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I am submitting herewith a thesis written by Sheri L. Edwards entitled “Health Information Need and Seeking of Older Adults Residing in an Independent-Living Retirement Community: A Qualitative Study.” I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Information Sciences.

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Health Information Need and Seeking of Older Adults Residing in an Independent-Living Retirement Community: A Qualitative Study

A Thesis Presented for the Master of Science Degree
The University Of Tennessee, Knoxville

Sheri L. Edwards August 2006
DEDICATION

To the participants with immeasurable gratitude this thesis is dedicated.
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ABSTRACT

Among the information needs experienced by older adults, health information needs consistently achieve a high ranking. The purpose of this study was to examine the health information needs of older adults residing in an independent-living retirement community, as well as the information channels they use for information. Additionally, this study explored whether information channels satisfied older adults’ health information needs. Face-to-face in-depth interviews revealed that older adults experience a variety of health information needs; the emergence of those needs is attributed to varying circumstances. While the older adults in this study often use one or more information channels to satisfy their health information needs, face-to-face contact overwhelmingly is their preferred method of obtaining health information.

The circumstances under which older adults’ health information needs arise are significant to the outcome of need satisfaction. These circumstances reveal the relationship between a health information need and the information channel used to satisfy it, as well as the degree of reliability of an information channel. Satisfactory outcomes of the use of information channels were perceived by these older adults to be a direct result of successful channel interaction, although more research is needed to determine if these findings are typical.
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CHAPTER 1

INTRODUCTION AND STATEMENT OF THE PROBLEM

Elfreda Chatman’s extensive research of traditionally less-studied populations (e.g., retired women, janitors, and prisoners) has contributed widely to our understanding of the everyday information challenges that confront ordinary people. Her careful scrutiny of tightly-knit social hierarchies and the information barriers therein reminds us that the voices of all members of society must be heard if we are to achieve a resonant understanding of people’s information needs and information-seeking behavior. Thus, it is Chatman’s fearless unmasking of the life-worlds of those who often linger on the periphery of the larger society that inspires this study.

Numerous studies have assessed the information needs of older adults. Topics ranging from health care to transportation to housing consistently rank high among participants in those studies. While such research has revealed useful and important insight into older adults’ information needs, the methods employed tend to focus on the prioritization of needs rather than on the circumstances or situations that motivate older adults to seek information about their health needs. Consequently, a literature review has found that while health information is pegged by many researchers as the primary information need of older adults, little has been done to examine specific situations under which those needs arise. Therefore, more research is needed to determine particular circumstances and instances that underlie older adults’ health information-seeking behavior.

The purpose of this study was to examine the health information needs of older adults and the information channels that older adults use to satisfy those needs. The research
took place within a federally-funded, independent-living retirement community in a mid-sized city in the Southeast. The retirement community is located in a well-populated suburb approximately five miles north of the city, and is situated on the perimeter of a bustling shopping mall. While the retirement community does not employ a medical staff, a full-time manager and a full-time social services coordinator are on hand to oversee daily operations.

The retirement community was chosen as the site at which to conduct the study primarily because of its accessibility both in terms of participant recruitment and location. The researcher is acquainted with one of the residents and has visited her on numerous occasions. As a result, other residents are familiar with the researcher’s presence; this was an extremely important “qualification” for access to the residents, given older adults’ tendency to be skeptical of those with whom they are entirely unfamiliar. Additionally, the researcher’s acquaintance with a resident permitted access to greater numbers of participants via a “snowball” technique, for which the social services coordinator gave permission (Evans, 2005a). Finally, the retirement community is located relatively close to the city in which the researcher resides, which allowed for more instances of data collection than might have a single visit to a distantly-located retirement community.

According to the social services coordinator (Evans, 2005b), fifty-five percent of the residents are fully physically mobile and are able to manage daily tasks (e.g., cooking, bathing, and driving) independently. However, other residents are in need of assistance in physically managing such tasks. Accordingly, an Activities of Daily Living (ADL) scale is used to determine and measure residents’ level of need for assistance with daily
tasks. Thirty-nine percent of residents are considered “frail” and have a maximum of two ADLs, while six percent of residents are considered frail and have three or more ADLs. Additionally, the educational level of current residents is high school or less, with rare exception. Finally, some residents are married couples, while others are single, divorced, or widowed.

The researcher’s selection of this population as the basis for the research at hand stems from a fervent interest in the entire domain of life experience and its capacity to serve as a rich and invaluable source of information. The knowledge and wisdom accumulated over a lifetime can provide meaningful insight into what the future might hold. Therefore, an increased emphasis on research of older adults’ life experiences and the ways in which their information needs and uses shape those experiences could serve as a useful guide for the planning and assessment of programs and services that everyone may need someday.

Given that adults age sixty and older are this nation’s fastest-growing population segment (US Department of Commerce, 2004), an examination of older adults’ health information needs is particularly timely. The unprecedented healthcare financing dilemma that we now face clearly indicates that products and services must be designed effectively and efficiently to meet the needs of an aging society. Accordingly, older adults must be provided a context in which they can speak candidly and openly about their health information needs and the information channels they use to satisfy those needs.
Research Questions

This study examines the health information needs of older adults residing in an independent-living retirement community and the information channels those adults use to satisfy their health information needs, as well as the outcomes, or success indicators, of information channels. In addition, this study sought to identify the circumstances under which health information needs arise.

1. What are the health information needs of older adults residing in an independent-living retirement community, and under what circumstances do those needs arise?

2. Which information channels do these older adults use to satisfy their health information needs?

3. Do the information channels used by older adults satisfy their health information needs?

4. How are the health information needs of older adults satisfied or unsatisfied by these information channels?

Definitions

The following terms and concepts are defined according to the context of this study:

*older adult:* any person who meets the residency criterion (i.e., aged sixty-two or older) of the retirement community in which the research took place

*health information need:* a health-related situation in which public-oriented health information is needed to satisfy an information gap originating from the situation

*information channel:* a communication route through which public-oriented health information is sought in an effort to satisfy a health information need

*source:* an entity bearing information (e.g., book) found within a particular channel of
information

outcome: whether an information channel satisfied a health information need
CHAPTER 2

LITERATURE REVIEW

Information Needs and Older Adults

An increasing body of literature, on both national and global levels, has focused on the information needs of older adults. Research involving assessment of those needs generally reveals five broad categories: health, finance (including income and employment), physical maintenance, housing, and transportation (Barrett, 2005; Chatman, 1992; Davis-McFarland et al., 1998; Jones et al., 1992; Su and Conaway, 1995; Tinker et al., 1994; Todd, 1984; van der Rijt, 1996). While these studies have generated a plethora of important and useful information about the general information needs of older adults, they underscore the difficulties that can arise when studying the information needs of particular populations of older adults or when employing certain methods with which to conduct research on those populations. Despite these complexities, the findings of the studies peg health information as a primary information need of older adults. Therefore, the research at hand will build on those findings by exploring not only older adults’ particular health information needs and the information channels they use to satisfy those needs, but also the specific circumstances in which those needs are revealed.

Su and Conaway (1995) completed an exhaustive study of the information needs of 180 Chinese immigrants aged sixty and older living in the United States. The purpose of the study was to improve resources and services for that population group. Although the research provides a comprehensive delineation of those needs, older Chinese people tend to grapple not only with problems typically faced by older adults (e.g., declining health),
but also with cultural barriers (e.g., language) that create new or unusual needs that are irrelevant to some other groups of elders.

Another study funded by the Allied Health Project sought to determine health education needs of older adults in order to integrate teaching, research, and service in geriatrics (Davis-McFarland et al., 1998). While the results of the study generated a comprehensive health education needs assessment well-suited for the purpose of the research, the findings were derived solely from a list of needs generated by the participants (Davis-McFarland et al., 1998). Particular circumstances or situations that motivated those needs were not explored. Alternatively, Gollop (1997) examined the factors (e.g., self-perceived literacy) that influenced the health information-seeking behavior of older African-American adults. The aim of the study was to encourage public libraries to conduct vigorous marketing campaigns to prevent certain populations of older adults (e.g., African-American women) from being underserved. Interestingly, health information needs were not considered in the design of the research questions; such information seemingly could provide a useful foundation for the formulation of public libraries’ marketing strategies.

Finally, Williamson (1996) examined the information needs of 202 older Australian adults aged sixty and older. The research is exhaustive; the instruments used for data collection included individual diaries and three focus groups (Williamson, 1996). The longest of the interviews explored the participant’s information needs over a five-year period. However, some participants are described as “very old” and “frail.” The ages that match these descriptions are not mentioned, although the terms “very old” and “frail” seem to suggest an age well beyond sixty-two. Presumably, very old and frail people
would have trouble remembering a five-year period of information need, given the
decline in memory that can occur with the aging process. Regardless, the author does not
discuss whether that was the case.

