications change you. Participants acknowledged that medication-induced changes were sometimes good while at other times were deleterious. Participants' awareness of medications making you feel good or bad was predominantly linked to the total numbers of different medications they were required to take each day. Participants believed that a decrease in medication was equated with an improvement in their overall health status and for that reason any reduction in medications by the physician was positively received. Participants were quick to offer experiences of medication-induced changes that were of a negative nature; often, this was related to a growing medication list. Unfortunately, participants also offered stories of medication experiences that demonstrate the insidious nature of medicine-induced changes. Family and friends were identified as the primary individuals who helped older adults

manage medication changes that adversely influenced their health.

Theme B: Perceived relationship between number of medications and health status

The general message from participants was that the more medications a person takes, the less healthy they perceive themselves to be. Embedded in this message is that when a person takes six or more prescription medications, it is difficult to think of oneself as healthy. The subthemes that emerged include the following:

Quality of life and prescription medications. Participants identified a turning point whereby the growing list of medications is seen as contributing to a diminished quality life. One participant spoke about his elderly friend's decision to come off of all his medications as a way of improving his quality of life, even if it drastically reduce the time that he had left to live. Participants were striving to maintain a balance within their medication regime; there were repeated expressions of apprehension at having to take more than six prescription medications. Participants demonstrated careful, ongoing considerations of their own medication experiences compared with their friends' and families' experiences and had a vision as to what it would mean when their medication regime moves them from a good quality of life to a poor quality of life. Unfortunately, they did not discuss their quality of life reflections as it relates to medication consumption with their physicians.

Communicating medication needs to the doctor. Participants expressed their discomfort in raising questions about prescription medications with their doctor. One participant explained that she knows a lot of older people have reactions to their prescription medications or simply feel worse, but "They do not want to report it, they don't want to, as I call it, *make waves*." Participants found it difficult to express their medication related needs to their physician, as reflected in the following statement: "They don't want to listen, they don't want to hear you, they are the boss and they tell you what you need." Others expressed a sense of reluctance in communicating their medication-related needs to their doctors but found that they would eventually push themselves to discuss some of their needs with the doctor. In other instances, there were examples of a family member or friend taking control and speaking with the older adult's physician about their medication related needs. Some participants verbalized that as the number of medications ingested increases there is a greater reliance on and abdication of medication responsibility to physicians. Participants who were experiencing an increase in their medication consumption also reported a decline in their conversations with their doctors.

Doctors hesitant to stop medications. Participants overwhelmingly felt that their doctors have little difficulty adding medications but are hesitant to stop previously prescribed medications. One woman who had been on antidepressant medication for several years asked her doctor to take her off of it. Her doctor stated that the fall season is not a good time to take a person off antidepressants. In the spring season, she made the same request, this time her doctor said, you are doing so well, let's just stay the course and keep with the medication. Other participants reported similar experiences with their physicians when attempting to have medications stopped or changed. Unfortunately, it was adverse drug reaction that some participants identified as precipitating a thorough medical evaluation and a revamping of his or her medication regime.

Detrimental health care approaches influence health status. Participants recognized that their doctors are extremely busy and often time-poor. Health care approaches that limit a doctor visit to one health problem are frustratingly inadequate for persons who are living with chronic health challenges and consuming multiple medications. Within this study, it was spouses or close friends who were identified as recognizing the detrimental effects of trying to isolate one health problem within the doctor visit. Participants acknowledged that this health care approach did not offer the doctor enough information and insight into the context of what was happening in their lives.

Theme C: The doctor-patient relationship influences the medication experience

Overall, the experience with prescription medications is mediated by the kind of relationship one has with a prescribing physician. As noted above, doctors are perceived as being keen to prescribe medication, but resistant to reducing or eliminating medications. Older adults sense this reluctance and attribute it to "not listening" or "not having time." Ultimately, this can undermine the confidence that older adults have in their physicians.

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Doctor is a trusted authority. Participants respect the knowledge that their physicians possess. For that reason, participants—at least initially—felt confident and comfortable trusting that their doctor was choosing medications best suited to their health condition. Underlying a participant's confidence in their doctor was the thought that doctors spend years learning about health and illness. For that reason, authority and trust in one's doctor is easily earned. Participants felt that their doctors had provided very limited information on why they were receiving certain medications—again, this lack of communication was typically not an issue because of the participant's underlying sense of trust and delegation of medication-related authority to the doctor.

Participants had an insufficient understanding of how different prescription drugs interact. One participant qualified why this is so when he stated "Doctors just do not have the time to spend talking to you about the details of your medication." If medication-related drug interactions and side effects did surface, they expected their doctor to take charge and improve the situation. Participants did not talk about their own responsibility in trying to seek out information that could increase their understanding of medication interaction.

