EXPLORING MALE AND FEMALE HEALTHCARE PROVIDER COMMUNICATION WITH ALZHEIMER'S PATIENTS: A QUALITATIVE STUDY

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The idea of studying patient-provider communication within the context of Alzheimer's came from my grandmother's disease experience. My grandmother has suffered from Alzheimer's for several decades. The helpless and exhausting experience of communicating to her made me think about alleviating this painful situation. I also thought of my high-risk mother, who might eventually be diagnosed with Alzheimer's, as well as myself. I did a genetic test a few years ago. It shows that I am nearly eight times more likely to have Alzheimer's than the average. In addition to hoping medical science would make substantial progress in the next decades, what else can I do?

Through the master program in Applied Communication, however, I have learned that the U.S. have made a significant contribution to improving caregiving for Alzheimer's patients and patients with other mental issues, such as competent healthcare providers and healthcare systems, communication training for both patients and healthcare providers, and therapeutic method as well. I realize there is something I definitely can do. Therefore, I decided to have my master thesis focusing on how male and female healthcare providers differ in communicating with Alzheimer's patients, and examining the gender role in patient-provider communication. I hope my study could benefit future studies as well.

In working on this study, I appreciate Dr. Matthias, who helped me go through and polish my idea, and developed a literature review. She also provided me great suggestions and experience in recruiting and interviewing participants. I also appreciate Dr. Goering and Dr. Head, who spent countless hours helping me understand what it means to conduct research and how to achieve the goals as well as developing the academic writing to strengthen my thesis. Finally, I want to thank Dr. Bute for her peer review and re-editing suggestions. I cannot imagine how difficult it would be without their step-by-step interpretation and advising during the completion of my study.

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Ying Lyu

EXPLORING MALE AND FEMALE HEALTHCARE PROVIDER COMMUNICATION WITH ALZHEIMER'S PATIENTS: A QUALITATIVE STUDY

Today, Alzheimer's is a devastating disease that affects more than 46.8 million people worldwide. In the U.S., it is estimated that 5.7 million Americans were living with Alzheimer's disease (AD) in 2018, and 5.5 million people are at least 65 years old with 3.3 million women and 2 million men. Caring for people with AD is stressful and emotionally draining for both family members and healthcare providers and would be exacerbated by the breakdown in communication. While communication challenges can take many forms, one understudied area in AD patient-provider communication is how gender role might affect the outcomes and perceived feelings during interaction. Without knowledge and attentiveness of how gender may affect patient-provider communication, healthcare providers may become more frustrated in their attempts to apply unadjusted skills, which can cause further breakdown and stress. This study is to explore how gender might be a role affecting caregiving communication within the context of Alzheimer's. Eleven participants were recruited to have a semi-structured interview through online flyers. The findings from this study yield broad suggestions for future work within the field of Alzheimer's communication research and specific suggestions for designing the communication training.

Elizabeth Goering, PhD, co-chair

Katharine J. Head, PhD, co-chair

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AD: Alzheimer’s Disease

HCPs: Healthcare providers

IADC: Indiana Alzheimer’s Disease Center

CHAPTER ONE: THE CHALLENGES OF ALZHEIMER'S

Alzheimer's disease (AD) was discovered on November 25, 1901, by Dr. Alois Alzheimer, who examined and observed a patient named Auguste Deter at the Frankfurt Asylum (Maurer & Maurer, 2003). That patient was 46 years old and had strange behavioral symptoms, including a loss of short-term memory, then died at 51. Along with 2 Italian physicians, Dr. Alzheimer used cell-staining techniques to identify amyloid plaques and neurofibrillary tangles within the brain's cortical gray matter. And in 1906, he gave a presentation that first linked these pathologic findings with the clinical symptoms of presenile dementia (Maurer & Maurer, 2003).