Undoubtedly, the results of previous research have provided valuable insight into
older adults’ general information needs, and particularly health-related needs.
Nevertheless, the populations of older adults studied and the research methods employed
indicate that the health information needs of older adults and the specific circumstances
under which those needs arise require further exploration.

This study was conducted in an independent-living retirement community of older
adults who are at least age sixty-two. While prior research (Chatman, 1992) has explored
the information needs of older adults who live in retirement communities, the participants
in this study were segmented as a choate group against the overall older adult population
to allow for a clarified assessment of their health information needs.

Several factors account for this partitioning. According to the social services director,
residents must be aged sixty-two or older in order to live in the retirement community
(Evans, 2005a). Additionally, residents’ consumer habits reflect the diminished income
levels associated with post-retirement lifestyles. For example, rent fees are calculated by
the federal government according to a “sliding scale,” rather than as a flat fee (Evans,
2005a), an indication that the residents do not command high incomes. Moreover, by
virtue of residency in the retirement community, the residents have access to the same
services and activities, including housecleaning, shopping, and in-house social
gatherings. Finally, the retirement community is adjacent to a hospital in which the
residents are able to receive necessary medical care, a circumstance which allows
residents to interact with the same community of medical professionals and healthcare organizations.

**Information Channels and Older Adults**

Information channels typically are comprised of interpersonal networks, and include friends and relatives; organizations; and professionals (e.g., physicians) whose function is to interact with older adults on an ongoing basis (Goodman, 1992; Silverstein, 1984). Chatman (1992) found that older adult women engage in much conversation about health with other people of the same generation, particularly spouses and neighbors. Similarly, Davis-McFarland et al. (1998) observed that many older adults receive most of their health information from physicians, the health department, and from health fairs held at senior centers (Davis-McFarland et al., 1998). Not surprisingly, then, personal contact is crucial for older adults, as they prefer to obtain information through face-to-face contact with others (Barrett, 2005; Tinker et al., 1994; Todd, 1984).

Interestingly, some researchers have discovered that interpersonal networks can be problematic as a source of information for older adults. For example, Chatman (1992) notes that while older adult women typically are members of social networks, these networks are not sources of critical information. While the greatest asset of social networks is the provision of emotional support, over-dependence is viewed negatively; such behavior can result in expulsion from the network (Chatman, 1992).

Concurrently, information channels can include those intended for popular consumption (e.g., media). Media information channels include sources such as television, radio, books, newspapers, magazines, pamphlets, and the Internet. Use of these types of sources of information among older adults is dependent on a variety of
factors, including educational and income levels, age, and living arrangements. For some media, including books and magazines, a decline in usage was found with advancing age; those 80 years and older tend to have lower income levels and therefore are less likely to purchase printed materials (Goodman, 1992).

Accordingly, Hilt and Lipschultz (2004) found that older adults spend more time watching television than they do reading newspapers, and they watch more television than any other age group. Other research suggests that television and newspapers function as substitutes for dwindling interpersonal contacts. Older people who no longer visit friends or attend church spend more time with the mass media (e.g., television); those who live alone are more likely to use television for companionship (Hwang, 1977; Su and Conaway, 1995).

The Internet is used by many older adults for seeking information (e.g., news) and for virtual interpersonal communication (e.g., via electronic mail, or e-mail). Like other age groups, older adults vary in their use of the Internet (Hilt and Lipschultz, 2004). However, current knowledge about older Internet users seems to be limited mainly to the number and demographic profile of people acquainted with the medium; very little is known about the characteristics, values, attitudes, and behavior of older adult computer users (Vuori, 2005; Meischke et al., 2005). What is known is that older, nonwhite, less well-educated, and less well-off older adults are less likely to have access to the Internet than their peers who do not share those characteristics (Meischke et al., 2005).

While research indicates that increasing numbers of older adults are turning to the Internet for information, some studies have found that these people continue to encounter both physical and cognitive barriers when using the technology. For example, many
older adults report that computers are complex and that the skills required for using them is a “hassle not worth the effort” (Vastag, 2001). Additionally, some older adults view the Internet as jargonistic, while others maintain that eye-hand coordination problems make computer mice difficult to use (Voelker, 2005). Accordingly, a growing body of research suggests that the Internet is the least-preferred information source among older adults (Hilt et al., 2004; Vastag, 2001; Voelker, 2005; Williamson, 1996).
CHAPTER 3

METHODOLOGY

Some studies that examine the information needs of older adults employ methods such as using surveys or questionnaires as data collection instruments. Such empirical methods reflect the quantitative nature of methodological approaches traditionally associated with academic research. However, because this study sought to explore the underlying circumstances that motivate older adults to seek health information, its methodology reflects a more naturalistic and person-centered approach.

The Participants

This study used a face-to-face, semi-structured in-depth interview method to examine the health information needs of older adults and the information channels they use to satisfy those needs. The interview method allows for in-depth discussions with participants and provides rich and informative data that often reveal the thoughts and reasons underlying information-seeking behavior (Wang, 1999).

Of the twenty residents targeted for participation, eighteen residents were approached and agreed to be interviewed for this study. This number was justifiable according to time constraints of the data collection process and the qualitative nature of the research. The participants are sixty-two years or older and reside independently within a federally-funded retirement community located in the Southeast. Approximately ninety-four residents reside in the retirement community; all live on a “fixed” income.

Seventeen participants were female, and one participant was male. Gender was not a factor in the collection or analysis of the data; thus, the data collected from the interview
with the male participant was included because the health information need that emerged from the recalled incident was not gender-specific. Additionally, the male participant represents one-third of the males residing in the retirement community (n=3) during the time data was collected.

Although data was not collected on participants' demographic information, fourteen of the eighteen participants revealed their ages in the interviews; the average age of those participants was eighty-three at the time the interviews took place. Moreover, although most of the residents hold a high school diploma or less, participants' educational levels were not part of the data collection, nor were they revealed in the interviews. Therefore, the participant’s educational level is not mentioned in this study or included in the data analysis.

Permission was given to conduct the research at the retirement community by its social services coordinator, who is charged with overseeing questions, concerns, and everyday situations that residents might find problematic (e.g., balancing a checkbook). Additionally, the Institutional Review Board (IRB) at The University of Tennessee gave its permission for the researcher to approach and interview residents for the study. Participation was voluntary, and the participant was free to withdraw from the research process at any time.

Participants were recruited informally via a “snowball” technique (i.e., by word-of-mouth) through a resident with whom the researcher is acquainted. The recruiter initially approached her own circle of friends either by telephoning or visiting them to explain the purpose of the research and to set up tentative days on which they thought they might be available to be interviewed. This pool of participants eventually included those who the
recruiter thought of as acquaintances, i.e. people she would see while walking her dog or picking up her mail.

**Ethical Concerns**

The researcher ensured the participant’s optimum comfort by making sure that none of the questions on the interview protocol was of a sensitive nature. Thus, no risks were foreseen, and the participant was free to withdraw from the research process at any time. If the participant decided to cease participation in the research at any time during the interview, the interview immediately was terminated. While none of the participants formally withdrew from an interview, two participants asked during their interviews that the recorder be turned off because they did not feel comfortable revealing a particular detail on audiotape. The researcher complied, and none of those details were recorded or are mentioned in this study.

**Data Collection Instrument**

The instrument for data collection adapted the critical incident technique (CIT). The technique provides a set of procedures for collecting instances of memorable experiences. Accordingly, the participant was asked to describe a memorable episode in which he or she recognized a need for health information. Additionally, the participant was asked to characterize the information channel(s) he or she used to satisfy a health information need. Each interview was conducted according to the interview protocol (Appendix A). The questions in the interview protocol were written to accommodate the educational level of the participant. On average, interviews lasted forty-five minutes, and were audio-recorded upon permission from the participant.

Traditionally, the CIT is defined as a set of procedures for collecting direct
observations of human behavior to facilitate their potential usefulness in solving practical problems (Flanagan, 1954). The CIT seemingly has received little attention in the field of Library and Information Science (LIS), although it has been used in some studies involving Library and Information Management (LIM) (Fisher and Oulton, 2003). Therefore, application of the CIT in this study is based loosely on the time-line approach used in Dervin’s sense-making research, in which participants recall the details of an incident in a step-by-step process (Dervin, 1983). In this study, an “incident” is defined as any memorable event that caused the participant to look for health information. Concurrently, to be considered “critical,” the incident must be memorable enough to be recalled in as much detail as possible.