Doctors and their listening skills. Participants related many stories about physicians who positively influenced their health because of their excellent listening skills. Equally true, but to a lesser degree, participants equated a doctor whom they felt possessed poor listening skills as negatively influencing their overall health. Participants who were consuming multiple medications commonly expressed dissatisfaction with their physicians and an abdication of responsibility to the doctors to take charge of their plan of care. Participants were unable to identify when their family doctor engaged in a review of their drug list and did not seem overly concerned or able to recognize why this was important.

"Overly" busy doctors and negative health. Participants felt they have, at different points in time, suffered poor health as a direct result of their doctor being too busy to avert a small problem before it became serious and required the assistance of a healthcare team. Participants recognized that a doctor who is more generous with their time seems to possess a greater overall understanding of a person's health history and their related plan of care.

What is apparent within this subtheme is the lack of attention by both the participants and doctors regarding the use of prescription medication in combination with other, OTC medication(s). Unless solicited by the interviewer, participants did not take into consideration their nonprescription, OTC medications in conjunction with their prescription medications. This disconnection between OTC medications and prescription medication could be one of the reasons why participants appear to underreport OTC medication use to the family physician. Further to this, the insightful knowledge that participants demonstrated toward their OTC medications was very different from their knowledge of prescription medication.

Finding themes and sub-themes are displayed in Table II.

Discussion

Findings from this research draw attention to community dwelling older adults as heavy consumers of prescription and OTC medications. Dominant research approaches are often concerned with older adults medication use from a health professional's perspective of adherence and "compliance" (Belcher et al., 2006; Hughes, 2004; Lorenc & Branthwaite, 1993; Mirza, 2006); in contrast, this research captured the complexities of medication use in community dwelling older adults from their unique, experiential perspective. Surprising insights emerged about the many age related factors influencing community-dwelling older adults' experiences with medication, including invaluable information about quality of care issues. As revealed in this study and echoed in the literature, medication use in older adults can result in serious harm and sometimes death (Budnitz et al., 2006; Classen et al., 1997; Gandhi et al., 2003; Institute of Medicine, 2000; Shrank et al., 2006; White et al, 1999); understandings derived from an older adults own distinctive experiences are needed to improve current levels of professional knowledge and its influence on older adult health outcomes.

As demonstrated in this study, chronic illnesses are prevalent in the older adult population and necessitate timely, consistent, ongoing evaluation by health professionals to offset risks, particularly as it relates to the use of prescription medications. Participants are aware of medication risks but willfully accept them as part of their normal experiences based on the underlying expectation that medications will aid their chronic conditions and effectively keeping them alive. This overarching belief in medications as life preserving was often called upon by participants to substantiate their level of commitment to take prescribed medications according to explicit physician directions, even when it made them feel less than ideal. Tensions

Table II. Findings from content analysis.

Overarching theme		
Prescription medications are considered to be life-sustaining and life-prolonging. For participants, the actual ingestion of medications was something they identified as keeping them alive and helping maintain a certain state of health.		
Theme A *Medications are necessary.* Assumption that medications are an unquestioned aspect of day-to-day life, a necessary "evil". They are viewed as a substance that helps an older adult with chronic illnesses to sustain life.	*Theme B* *Perceived relationship between number of medications and health status.* The more medications a person takes, the less healthy they perceive themselves to be. Embedded in this theme is the belief that when you take six or more prescription medications, it is difficult to think of oneself as healthy.	*Theme C* *The doctor patient relationship influences the medication experience.* An older adult's experience with prescription medications is mediated by the kind of relationship one has with a prescribing physician. Doctors are perceived as keen to prescribe medication, but resistant to reducing or eliminating medications. Older adults appear to sense this reluctance and attribute it to doctors "not listening" or "not having time."
Subthemes *Medication knowledge*. Limited depth of understanding of how medications work. Acceptance that you must trust that you are receiving the right medications for the right problem. Prescription medications hold an accepted, mysterious quality.	*Subthemes* *Quality of life and prescription medications*. Participants with multiple chronic illnesses identified a turning point whereby the growing list of medications is no longer seen as contributing to an improved quality of life. A focus on quality of life compared with quantity of life was frequently mentioned.	*Subthemes* *Doctor is a trusted authority.* Participants demonstrated great respect for the knowledge that their physician possesses. For that reason, participants—at least initially—felt confident and comfortable easily trusting that their doctor was choosing medications best suited to their health condition.
Medication and self-adjusting. Identified medications as helpful to health condition(s) and in some instances 'more' is better. Rarely self-adjust prescribed medication dose because of the belief they can be dangerous. When they do adjust medications, it is more likely to involve an upward dose adjustment.	*Communicating medication needs to the doctor.* Participant expressed their discomfort raising questions about medications with their doctor. There was difficulty communicating medication needs to their doctor.	*Doctors and their listening skills.* Participants related many stories about physicians who positively influenced their health because of their excellent listening skills. Equally true, but to a lesser degree, participants equated a doctor whom they felt possessed poor listening skills as negatively influencing their overall health.
Medications perform a critical task. Medications associated with "keeping you alive." Although generally dislike taking medications its balanced against the thought medications target certain health conditions. Even when medications create negative body symptoms older adults continue to take them because they offer security. *Medications change you.* Awareness that medications making you feel good and/or bad. The identification of body symptoms was predominantly linked to the number of medications that need to be taken.	*Doctors hesitant to stop medications.* Participants overwhelmingly felt that their doctors have little difficulty adding medications but are hesitant to stop previously prescribed medications. *Detrimental health care approaches influence health status.* Participants recognized that their doctors are extremely busy and often time-poor. Health care approaches that limits one health problem to one doctor visit were identified as frustratingly inadequate for older adults who are living with more than one chronic health challenge and receiving multiple medications.	*Overly busy doctors and negative health.* Participants believed they have suffered poor health (at times) as a direct result of their doctor being too busy to avert a small problem before it became serious and required the assistance of a healthcare team. Participants identified their doctor (and not themselves) as being the ultimate authority in prescription medication use. When the doctor is perceived to be engaging in hasty medication-related decisions, it is viewed as negatively impacting a person's health.