Today, AD is a devastating disease that affects more than 46.8 million people worldwide (Alzheimer Association, 2020). In the U.S., it is estimated that 5.7 million Americans were living with AD in 2018 (CDC, 2019), and 5.5 million people are at least 65 years old, with 3.3 million women and 2 million men. And by 2050, that number will go up to 16 million (Alzheimer Association, 2021). This number is expected to double every 20 years, reaching 75 million in 2030 and 131.5 million in 2050 worldwide (Alzheimer's Disease International, 2018). Among AD patients, 81% are 75 years old or older, 15% are 65 to 74 years old, and 4% are younger than 65 (Alzheimer's Association, 2021). The statistics related to AD and its effect on the patient and entire healthcare system are staggering: AD is the sixth leading cause of death in the United States, one in three seniors died with AD, and every 65 seconds someone in the United States develops AD (Alzheimer's Association, 2018).

For decades, hundreds of millions of people worldwide have had to cope with AD effects, including the persons with AD, family members, healthcare providers (HCPs), and others with whom they interact. The impact of the diagnosis on HCPs is multifaceted, ranging from economic concerns to concerns about altering their lifestyle to care for the patient. In 2018, more than 16.1 million HCPs will provide an estimated 18.4 billion hours of unpaid care, yet AD costs HCPs more than just their time (Grabher, 2018).

Caring for AD patients can be stressful and emotionally draining for both family members and HCPs. These problems can be exacerbated by the difficulties encountered in communicating with individuals with AD. Communication is one of the most significant issues in caring for individuals with AD (Santo Pietro, 2002). Research reveals that breakdowns in communication are the most reported top stressor by HCPs: communication problems were reported by 88% of HCPs, with almost half reporting problems these patients have in speaking and understanding language (Georges et al., 2008). One nursing assistant, commenting on caring for AD patients, said, “After work, I drive around until I can stop crying, and then I go home to my kids” (Santo Pietro, 2002, p. 163). As the number of people with AD will continue to grow, communication problems add a layer of complexity to caregiving and contribute to many other issues, such as disrupting the caring process and raising stress in both HCPs and patients (Santo Pietro, 2002). While communication challenges can take many forms, one understudied area in AD patient-provider communication is how gender might affect the outcomes and perceived feelings during the interaction.

Challenges in Patient-Provider Communication with AD

Communicating with AD patients presents multiple challenges, partially resulting from the characteristics of AD patients. AD patients usually have difficulties on several levels, such as memory loss, language decline, social isolation, and depression (Small &

Perry, 2012), gradually and irrevocably challenging a person's capacity to communicate with others, as well as patient-provider communication.

Deterioration in memory and communication abilities are prominent and distressing AD features, which affect both AD patients and HCPs. The deterioration in language abilities, both production and comprehension abilities, are the most common symptoms as the disease progresses. For most healthy individuals, a variety of verbal and nonverbal exchanges spontaneously occur when they pursue daily activities. Patients with AD usually talk a lot, retain intact syntax, and use common words frequently but often lack normal coherence. While when language skills are impaired for AD patients, declining communicative abilities usually create both emotional and physical barriers that can compromise the quality of life of these individuals and create unique challenges for their family and HCPs (Blair et al., 2007; Forbes-McKay & Venneri, 2005; Wilson, Rochon, Mihailidis, & Leonard, 2012).

Patients with impaired functional communication have difficulties with discourse, word-finding ability, and comprehension (Schulz et al., 2011). Functional communication is a major part of social life, and impairments in language ability significantly impact the everyday life of both patients and HCPs. With the progression of AD, patients might lose most of their verbal skills. Eventually, they are not capable of reading, writing, and carrying out a purposeful conversation. Behavioral or nonverbal actions that accompany the progression of AD appear related to their lack of verbal expression (Richter, Roberto, & Bottenberg, 1995). Patients find it increasingly difficult to communicate and become more dependent, isolated, frustrated, aggressive, and fearful. As a result, HCPs find it difficult or impossible to interact with AD patients. Consequently, they may be confronted with aggressive behavior, making caring for AD patient more difficult.