The CIT was a suitable technique for this study for three reasons. As a qualitative method, it provided a flexible context in which the participant was able to speak freely and candidly about his or her health information need(s). Additionally, the CIT provided an underlying structure in which to understand the criticality of circumstances and situations that motivated the participant to seek health information. This is in direct contrast to studies that examine health information needs but do not provide a context in which they arise, or that consult panels of experts who may have different perceptions of older adults’ health information needs. Finally, the CIT emphasized an incident rather than an opinion by asking participants to identify a specific incident they experienced (Tenopir et al., 2005). In short, the CIT gave the participant ample opportunity to speak openly and candidly about his or her need for health information.
Instrument Testing

The feasibility of the CIT as an appropriate method for the research at hand was piloted. The participant who served as a model for the pilot study resides in the retirement community and is acquainted with the researcher. The researcher was invited by the participant to conduct the interview in the participant’s apartment. An interview protocol was used to guide the interview. However, in light of the results of the pilot test, the data collection instrument was modified. For example, the term “channel” was replaced with “source” in asking the participant about the information channels he or she uses to satisfy health information needs. This change was made solely to accommodate the pilot study participant’s thinking that “channel” referred to a specific television channel. Additionally, questions relating to new technology (i.e., the Internet) were added to the interview protocol and asked during the interviews to accommodate participants who use it as a source of health information.

Limitations

The time allotted to complete the data collection process, as well as the qualitative nature of the research, limited the study to a targeted number of participants (i.e., twenty). Moreover, because participants were recruited informally using a snowball technique, the scope of the study was limited to those who were members of the recruiter’s social network. Thus, seventeen of the eighteen participants (94%) were female, which negated the possibility of comparing and contrasting gender differences that might have emerged from the data had the three males who reside in the retirement community been included in the study. A third limitation was the overall inexperience of the researcher, which resulted in errors made during the data collection process (e.g., asking additional probing
The interviews for this study were conducted during a five-week period between December 9, 2005 and January 17, 2006. All interviews were conducted by the researcher in person according to a semi-structured interview protocol (Appendix A). Each interview was given in the living room of the participant's apartment, and on average lasted for forty-five minutes. None of the participants explicitly suggested that the interviews should take place other than in their apartments, nor were there any implicit indications given by the participants or by the social services coordinator that the interviews be given elsewhere.

On average, four participants were interviewed each week during the five-week period. Typically, the researcher would arrive at the recruiter’s apartment and keep the recruiter company for about half an hour before preparing for the interviews (e.g., making a final check that the audio-recorder worked properly). Prior to each interview, either the recruiter or the researcher would first telephone the participant to confirm that he or she was interested in being interviewed for the study; a time convenient to the participant was also established in these conversations.

Upon arriving at a participant’s apartment, the researcher was graciously welcomed. The apartments are small, which leaves little room for the furnishings the participant had brought from a previous residence. Every apartment had many displays of family photographs, and many of the participants were delighted to share the “who's who” of each photograph prior to the interviews. This interaction between the participant and the researcher set a comfortable, relaxed atmosphere. Therefore, with the exception of a few
participants who did not engage in such conversation, the researcher did not immediately begin discussing the nature of the research until a stopping point in the casual conversation was reached.

Many of the participants were eager to share information about themselves beyond the focus of the research (e.g., their health information needs). For example, some participants discussed their pre-retirement occupations, while others spoke about their children and grandchildren, and the ages and occupations of each. Given that older adults often are not fond of revealing information about themselves to someone who is unfamiliar to them, the researcher was particularly grateful to be privy to such conversations.

That is not to say that all participants automatically warmed to the idea of being interviewed for the study, or that they fully understood the purpose of the research. Two participants, after agreeing to be interviewed, initially had second thoughts about participating in the study. These doubts were expressed to the recruiter, who was told “Well, I said I would do it, so I’ll do it.” Another participant initially asked if the researcher was “selling something.” Two other participants wanted to know if the researcher was the “lady from Medicare, because [we] have a lot of questions.” Other participants who at first agreed to be interviewed later declined, citing doctor's appointments as the reason they could not participate. The researcher did not pursue interviewing those residents who canceled, since doing so would risk violating the conditions of IRB approval. Moreover, such persistence could have seemed “pushy,” a perception which might have circulated throughout the retirement community, thereby impeding the data collection process.
During each visit made to the retirement community, a few participants who were interviewed during prior visits brought the researcher gifts of candy, while one lent a book to the researcher. These gestures conveyed that a certain level of trust had been established between the researcher and those participants. Moreover, that a bond of trust was formed might have become a “newsy” piece of information that circulated among the residents, which could explain why more than the targeted number of residents (i.e., twenty) agreed to partake in the study, even if some residents later declined.

Prior to each interview, a careful explanation was given to the participant about the purpose of the research. Moreover, the participant was informed that the social services coordinator and the appropriate authorities at The University of Tennessee had given permission for the research to be conducted at the retirement community. The participant then was shown an informed consent statement (Appendix B), the contents of which the researcher also explained, paying special attention to obtaining consent for the audio-recording. The consent form was written in large print for those who might need such an accommodation; however, most participants requested that the consent statement be read aloud to them. Afterward, the participant was asked to sign the statement. One participant, who has lost her vision, was able to sign the consent statement by having her hand guided to the appropriate signature space.

A few participants “waived” signing the statement, offering comments such as “Oh, that's alright. I don't have to give my permission.” Additionally, while a few participants seemed wary at having to sign the informed consent statement in order to be interviewed, the researcher reassured them that the form would be kept confidential under lock and key at the University. At this point prior to each interview, none of the participants
declined to be interviewed, and all agreed to be audio-recorded. Thus, the interviews were audio-recorded for later transcription and analysis.

At the beginning of each interview, the participant was asked to describe a memorable experience in which he or she needed health information. Next, the participant was asked to identify the information channels he or she used to get the information. Each participant was able to recall at least one need for health information. The participant’s ability to recall the incident in significant detail determined its inclusion in the analysis; specific criteria for recency was not established or applied by the researcher. Thus, while the researcher often did ask probing questions such as “How long ago did [incident] happen?” the time at which an incident occurred was not a criterion for its inclusion in the data analysis. Additionally, each participant recalled using at least one information channel in order to satisfy a health information need. Some participants recalled more than one incident and therefore discussed multiple information channels.

A preliminary analysis of the data revealed four interviews as unusable. One interview was excluded because a need for health information solely was based on her personal medical test results. Incidents revealed in two more interviews contained very little detail and could not be sufficiently analyzed. A fourth interview, which involved the participant who was the model for the pilot test, was excluded on the grounds that the participant’s previous exposure to the data collection instrument was evident in the transcript of the interview. Additionally, of the fourteen participants who recalled incidents in enough significant detail to be included in the analysis, five other incidents mentioned by them were excluded because the researcher was unable to analyze those incidents as a complete unit. Therefore, fourteen of the eighteen interviews were
included for analysis, from which a total of nineteen critical incidents were derived.

To show her appreciation to the participants, the researcher sometimes visited for a few minutes with a previously-interviewed participant during the remainder of the data collection process. In addition, the researcher sent Valentine's Day cards to each participant thanking him or her for being part of the study.

**Data Analysis**

After the data collection process was completed, audio-recordings of the interviews were transcribed by hand and word-processed into field notes. Transcriptions were verbatim to allow for full analysis of the data and to ensure the integrity of the analysis. The researcher then developed a data coding scheme, and coded data were placed into a spreadsheet according to each of three variables (i.e., need, channel, and outcome) so that the data could be organized for proper analysis.

Research findings are conveyed in narrative form and consist of a discussion of emergent themes and perspectives. Direct quotations of participants are used to illustrate data analysis. Three tables are included in the findings: aggregated results of health information needs; aggregated results of the frequency and percentage of channel-source use; and aggregated results of the outcomes of information channels. The findings have implications for the design of information products and services to help older adults find information. Finally, recommendations for future research are offered.

In analyzing the data, the researcher compared the participants’ responses to identify emergent categories of health information needs; these categories are discussed in the following section. This was a lengthy process in that the researcher collected a large amount of data from the eighteen participants; however, the time devoted to analyzing the
data was valuable because the researcher was able to get a “feel” for the information each participant conveyed. Data that were directly related to each of the three research questions was captured and placed into the spreadsheet. Data was coded using a bottom-up approach in order to derive particular categories of health information needs, as well as to derive particular categories of the information channels used to satisfy those needs. Additional coding was done to identify the outcomes of both the health information needs and of the information channels.