Citation: Int J Qualitative Stud Health Well-being 2012; **7**: 10451 - http://dx.doi.org/10.3402/qhw.v7i0.10451

were exposed between the life preserving qualities of medication and the way it can positively or negatively influence an older adults perceived state of health. The less prescription medications an older adult is consuming, the healthier they believe themselves to be. Conversely, the more prescription medications an older adult is taking the more likely they are to identify themselves as not being healthy. An intense awareness existed amongst participants that as their medications increased in number, they were more likely to suffer harmful drug effects. Surprisingly, even when participants were acutely aware of the dangers of medication, they exhibited limited motivation to learn anything more than basic information about their prescription medications. The ambiguity older adults are willing to accept about their prescription medications has a connection to the trust they place in the authority of health professionals, most notably doctors to safely care for their health conditions.

An unanticipated finding in this study was the way that older adult's knowledge of non-prescription medications compared to prescription medications was far more complex and advanced in all participants. Several of the participants elaborated on this difference between their prescription and non-prescription medication knowledge by explaining that with the non-prescription medications you have far more control in deciding what you think is right for your health and for that reason you are pressed to learn more. Prescription and non-prescription medications are viewed in a mutually exclusive fashion; this was most apparent in the way participants identified underreporting their non-prescription medication uses to their physicians.

Although the doctor patient relationship was cited in this study as a major influence on the medication experience, participants expressed how difficult it was to discuss their medication and quality of health related needs with their physician. Unfortunately, participants who were experiencing an increase in their medication use spoke about a corresponding perception of a dwindling dialogue with physicians about their health needs. What was unclear was why these participants experienced less of an open dialogue with their physicians; and, more importantly it was difficult to determine what factors contributed to these participants feeling less healthy and more reliant on their physician's authority to make decisions about their health. Further research is needed to determine why older adults do not, as this study indicates, readily foresee themselves as sharing responsibility with their physicians in both seeking and gathering medication information that will inform their overall quality of health and medication experiences. It was beyond the scope of this study to determine if the increasing complexity of an older adult's chronic conditions and medication regime caused them to abdicate their responsibility to their physician; or, if physicians knowingly or unknowingly encouraged older adults to trust and depend on their medication related authority as the complexity of an older adults care increased.

Medical authority and the complexities surrounding medication use need to undergo significant revision if community dwelling older adults are to experience greater success in safely managing their health and medication-related needs. The importance of embracing a model of health care that will support an older adult in sharing responsibility of medication knowledge and health related needs with a health professional cannot be underestimated. It is important to recognize that community dwelling older adults, do require greater support than currently available in successfully managing their complex health needs. Support for these older adults could be in the form of health care advocates who regularly attend doctor visits; or, creating a model of care focused on chronic health whereby the necessary time is set aside to offer ongoing, comprehensive and consistent evaluation of an older adults current drug regime and evolving health needs. Regardless of how this model of care unfolds, what is important is to place greater emphasis on shared authority between older adults and their physicians. Any efforts that seek to minimize the risks associated with medication use and improve the desired health outcomes of community dwelling older adults must involve a model of care that provides the necessary support for both the older adult and the physician that are integral to their ongoing care.