Communication problems with AD patients have also been linked to semantic memory deficits, executive function (including working memory), and attention. People with AD typically experience progressive impairment acquiring and retaining new information or events, referred to as a deficit in episodic memory (Smith et al., 2011). Patients are frequently perseverative or repeatedly talk about the same thing. AD patients usually experience significant difficulty in encoding, retaining, and recalling new information after a delay. Meanwhile, their memory for more remote information (e.g., memories from childhood or young adulthood) is generally intact, especially in the early and middle stages of AD (Albert, 2008). In sum, due to AD patients' symptoms, HCPs face an array of communication challenges in communicating with and caring for persons with AD.

Gender Impact on Patient-Provider Communication

In addition to the communication challenges mentioned above, gender might be another variable to consider in patient-provider communication with AD patients. Because provider-patient communication can significantly impact the outcomes of satisfaction, adherence, and health improvement, the possibility that the participants' gender may influence the structure and content of the consultation becomes a question of considerable importance. Hence, it is worth examining how gender-based perceptions and stereotypes might play a prominent role in the medical encounter, although it is challenging to know the scope of these beliefs and their impact.

Gender Plays a Role in Communication

Gender has been identified as one source of systematic variation in patient-provider communication through its influence on the interactants' expectations, motivations, goals, emotions, and perceptions of their partners (Street, 2002). A variety of research has been done to explore the role of gender in communication, and researchers have generally used biological sex as the primary indicator of gender. Street (1992) systematically sorts out the unique contributions of several personal and partner impact on patient-provider communication patterns. In a study of 7 physicians who interacted with 115 patients, he found that physicians offered more information and support to patients who asked questions and expressed concerns. However, independent of the patient's behavior, additional variation in the degree to which physicians engaged in partnership-building was related to the patient's education and gender. Additionally, some research does show that patients, regardless of sex, often vary their responses depending on the clinician's gender (Roter & Hall, 1993; Street, 2001). For instance, patients may be more expressive and assertive when interacting with female HCPs, not because they are presumed to have less power and status, but because female clinicians are more frequently use partnership-building or other forms of facilitative communication (Street, 2001).

In short, the results of these studies highlight the fact that patient-provider communication unfolds according to a complex interplay of style, perception, and adaptation. Hence, gender has a significant impact on medical interactions to the extent that it can be linked to the fundamental processes of interpersonal communication.

Therefore, I believe it is worthy to explore its effects on the AD content and seek to do so in this study.

Gender Differences in Communication

Gender differences, in general, are worthy of being discussed before exploring gender impact in communication within the AD context.

Past literature reveals gender differences in communication. To speak generally, Mulac (2006) indicated that meaningful distinctions in language do exist, based on the observations on women's and men's language over 25 years. Mulac and colleagues found 21 linguistic features to distinguish gender from the summary of over 30 studies, indicating six variables used more by males and ten used more by females. For example, references to quantity (e.g., "6ft., 4 in., tall," p. 224) and directives (e.g., "Write that down," p. 224) are used more by male's communication. In contrast, intensive adverbs (e.g., "really, so," p. 224), mean length sentence (relatively long), and references to emotions (e.g., "happy, hurt," p. 224) tend to be employed more by female's communication. However, there are five linguistic features whose use is similar, such as progressive verbs, justifiers, fillers. They further interpreted the 16 gender-distinguishing language features into four dimensions of language style Gudykunst and Ting-Toomey (1988) proposed: direct and indirect, succinct and elaborate, personal and contextual, instrumental and affective. For example, directives from males indicate the direct style, whereas female's use of uncertainty verbs exemplifies indirectness; male's higher use of references to quantity represents instrumental style, and female's references to emotion indicate effective style (Mulac, 2006).