**Data Coding**

Data from each interview were coded according to three variables: health information needs; information channels and specific sources therein; and an outcome, or success indicator, of information channel(s). Although the incident from which a health information need emerged was the unit of analysis for this study, the coding scheme initially focused on all three variables at once. However, as it became increasingly difficult to manage such a large amount of data, it was decided that a coding scheme for health information needs should be developed more fully in order to establish coherency for the coding of information channels and channel outcome.

A coding scheme for health information needs was not an easy one to develop. A preliminary analysis of the data revealed that while about three-quarters of the participants mentioned more than one incident from which one or more health information need emerged, some of those incidents were recalled only in shades of detail. Meanwhile, several participants wove the details of their needs for health information amongst anecdotal recollections that sometimes strayed from the research at hand; probing questions often exacerbated this situation. Thus, a coding scheme was developed
for health information needs according to two criteria in order to parse data relevant to the research questions.

The first coding criterion for health information needs was that the need be of a general nature, i.e., “public” information. This was thought by the researcher to be necessary for capturing the full scope of the health information needs of the older adults in this study. For example, one participant discussed her need for health information in terms of medical test results that she was expecting. The incident was not coded as a need for health information because the test results applied only to that participant. (Conversely, the incident would have been coded as a health information need had the participant experienced a need for information about a particular type of medical test and its purpose).

The second criteria for coding health information needs was that the need be supported by enough detail so that the incident from which the need emerged could function as the unit of analysis. In some cases, the participant discussed a health information need but was unable to or did not feel comfortable in sharing specific details. For example, one participant who experienced a need for information about arthritis seemed self-conscious throughout the entire interview, and responded to the interview questions in three- and four-word answers. Additionally, no other health information need was mentioned by the participant, even when probing questions were asked in an effort to prompt recall of another possible incident. Therefore, the entire interview was excluded because of an overall lack of information. (It should be noted that although this participant did not ask that the interview be terminated, the researcher did not probe for more information precisely because the participant seemed timid; the interview lasted
The coding scheme involved identifying needs by using whole words or two- or three-word phrases that succinctly but sufficiently described a particular need. Each word or phrase that revealed a health information need was identified by a numerical code; thus, numerical coding facilitated the entire coding process. This coding scheme was placed into a codebook (Appendix C). Additionally, numerical coding was used to identify keywords within the transcripts that were used to create category definitions. Coded data then were placed into a spreadsheet so that the data could be organized for analysis. The following example illustrates the coding schema for the health information need “wrist surgery” and the keywords used to identify the need; an example from the participant’s own words is also provided:

health information need: wrist surgery
keywords: carpal tunnel, palm, surgery, wrist
example: “When I got this carpal tunnel [points to left wrist], I got to where it hurt--it was so painful, and I didn’t know where exactly to find a doctor that did that type [of] work.”

This second coding scheme (Appendix C) functioned as the unit by which categories of health information needs were derived. The coding scheme initially generated five categories of needs: Organ Dysfunction, Medical Procedure, Metabolic Disorder, Nutrition, and Drug Coverage. The derivation of categories consisted of examining coded portions of transcripts that revealed corresponding health information needs. The needs were then classified under a named category (e.g., “Medical Procedure”) according to keywords found in the coded portions of transcripts. However, a secondary analysis of the data revealed that the categories “Organ Dysfunction” and “Metabolic Disorder”
could be combined; this was accomplished, and the new category was labeled "Disease/Disease-Related." Additionally, "Drug Coverage" was determined to be too narrow of a category to be replicated in another study; it, too, was changed and re-named "Medical Insurance Plan." Thus, four categories emerged from this study: "Disease/Disease-Related," "Medical Insurance Plan," "Medical Procedure," and "Nutrition/Diet."

All categories of health information needs were derived from the interviews so that the full scope of needs could be identified and defined by the participants themselves. Although the derivation of categories of health information needs occurred after the data were coded, this seemed necessary considering the large amount of data that were collected from the interviews. Moreover, the derivation of categories from the coding scheme helped classify needs that were somewhat vague (e.g., "upper-body pain") but that nonetheless fit the criteria of inclusion for analysis.

While the coding scheme also was used to generate categories of information channels and the sources therein, these variables typically are not cryptic in nature (as health information needs can be) and therefore were more readily identifiable in the data. For example, information sources such as "medical book" and "health book" were coded as "book" under the channel category "Documents." (Categories of information channels are discussed in Chapter 4; see Appendix C for information channels and their definitions, keywords, and examples).

Outcomes of information channels also were coded. Initially this was a somewhat difficult process, since it required careful scrutiny of the data in order to determine the ways in which participants characterized outcomes. Moreover, channel outcomes often
emerged at places in the transcripts that were not necessarily located near an identified
information channel, thereby requiring a careful mapping of a channel to its respective
outcome. Finally, information channels that were used in the same incidents did not
necessarily have similar outcomes; this was the most difficult aspect of the entire coding
process.

Interestingly, however, outcomes became easier to identify over time, since they
tended to be described similarly among participants. For example, comments such as
“Through working with my doctor, I think I’ve got things under control” or “I watch
medical programs on TV, but they never talk about [my need],” as well as variations of
those comments, are typical descriptors of information channel outcomes that were coded
and subsequently categorized. Chapter 4 provides a full discussion of outcomes of
information channels.

Cross-coding of the data was performed in order to enhance rigor of data analysis.
The cross-coder, who did not collaborate in this study, initially was given two interviews
to code, along with the codebook. The first batch of cross-coding yielded only 58%
inter-coder reliability, which was considered unacceptable since it fell below cross-
coding standards established by the research community. Because the primary deficiency
in the first round of coding involved the coding of information channel outcomes, the
researcher and the cross-coder discussed the nature of the research in more in-depth
terms. Particular attention was paid to how “outcome” was defined by the participant and
coded by the researcher. Subsequently, a second batch of cross-coding was completed,
using two more interviews and the codebook. This second round of cross-coding yielded
a 78% percent match, and is considered by the researcher as sufficient for presenting the
data as rigorously analyzed.
CHAPTER 4
FINDINGS AND DISCUSSION

The first section of this chapter provides the results for Research Question 1 concerning the health information needs of older adults. The second section describes the results for Research Question 2 involving the information channels used by older adults to satisfy those needs. The third section presents the results for Research Question 3 involving the outcomes of the use information channels, while the fourth section describes the results for Research Question 4, which explores how older adults’ health information needs are satisfied or unsatisfied by information channels. The final section provides a general discussion of the findings of this study.

Research Question 1: Health Information Needs

Analysis of the data revealed four major categories of health information needs: Disease/Disease-Related, Medical Procedure, Medical Insurance Plan, and Nutrition/Diet. Nineteen incidents of health information needs were revealed from the fourteen interviews analyzed for this study. Of the fourteen participants who are included in the data analysis, five participants mentioned two different health information needs; the total number of needs expressed by the participants collectively was nineteen. Table 1 provides a summary of the categories of health information needs and, where applicable, the type of need that falls under each category.

Ten of the nineteen health information needs (53%) fell under the heading “Disease/Disease-Related.” This category is defined as pertaining to a health information need involving a disorder of a bodily organ or a bodily process. One of the ten needs,
Table 1
Health Information Needs and the Type and Number of Incidents of Need

<table>
<thead>
<tr>
<th>Health Information Needs</th>
<th>Number of Incidents of Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease/Disease-Related</td>
<td></td>
</tr>
<tr>
<td>diabetes</td>
<td>3</td>
</tr>
<tr>
<td>heart attack</td>
<td>1</td>
</tr>
<tr>
<td>heart condition</td>
<td>1</td>
</tr>
<tr>
<td>lung condition</td>
<td>1</td>
</tr>
<tr>
<td>macular degeneration</td>
<td>1</td>
</tr>
<tr>
<td>spinal disorder</td>
<td>1</td>
</tr>
<tr>
<td>stroke</td>
<td>1</td>
</tr>
<tr>
<td>upper-body pain</td>
<td>1</td>
</tr>
<tr>
<td>Medical Procedure</td>
<td></td>
</tr>
<tr>
<td>colonoscopy</td>
<td>1</td>
</tr>
<tr>
<td>heart bypass</td>
<td>1</td>
</tr>
<tr>
<td>wrist surgery</td>
<td>1</td>
</tr>
<tr>
<td>Medical Insurance Plan</td>
<td></td>
</tr>
<tr>
<td>prescription drug coverage</td>
<td>3</td>
</tr>
<tr>
<td>Nutrition/Diet</td>
<td>3</td>
</tr>
<tr>
<td>Column Total</td>
<td>19</td>
</tr>
</tbody>
</table>

coded as “upper-body pain,” does not involve a specific bodily organ, but was included in this category because symptoms (e.g., chest pains) experienced during the incident in which the need surfaced were similar to those associated with a heart attack or the onset of one.