Limitations

Limitations were evident within this study. The sample size ($n = 21$) resulted in a generous amount of qualitative research data. When working with a large amount of data, the success of content analysis depends on the coding process utilized. The large quantity of data in this study was organized into smaller content categories all in an effort to improve the trustworthiness and validity of the findings. In this study, researchers spent considerable time identifying a clear coding scheme and although researchers were careful to engage in a triangulation process the risk of overlooking and negating potential key categories existed.

The sampling strategy in this qualitative study was intentionally purposive and therefore cannot be considered truly representative of the larger population. In keeping with a qualitative research tradition, this study does not purport to offer findings that

are objective, representative or generalizable based on a traditional view of the word (Janesick, 1998). What the study does offer is specific to the qualitative research goal: achievement of an in-depth, rich description of the phenomena of concern. Qualitative research offers a return to a discourse based on the personal (Janesick). Through this passion for communicating with people, invaluable information is obtained that may not have previously been considered or know. The study findings will be of interest to future researchers concerned with exploring this topic and to health practitioners seeking to understand the experiences of older adults medication use in an unsupervised community setting as a away of shaping future public health campaigns aimed at reducing adverse drug events or other related medication issues.

There was no attempt to prioritize the participants' responses in this qualitative study, and for that reason we cannot comment on the relative importance of the themes to the participants, though we can comment on their relative importance in preventing possible adverse drug reactions through patient education and advocacy. All who participated in the study were English-speaking and were able bodied enough to go to their local seniors' centers or attend doctors' appointments. There were no minority participants within the study—this is partly due to the rather homogenous character of both the region and the demographic group involved in the study. Further research is needed to quantify the perceptions expressed by the participants in the study.

Conclusion

The study reveals that communication between participants and their physicians is a vital aspect of medication use in the context of everyday living. The views held about medical authority and the complexities surrounding medication use need to undergo significant revision if we want people to experience greater success in safely managing their health and medication-related needs. Currently, the majority of participants in this study appeared to have a lack of insight regarding the complexities of the medications they are taking and their medications connection to their chronic health challenges. The number of participants who were able to offer their own experiences with adverse drug reactions requiring the assistance of health professionals was very significant. Often it was only through the advocacy and assistance of a family member or close friend that adverse drug reactions were brought to the attention of participants' physicians.

The study findings accentuate that a person's medication and health related needs are drastically influenced by four key factors: age, the number of chronic health challenges, the amount of medications being prescribed and physician management, especially during transitional periods in their health status. Participants in the older age group and/or those with multiple chronic illnesses have health needs that are undeniably complex. Unfortunately this study captures how difficult it is for participants and their physicians to safely manage chronic health challenges and medication related needs within the structure of our current health system.

A massive demographic transformation is underway in Canada and throughout the developed world that will place additional pressure on an already compromised healthcare system. This study offers timely information and an understanding about how older adults' medication use is strongly influenced, if not disadvantaged, by the way our healthcare services are currently resourced, organized, and delivered. Older adults with chronic health conditions are vulnerable to the loss of agency in their lives. The value of implementing innovative, proactive, evidenced-based models of older adult care that are premised on strategies that promote person-centered, inter-professional, interdisciplinary collaboration and shared decision making will greatly assist older adults and their physicians in safely managing daily medication uses.

Conflict of interest and funding

We received funding from British Columbia Foundation for Aging Research and the Vancouver Island Health Authority.

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Citation: Int J Qualitative Stud Health Well-being 2012; 7: 10451 - http://dx.doi.org/10.3402/qhw.v7i0.10451

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Appendix A

- Tell me a little about yourself (age, educational and occupational background, where you currently reside);
- What medications do you take? (*participants were asked to bring a list of their current medications to the interview*);
- As you look at the sheet in front of you (medication list), can you tell me about any other medications that you are taking but that are not on the list?
- When you speak about your medications, please include such things as herbal teas, over-the-counter medications, or other alternative medications.
- Can you elaborate on your overall experience with medication use?
- You have just told us about your experience with medication use; can you now elaborate on how you believe your medication(s) work to address your health issue(s)?
- Was there ever a time when you found it necessary to self-adjust the dose or the frequency of your prescribed medication(s)? Was there ever a time when you decided not to fill your medication prescription?

- If you did not fill a prescription can you tell me more about what assisted you in making this decision?
- How confident are you in expressing your health-related needs to the physician? Other than your physician, what are some of the other ways you gain information about your prescription medication(s)?
- What are your thoughts on medications and its connection to your health? For example, some individuals may believe that more medications is better for their health.
- Is there anything else that you would like to say about your experiences with prescription medication that we have not discussed during this interview?

Citation: Int J Qualitative Stud Health Well-being 2012; **7:** 10451 - http://dx.doi.org/10.3402/qhw.v7i0.10451