The category “Medical Procedure” encompassed three (16%) health information needs: colonoscopy, heart bypass, and wrist surgery. Medical Procedure is defined in this study as a need involving the investigation of a health problem, the treatment of, or attempt to repair a health problem. This category of need seemingly had a dual function in that although the needs involved bodily organs (i.e., heart, colon, and wrist), the
The procedure itself became the focal point for which a need was recognized.

The category “Medical Insurance Plan” concerns prescription drug insurance, and emerged in three incidents (16%). This health information need is defined as having to do with a component either of a national- or state-funded medical health insurance program which provides for low-cost medication. Compliance with federal- and state-wide legislative changes to the program further defines the need. Finally, health information needs involving nutrition and diet are categorized under “Nutrition/Diet,” and emerged from the three incidents involving diabetes (16%).

**Research Question 2: Information Channels**

From the fourteen types of health information needs that emerged from this study, three categories of information channels were used: Personal Contact, Documents, and Organization; within these categories, twelve different types of sources were used. This study considers both the information channels the sources therein in order to provide ample discernment of where older adults turn to satisfy their health information needs.

The following outline summarizes the three categories of information channels and the specific sources within those categories that older adults in this study used to satisfy health information needs:

### Personal Contact (n=5)
- coordinator
- doctor
- family/friend
- family-expertise
- friend-expertise

### Documents (n=4)
- book
- magazine
In this study, the category “Personal Contact” refers to people with whom older adults interact in order to satisfy a health information need. It is important to note that when feasible, the terminology used to describe these people was taken from the participant’s own language. Thus, the colloquial “doctor” is used rather than the more formal-sounding “physician,” while “coordinator” is an abridged reference to the social services coordinator of the retirement community.

Eighteen of the nineteen incidents (95%) involved some form of the channel Personal Contact as a means of satisfying a health information need. (The exception is one of the three incidents involving prescription drug coverage, in which the channel Organization was used). This use of Personal Contact is distributed among all four categories of need. Sixteen of the nineteen incidents (84%) involved the use of a doctor, while five incidents (26%) resulted in the use of family and friends. Concurrently, the coordinator, whose office is located inside the retirement community building, was sought in two of the nineteen incidents. (10%).

Eleven incidents (58%) resulted in the use of the information channel Documents. In this study, “Documents” refers to written records that were used to satisfy a health information need. Books and magazines were used in all three incidents involving diabetes, as well as in all three incidents involving Nutrition/Diet; this also was the case in the incident involving a stroke. The use of documents to address the remaining health
information needs (lung, heart condition, colonoscopy, and stroke) revealed various sources that were used to satisfy those needs. For example, the incident involving a lung condition resulted in the use of a syndicated newspaper column as a source of information for that need. Health information needs involving a heart condition and a colonoscopy both led to the use of pamphlets as a source of information.

Five of the nineteen incidents (26%) resulted in the use of Organization as a channel of information. “Organization” refers to an organization or agency that is relevant to satisfying a health information need. Two incidents involving a need for information about prescription drug coverage involved the use of a government agency. The incident concerning a need for information about a spinal disorder resulted in the use of the library as a source of information. Finally, a medical workshop was used in two incidents involving diabetes and nutrition/diet. Table 2 provides an aggregated summary of information channels and the frequency and percentage of source use. Table 4 (Appendix D) provides a summary of channel use. Tables 5, 6, and 7 (Appendix D) each provide a breakdown of sources used within each of the three information channels.

**Research Question 3: Outcomes of Information Channels**

In this study, “outcome” denotes the resultant degree of success achieved in using a particular information channel to satisfy a health information need. Outcomes were analyzed according to the descriptors “satisfied” and “not satisfied.” It should be noted that “satisfied” and “not satisfied” outcomes from the use of information channels refers to whether information sought from a particular channel was or was not obtained, regardless of whether an incident itself was resolved.

The nineteen incidents from which health information needs emerged were the basis
Table 2
Information Channels and the Frequency and Percentage of Source Use

<table>
<thead>
<tr>
<th>Information Channels</th>
<th>Number of Participants</th>
<th>Frequency of Use</th>
<th>Percentage of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Contact (n=25)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor</td>
<td>13</td>
<td>16</td>
<td>64</td>
</tr>
<tr>
<td>Family/Friend</td>
<td>3</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Coordinator</td>
<td>2</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Family--Expertise</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Friend--Expertise</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><strong>Documents (n=11)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Book</td>
<td>3</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Magazine</td>
<td>2</td>
<td>4</td>
<td>36</td>
</tr>
<tr>
<td>Pamphlet</td>
<td>2</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Newspaper</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td><strong>Organization (n=5)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Agency</td>
<td>2</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>Medical Workshop</td>
<td>1</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>Library</td>
<td>1</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td><strong>Column Total</strong></td>
<td>--</td>
<td>41</td>
<td>--</td>
</tr>
</tbody>
</table>

Note: Numbers in parentheses following “Personal Contact,” “Documents,” and “Organization” refer to the total number of instances in which an information channel was used.

The first column indicates the information channels and the sources used within each channel. The second column indicates the number of participants that used each source within a channel. The third column provides a breakdown by channel of how often a source within a particular channel was used (e.g., the doctor was used sixteen times out of a total of twenty-five instances of Personal Contact use). The fourth column indicates by percentage the use of a source within a particular channel. The column total represents the total number of instances of source use.
of analysis of information channel outcomes, since some incidents resulted in the use of more than one information channel. The use of Personal Contact resulted in a successful outcome in sixteen of the nineteen incidents of need (84%). The channel Documents was used successfully in nine of the nineteen incidents of need (47%), while the channel Organization had a successful outcome in five of the nineteen incidents (26%). It should be noted that from the nineteen incidents of need, a total of forty-one instances of information channel use occurred. Of these, thirty-nine instances of use (95%) resulted in satisfactory outcomes, while two instances of use (5%) did not have satisfactory outcomes. Table 3 presents a summary of categories of health information needs and the outcomes of channel use within those categories.

Table 3
Categories of Health Information Needs and Outcomes of Information Channel Use by Need

<table>
<thead>
<tr>
<th>Needs</th>
<th>Channels</th>
<th>Disease/Disease-Related</th>
<th>Medical Procedure</th>
<th>Medical Insurance Plan</th>
<th>Nutrition/Diet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Contact</td>
<td>satisfied</td>
<td>14</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>not satisfied</td>
<td>--</td>
<td>1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Documents</td>
<td>satisfied</td>
<td>5</td>
<td>2</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>not satisfied</td>
<td>1</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Organization</td>
<td>satisfied</td>
<td>2</td>
<td>--</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>not satisfied</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

The first column indicates the three categories of information channels and the outcomes of each category. The second, third, fourth, and fifth columns indicate each of the four categories of health information needs. Numbers in the second, third, fourth, and fifth column indicate the instances of source use (n=41) within each information channel according to whether each instance of use either satisfied or did not satisfy a health information need.
Research Question 4: Need Satisfaction and Information Channels

All of the health information needs that emerged from this study were satisfied. With minor exception, all sources within the information channels used by older adults in this study provided information that was needed, even when a situation itself was not resolved.

Personal Contact served as the primary channel through which older adults satisfied their health information needs. The use of Personal Contact allowed for immediate, interpersonal communication between older adults and members of their family and social networks, as well as with medical professionals (e.g., doctors) and the coordinator. Additionally, interpersonal communication was established through use of the channel Organization (e.g., through attending a medical workshop or visiting the library). In sum, the channels Personal Contact and Organization satisfied older adults’ health information needs by providing useful, reliable information in a timely manner. This supports the findings of previous studies that report older adults’ preference for interpersonal communication when seeking health information.

Information channels served an additional purpose by accommodating older adults’ decisions to participate in the management their health information needs. For example, the information channel Documents was used by seven of the fourteen participants (50%) included in this study. These seven participants read a variety of printed materials (e.g., books and magazines) that pertained directly to their health information needs. Subsequently, several participants formed their own collections of information (e.g., folders containing newspaper articles and columns; diabetic cookbooks). These “ready-references” served as permanent, accessible records of information which could be
referred to at the participants’ leisure, thus allowing them to take personal ownership of satisfying a health information need.

Alternatively, there were some instances in which an information channel did not satisfy a need. For example, a need in which a nurse friend (i.e., Personal Contact) was consulted could not provide information about a particular medical procedure (i.e., wrist surgery); the friend did not have experience with the procedure. Similarly, a participant who needed information concerning a specific lung disease was unable to find information about the disease in newspaper columns (i.e., Documents) collected by her that discussed problems associated with the lungs.

**General Discussion**

Nineteen health information needs emerged from the fourteen participants included in this study. The needs fell under four major categories: Disease/Disease-Related; Medical Procedure; Medical Insurance Plan, and Nutrition/Diet. Information channels used to satisfy the needs fell under three categories: Personal Contact, Documents, and Organization.

All nineteen health information needs in this study were satisfied; in all but two instances, use of the information channels that emerged from this study resulted in a satisfactory outcome. However, a satisfactory outcome of channel use did not necessarily resolve an incident. For example, the incident involving macular degeneration resulted in an unsatisfactory outcome, but the participant had received enough information from her doctor to know that such an outcome was likely. Similarly, in the incident involving wrist surgery, the participant’s doctor expressed concern that the wrist was too damaged by arthritis to be repaired successfully through a surgical procedure. This proved to be
true once the surgery was completed. Therefore, this study focused on whether and how an information channel satisfied a health information need, regardless of whether the incident itself was resolved.

Among the three categories of information channels, Personal Contact was the most frequently used; within that channel, doctors overwhelmingly were the preferred source of health information. Participants stated that they felt comfortable in sharing their health information needs with the doctor, and placed full trust in his or her medical expertise. Ironically, however, many of these same participants acknowledged that being an older adult and communicating effectively with their doctors is problematic at times, in that the participants sometimes feel “rushed” by their doctors and therefore lack the time necessary to fully explain their health information needs. One participant summed up the situation accordingly: “Doctors don’t have time to fool with you like they used to.”

Conversely, other sources were not seen as viable in terms of need satisfaction. For example, none of the participants in this study used the Internet to satisfy their health information needs, although at the time of data collection, four of the eighteen participants (22%) owned computers. While some Internet-related activities (e.g., e-mail) were conducted by those four participants, they mostly used their computers to play games or to write letters.

While a few participants pragmatically acknowledged lack of computer ownership as their primary reason for not using the Internet for satisfying their health information needs, others expressed near-defiance at the mere thought. Comments such as “I don’t know how to use a computer, and I’m not interested” were replete throughout the interviews. Accordingly, for most of the older adults in this study, even the criticality of
satisfying a health information need is not enough of a motivator to adapt to an alternative source of health information (e.g., the Internet). This supports previous research in which older adults have indicated that they do not use the Internet in their efforts to satisfy their health information needs, and that the Internet is the least preferred channel of communication among older adults.

Along with health information needs and the information channels used to satisfy those needs, this study sought to identify and explore the circumstances under which health information needs arise. In this study, the circumstances were of four types: physical manifestation of pain; the existence of a “co-need”; compliance with federal and state legislation; and those characterized as “serendipitous.” The most conspicuous of these are circumstances involved a physical manifestation of pain. With one exception (i.e., macular degeneration), needs categorized either as Disease/Disease-Related or Medical Procedure initially involved physical pain, which was the catalyst for recognition of a need. This suggests that the older adults in this study typically (and perhaps inevitably) experience health information needs that involve natural consequences associated with the aging process, i.e. deterioration of bodily organs and bodily processes.

The existence of a co-need was another circumstance in which a health information need arose. For example, this study found that all incidents involving diabetes were augmented by Nutrition/Diet as a health information need, and that having information about nutrition and diet was inherent to the management of diabetes. Accordingly, this finding indicates a fixed triangulation between diabetes and nutrition/diet; in other words, a need for information about diabetes can be expected to generate a simultaneous need
for information about nutrition and diet.

A third circumstance under which a health information need emerged concerned needs involving prescription drug coverage and compliance with either state or federal laws that govern changes made to the coverage. Although prescription drug coverage is not typical of the health information needs that emerged from this study, i.e. those directly involving the human body, the emergence of prescription drug coverage as a need suggests that it was a “hot topic” among older adults in this study, particularly since the need for information hinged on compliance with laws that required financial adjustments necessary to secure and maintain the affordability of prescription drugs.

The final circumstance in this study under which a health information need emerged were serendipitous in nature and resulted from incidents involving diagnoses of disease (e.g., diabetes), as well as those involving prescription drug coverage. For example, diagnoses of diabetes emerged either from a routine visit to the doctor or during situations unrelated to the need itself (e.g., while in the hospital under unrelated circumstances). Concurrently, some participants who experienced a need for prescription drug coverage were contacted by vendors contracted by federal and local agencies specifically to inform those participants that they were eligible for supplemental prescription drug coverage. This suggests that older adults in this study who serendipitously encountered a health information need realized the existence of the need only upon “official” recognition of it by an outside source.

Gaining full insight into the circumstances under which health information needs arise necessitates a brief but comprehensive examination of the reasons why a particular information channel was used. For example, doctors (e.g., Personal Contact) were the
most sought-after source for information about health needs, particularly in circumstances relating to needs categorized as Disease/Disease-Related and Medical Procedure. While family members and friends with similar health information needs were viewed as viable sources of information, the use of family members and friends primarily resulted in verification of information already obtained from a doctor, rather than in the acquisition of new information.

For its part, the information channel Documents was viewed as useful in obtaining permanent, continuous sources of information. This was particularly the case in incidents in which certain sources (e.g., books and magazines) were repeatedly referred to on occasions when participants formulated questions pertaining to their health information needs. For example, one participant who experienced diabetes sometimes referred to her personal collection of diabetic cookbooks in an effort to resolve an incidental need for information about the disease, despite the fact that her diabetes was being managed successfully. Interestingly, Documents was used mostly by participants who had developed lifelong reading habits and thus inherently viewed Documents as a viable information channel useful to their efforts of satisfying a health information need.

Interestingly, use of the channel Organization primarily was derived from encounters within Personal Contact. Two incidents, in which doctors initially were sought, resulted in the use of the library and a medical workshop as a direct result of doctors’ recommendations that those sources be used; that the recommendations were followed further underscores older adults’ view of doctors as credible sources of health information. Simultaneously, government agencies were used only in incidents involving prescription drug coverage. In these incidents, the social services coordinator functioned
not only as a source of reliable information about prescription drug coverage, but also as a verifier of information already sent to the participants by a government agency.

Finally, it should be noted that while television was mentioned as a general source of health information, the data did not reveal a direct connection between a particular health information need and the use of television for satisfying the need. However, several participants mentioned that they watch medical programs. Since previous studies all indicate that older adults watch more television than any other age group, it is presumed that television is an effective channel actively used by the older adults in this study to satisfy their health information needs.
CHAPTER 5
CONCLUSIONS AND IMPLICATIONS

This study interviewed eighteen participants about their health information needs and the information channels they use to satisfy those needs; interviews from fourteen participants were included in the study. It was found that older adults experience a variety of health information needs that arise from various circumstances, and, moreover, that older adults overwhelmingly prefer face-to-face communication in their efforts to satisfy their health information needs. Additionally, older adults in this study actively sought information pertaining to their health needs.

Among the information channels used, Personal Contact was seen as the most reliable information channel and thus played a significant role in need satisfaction. Within this channel, doctors were used most often, and were seen as the most credible source of “new” health information. Alternatively, family members, friends, and the coordinator typically were viewed as incidental verifiers of health information already obtained from doctors or other sources (e.g., government agencies).

Interestingly, the information channel Organization functioned as an extension of Personal Contact, since the use of Organization initially was prompted by interpersonal communication resulting from the use of Personal Contact. This suggests that the older adults in this study accept without question the health information they obtain through Personal Contact. A further suggestion is that the participants in this study are not a population of “baby boomer,” Vietnam-era older adults who tend to question authority, but instead are of the World War II-era of older adults, who typically accept authority without reservation.
Meanwhile, use of the information channel Documents was characteristic of incidents that were managed or manageable through medical treatment. However, the ongoing development of personal collections of information garnered from Documents suggests that even after incidents have occurred and health information needs stemming from those incidents otherwise have been satisfied, older adults continued to seek information about those needs, particularly since Documents allowed them to do so at their leisure.

The research indicates that the emergence of a health information need varies according to circumstance, and that the relationship between a need and an information channel is itself circumstantial. For example, an experience with physical pain generally is seen by older adults as requiring immediate attention and therefore likely will result in the use of Personal Contact (versus Documents) as an information channel, since it is considered by older adults to be the most reliable and immediately-accessible information channel.

In order to address the health information-seeking behavior of the older adults in this study, the coordinator should develop a program in conjunction with a local library that emphasizes the library as a useful and valuable source of health information. Accordingly, local librarians should visit the retirement community on a regular basis and describe not only how the library can be used to satisfy health information needs, but also present recent or updated reading materials that are likely to satisfy those needs. On a similar note, the social services coordinator at the retirement community should create an in-house, centralized library of books, magazines, and other relevant reading material that is relevant to older adults’ health information needs.

Simultaneously, community volunteers who visit the retirement community should
take the opportunity to teach older adults how to use a computer, and show them the
ways in which the Internet can be used effectively to find health information and to
satisfy health information needs. Finally, given the extent to which the health
information needs of older adults has been researched, it is suggested that Information
Science curricula be developed to recognize older adults as viable users of information,
particularly since older adults are expected to eclipse in number all other segments of the
population within the next decade.

**Recommendations for Future Research**

This study found that it is necessary to examine the health information needs of older
adults, the ways in which information channels are used to satisfy those needs, and the
circumstances that bind a particular need with a particular channel. Because findings in
this study are not generalized, more research is needed to understand older adults’
information-seeking behavior in relation to their health information needs. Thus, the
following recommendations are suggested for future research:

1. Use focus groups to further explore health information need and seeking of older
   adults. Are there gender differences between older adults’ health information needs and
   the information channels they use to satisfy those needs?

2. Explore whether on-demand television is a future possibility in allowing older adults
to use television programs as a way to satisfy health information needs. How will recent
technological developments in television broadcasting (e.g., on-demand television)
enhance older adults’ information-seeking behavior during instances of health
   information need and seeking?

3. Identify and examine health information-seeking behaviors among World War II-era
older adults and “baby boomers.” Will baby boomers, as members of the Vietnam-era generation of older adults, respond differently to authority figures (e.g., doctors) than does the current generation of older adults? If this is the case, how will those differences be reflected in the health information-seeking behavior of the “new” generation of older adults?
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adults use the Internet for information on heart attacks? Results from a survey of seniors in King County, Washington.” *Heart & Lung* 34, no. 1 (2005): 3-12.


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APPENDICES
APPENDIX A

Interview Protocol

Part I: Critical Incidents
1. Can you tell me of a recent time when you needed health information?
2. How and when did you know you needed information?
3. What did you do first?
4. What did you do next?
5. How long did you spend looking for information?
6. Did you get what you needed when you stopped looking for information?
7. What information were you hoping to get during this experience?

Part II: Health Information Needs
1. Can you tell me about the kind of health information you need?
2. Can you tell me about the kind of health information you use the most?
3. Can you tell me about health information you need but can’t find?

Part III: Sources (of Health Information Needs)
1. Where do you find health information?
2. Which kinds of these things do you use the most?
3. Which kinds of these things do you use the least?
4. Which ones do you like the best?

Part IV: New Technology and Information Seeking
1. What kinds of new technology do you use?
2. How often have you gone to the Internet to get health information?
3. Are you happy with the health information you get from the Internet?
4. If you don’t use the Internet to get health information, what are your reasons?
APPENDIX B

INFORMED CONSENT STATEMENT

“Health Information Need and Seeking of Older Adults Residing in an Independent-Living Retirement Community: A Qualitative Study”

You are being asked to be part of a research study. The study will look at what your health information needs are. Also, the study will look at where you get your health information. The social services coordinator has given her permission for the researcher to come to the retirement community to do the research.

- The researcher will explain to you what the research is about. The researcher will ask your permission to interview you to find out about a recent experience that made you look for health information, and where you got the information.

- Only the researcher, Sheri Edwards, will know that you have participated in the research. However, the researcher will give you a number to use instead of using your name to make sure that the information you share is confidential.

- You will be asked if it is o.k. to speak into a microphone so that your answers can be recorded on a tape recorder. If you decide that you would not like to have your answers recorded on the tape recorder, the researcher can write down your answers, if that is o.k.

- The interview won’t be longer than one hour.

Initials_____
APPENDIX B (cont.)

Risks:

- There is no expected risk for you to be part of the study. It is o.k. for you to stop the interview at any time, and it is o.k. for you to stop the interview for any reason.

Benefits:

- It is hoped that the research will help people make products and services that will help you get good health information that you can use.

Confidentiality:

- All of your answers to the questions will be kept private and confidential. The information you give in the interview will be stored in a safe place that will be locked. Only the researcher will be able to get to this information. But you can put in writing that it’s o.k. for someone else to see this information. No one who reads or hears the report will know your name or the answers you give.

Contact Information:

- If you have questions at any time about the study or the way it is done, or if the study affects you in a way that makes you uncomfortable, you may contact the researcher. Her name is Sheri Edwards, and she can be reached at 1-865-974-2148. Her address at the University of Tennessee in Knoxville is 1345 Circle Park Drive, Suite 450, Knoxville, Tennessee 37996.
APPENDIX B (cont.)

- If you have questions about your rights as a participant in this study, you may contact the Office of Research Compliance Officer at the University of Tennessee at 1-865-974-3466.

Participation:

- Your participation in this study is voluntary and your decision alone. It is o.k. if you decide that you would rather not be a part of this study. If you decide that you would like to be a part of this study, but change your mind during the interview, that is o.k. The researcher will destroy or give back to you any answers you have given before you decided to stop.

CONSENT

I have read the information in these papers. I have been given a copy of this form. I agree to participate in this study.

Participant’s (Your) signature: _______________________
Date________

Investigator’s signature: ____________________________
Date________
A. CODING SCHEME

1 Health Information Needs

1.1 Disease/Disease-Related

definition: The health information need was a dysfunction of a bodily organ or a bodily process.

1.1.1 diabetes

definition: The health information need was a high level of blood sugar revealed through blood work. The test results indicated diabetes.
keywords: A1C test, blood work, diabetic, diabetes, high blood sugar
example: “I first found out I had diabetes two years ago. He [doctor] did some blood work, and found out through the test results.”

1.1.2 heart attack

definition: The health information need was chest pain subsequently diagnosed by a doctor as a heart attack
keywords: chest pains, heart attack
example: “The heart attack came about over a period of a month.”

1.1.3 heart condition

definition: the health information need was chronic heart trouble requiring the use of a pacemaker and later a defibrillator
keywords: anemic, defibrillator, heart, heart rate, pacemaker
example: “I’d had a pacemaker earlier--I’ve had it for about seven years—and then three years ago, he [the doctor] decided I needed a defibrillator.”

1.1.4 lung disorder

definition: the health information need was a lung disorder
keywords: asthma, bronchitis, congestion, lung
example: “He [the doctor] got me in with a specialist--lung specialist--I don’t know whether he thought it was in my chest, or what, but I started having a lot of congestion.”

1.1.5 macular degeneration

definition: the health information need was a disease of the macula
keywords: cataract, dry socket, eyesight, macular degeneration, wet socket
example: “It was after my cataract surgery that I began to lose my eyesight.”
1 Health Information Needs

1.1 Disease/Disease-Related (cont.)

1.1.6 spinal disorder
definition: The health information need was a disorder of the spine.
keywords: back, spinal specialist, spine
example: “I was going to a spinal specialist, and he made the
diagnosis . . .”

1.1.7 stroke
definition: The health information need was a stroke.
keywords: “no control over your hand or arm,” stroke
example: “My stroke was on the left side.”

1.1.8 upper body pain
definition: The health information need was pain in the head and chest.
keywords: chest pain, dizziness, headache
example: “I had an attack of chest pains, headache, and dizziness, so I went
to my doctor.”

1.2 Medical Procedure
definition: The health information need involved the investigation of, repair,
or attempt to repair a health problem.

1.2.1 colonoscopy
definition: The health information need was the investigation of a
digestive disorder.
keywords: adrenal test, colonoscopy, lower GI [gastrointestinal]
example: “He [the doctor] sent me for the adrenal test, and then the
adrenal [test] sent me to a colonoscopy.”

1.2.2 heart bypass
definition: The health information need was the repair of blocked arteries.
keywords: arteriogram, blockages, heart, surgery, “take my heart out and
work on it”
example: “They did six bypasses at one time--I had so much blockage
in my heart.”

1.2.3 wrist surgery
definition: The health information need was the attempt to repair wrist pain.
1 Health Information Needs

1.2 Medical Procedure (cont.)

1.2.3 wrist surgery, cont.
  keywords: carpal tunnel work, surgery, “they cut from the palm of my hand through my wrist,” wrist
  example: “When I got this carpal tunnel, it was so painful, and I didn’t know where exactly to find a doctor that did that type of work.”

1.3 Medical Insurance Plan
  definition: The health information need was information pertaining to medical coverage

  1.3.1 prescription drug coverage
    definition: The health information need was access to affordable prescription drug coverage.
    keywords: drug insurance, health plan, insurance policy, medication, “TennCare situation,” “the new Medicare cards”
    example: “What I need is drug insurance.”

1.4 Nutrition/Diet
  definition: The health information need was dietary management of a disease or disease-related health information need.
  keywords: diet, “different foods and amounts I need to eat,” no sugar, pre-cooked food, sweet stuff
  example: “I talk about the diabetes, and I tell him [the doctor] I buy the pre-cooked foods, and he tells me I should cook.”
APPENDIX C (cont.)

2 Information channels

2.1 Personal Contact
   definition: An individual or individuals with whom an older adult interacts in an effort to satisfy a health information need

2.1.1 coordinator
   definition: the social services coordinator of the retirement community
   keywords: coordinator, ______ [coordinator’s first name]
   example: “I took it into ______, and she called and said ‘It’s [medical insurance policy] legitimate, go on if you like it,’ so I took it from there.”

2.1.2 doctor
   definition: an individual who is a medical professional
   keywords: doctor, primary care doctor, specialist
   example: “I got some information from the doctor also you know about my diet.”

2.1.3 family/friend
   definition: family member or non-family member of a social network who contributes information relating to a health information need
   keywords: cousin, daughter, daughter-in-law, family, friend, son
   example: “I talk to family who have diabetes.”

2.1.4 family—expertise
   definition: a family member who has professional knowledge of a health information need
   keywords: daughter, daughter-in-law
   example: “I got in touch with a daughter-in-law who works at ________, . . . and I will get my medication at real low prices.”

2.1.5 friend—expertise
   definition: a friend who has professional knowledge of a health information need
   keywords: nurse friend
   example: “As far as I could find out, Dr. ______ was the only one out here at _________ [hospital] that did that type of work.”
APPENDIX C (cont.)

2 Information channels (cont.)

2.2 Documents
definition: written, recorded information used to satisfy a health information need

2.2.1 book
definition: a book used to satisfy a health information need
keywords: book, cookbook [for diabetics], medical books
example: “I get a book from AARP [American Association of Retired Persons] that covers everything with older people, and it’s always having something in it [about diabetes].”

2.2.2 magazine
definition: a magazine used to satisfy a health information need
keyword: magazine
example: “I read in some magazines about diabetes.”

2.2.3 newspaper
definition: a local or national newspaper used to satisfy a health information need
keywords: doctor's column, doctor news, newspaper, paper,
example: “I read Dr. ______'s column every day . . . and I’ve got things on the lungs.”

2.2.4 pamphlet
definition: a booklet used to satisfy a health information need
keywords: brochure, pamphlet
example: “I read the little pamphlet that came with it [defibrillator].”

2.3 Organization
definition: a government- or community-based agency or instructional workshop used to satisfy a health information need

2.3.1 government agency
definition: a government agency with administrative oversight of a national- or state-level health insurance program that is used to satisfy a health information need
keywords: Medicare, Social Security office, TennCare
example: “I just called the [Medicare] 800 number, and . . . asked for
APPENDIX C (cont.)

2.3 Organization (cont.)

2.3.1 government agency (cont.)
assistance.”

2.3.2 library
definition: a community-based information agency from which
information
was sought about a health information need
keywords: librarian, library
example: “I went to the library down here and got the man to look up
those two words.”

2.3.3 medical workshop
definition: an instructional workshop designed to provide information
about self-management of diabetes
keyword: workshop
example: “I went to the workshop. . . I was able to use the equipment
they had taking my own blood test.”

3 Channel Outcome
definition: whether an information channel satisfied or did not satisfy a health
information need

3.1 satisfied
definition: an information channel provided sufficient information to fulfill a
health information need
keywords: “no question about that now,” satisfied, well-informed
example: “They [doctors] told me what medication they were using, and
why. So yes, I was well-informed.”

3.2 not satisfied
definition: an information channel did not provide sufficient information to
fulfill a health information need
keywords: “consult you more,” “explain it more,” “didn’t have information”
example: “I asked a nurse friend, but she didn’t have information--said she had
never helped with that particular type of work.”
APPENDIX C (cont.)

B. CODEBOOK

1

1.1 Health Information Need
1.1.1 Disease/Disease-Related
1.1.2 diabetes
1.1.3 heart attack
1.1.4 heart condition
1.1.5 lung condition
1.1.6 macular degeneration
1.1.7 spinal disorder
1.1.8 stroke
1.1.9 upper-body pain

1.2 Medical Procedure
1.2.1 colonoscopy
1.2.2 heart bypass
1.2.3 wrist surgery

1.3 Medical Insurance Plan
1.3.1 prescription drug coverage

1.4 Nutrition/Diet

2

2.1 Information channels
2.1.1 Personal Contact
2.1.2 coordinator
2.1.3 doctor
2.1.4 family/friend
2.1.5 family--expertise
2.1.6 friend--expertise

2.2 Documents
2.2.1 book
2.2.2 magazine
2.2.3 newspaper
2.2.4 pamphlet

2.3 Organization
2.3.1 government agency
2.3.2 library
2.3.3 medical workshop

3

3.1 Channel Outcome
3.1.1 satisfied
3.1.2 not satisfied
# APPENDIX D

## DATA TABLES

**Table 4**  
Health Information Needs and the Type and Number of Information Channel(s) Used to Satisfy the Needs

<table>
<thead>
<tr>
<th>Participant No.</th>
<th>Health Information Need</th>
<th>Personal Contact</th>
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<th>Organization</th>
<th>Row Total</th>
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<td>2</td>
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Column Total  

|                | 25 | 11 | 5 | 41 |

62
APPENDIX D (cont.)

Table 4, cont.

Note: Interviews 3, 4, 9, and 14 are not analyzed and therefore are not included in Table 4.
The first column indicates participants by number. The second column indicates a health information need (Note: Some participants have more than one need). The third, fourth, and fifth columns indicate a type of information channel used to satisfy a health information need. The numbers in the third, fourth and fifth columns indicate the number of each type of channel used. Each row total represents the number of channels used per health information need. Each column total represents by channel the total number of information channels used to satisfy health information needs.
### APPENDIX D (cont.)

Table 5
Personal Contact Sources Used to Satisfy a Health Information Need

<table>
<thead>
<tr>
<th>Participant No.</th>
<th>Health Information Need</th>
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<th>Family/Friend</th>
<th>Family/Friend-Expertise</th>
<th>Coordinator</th>
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APPENDIX D (cont.)

Table 5 (cont.)

Note: Interviews 3, 4, 9, and 14 were not analyzed and therefore are not included in Table 5.

The first column indicates participants by number. The second column indicates health information needs. The third, fourth, fifth, and sixth columns indicate sources of information categorized as the information channel "Personal Contact." Each row total represents the type of source used by need. The column totals represent the total number of Personal Contact source types used.
APPENDIX D (cont.)

Table 6
Document Sources Used to Satisfy a Health Information Need

<table>
<thead>
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<th>Participant No.</th>
<th>Health Information Need</th>
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APPENDIX D (cont.)

Table 6 (cont.)

Note: Interviews 3, 4, 9, and 14 were not analyzed and therefore are not included in Table 6.

The first column indicates participants by number. The second column indicates health information needs. The third, fourth, fifth, and sixth columns indicate sources of health information categorized as the information channel “Documents.” Each row total represents the type of source used by need. The column totals represent the total number of Documents source types used.
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APPENDIX D (cont.)

Table 7, cont.

Note: Interviews 3, 4, 9, and 14 were not analyzed and therefore are not included in Table 7.

The first column indicates participants by number. The second column indicates health information needs. The third, fourth, and fifth columns indicate sources of health information categorized as the information channel “Organization.” Each row total represents the type of source used by need. The column totals represent the total number of Organization source types used.
Sheri Edwards was born in Miami, Florida, and has lived in various other cities in the Southeast, Upper Midwest, and Northeast. After graduating high school, she worked a series of retail and tutoring jobs before attending college. She holds a Bachelor of Arts degree (BA) in history and a Master of Education (M.Ed.) in Secondary English Education. Her first professional job was that of a public school English teacher, which she found to be both rewarding and challenging; she often thinks about her former students and hopes that she served them well. Her lifetime goal is to be a professional researcher; her research interests include information-seeking behavior, human-computer interaction, and citation analysis. She recently was accepted as a doctoral student in the College of Communication and Information at the University of Tennessee, Knoxville.