Meyers et al. (1997) found that males and females use different communication patterns in group argument. Women are more likely than men to ask questions and agree with others, and women are less likely than men to challenge others' statements and frame others' arguments. Maltz and Borker (1982) described three ways in which males and females communicate differently: minimal responses, the use of questions, and attitudes toward problem-sharing and advice-giving. In each area, they observed that males establish their dominance, whereas females enhance their relational intimacy. Consistent with this notion, Noller (1993) conducted a study focusing on marital conflict and found that wives engage in "demand" to establish closeness, whereas husbands "withdraw" to maintain power. These differences are theorized to reflect female's more significant concerns for cooperation and connection in their relationships.

Because this study is to explore gender impact within the AD context, gender differences in AD patients' communication and HCPs' communication will be discussed separately below.

Gender Differences in AD Patients' Communication

Like the general population, gender differences in communication have also been detected in persons with AD. Alzheimer's Disease is a progressive neurodegenerative disease. The performance and symptoms of individuals in early stage, middle to late stage of AD vary as the disease develops as well as linguistic skill. The literature reported three primary language deterioration levels: mild, moderate, and severe (Ripich, Wykle, & Niles 1995). In the early stage, persons with AD have difficulties with word-finding/naming and subtle conversational skills, including the descriptive ability (Bayles et al., 1992; Frank, 1994; Lovestone & Gauthier, 2001). These patients usually have long pauses and slower responses and may self-correct or apologize for their communication failures. However, reading, writing, and comprehension are relatively undisturbed compared to elderly individuals not diagnosed with AD (Bayles et al., 1992). While in later stages, articulation may also be affected, and the decline extends to comprehension, writing, and functional language use (Bayles et al., 1992; Frank, 1994; Fromm & Holland, 1989; Weiner et al., 2008).

A meta-analysis (Irvine, Laws, Gale, & Kondel, 2012) revealed that females had higher cognitive deficits than males even in verbal abilities. However, a female advantage has been detected in the healthy population (Hyde & Linn,1988; Maylor et al., 2007; Weiss, Kemmler, Deisenhammer, Fleischacker, & Delazer, 2003), regardless the age, education level, and dementia severity. Buckwalter and colleagues (Buckwalter et al., 1993; Henderson & Buckwalter, 1994) found that male AD patients retain verbal skills better than female patients in the early to middle stages of the disease. In a later study (Buckwalter et al., 1993), researchers found that women with AD showed the trend to perform worse than men with AD in the semantic memory test. Irvine and colleagues (2012) believed that women suffer a more significant deterioration in language than men at advanced ages, which indicates the possibilities of more challenges of a female in their later stage of AD.

Gender Differences in HCPs Communication

From the HCPs perspective, several studies have found that female and male HCPs differ in how they communicate with patients. For example, Tannen (1990) reported that female HCPs typically talk to build community and rapport, while male HCPs use talks as a method to establish status and independence. Similarly, Mulac and

Lundell (1980) found that even when gender markers are removed from a conversational transcript (e.g., names, gender-specific topics), the language of females tend to be perceived as having greater aesthetic quality (e.g., pleasing) but less dynamism (e.g., strong, active) than that of males. In the nonverbal domain, females tend to be more expressive and accurate at perceiving others' emotions than are males (Burgoon, 1994).

More studies showed that female HCPs are more likely to engage in patient-centered communication than male providers (Roter & Hall, 2004; Roter, Hall, & Aoki, 2002). Street (2002) believed gender differences in health encounters come from and are influenced by several factors, including differences in males' and females' communicative styles, perceptions of their partners, and how they accommodate their partner's behavior during the interaction. In a study (Ports, Reddy, & Barnack-Tavlaris, 2013) that examined the gender difference in HCP's communication in a sensitive context of gynecological care, researchers found that female HCPs engaged in more positive nonverbal communication and provided more health-related information. Furthermore, patients with female HCPs reported significantly more satisfaction. Considering gynecological exams are sensitive, the reported satisfaction may be biased to some extent, and it may not represent the larger population of patients. However, this study demonstrated that gender differences in HCPs' communication influence health outcomes in some specific areas. To be specific, female HCPs tends to be more expressive and accurate at perceiving the emotions from others, more interested in psychosocial aspects of health, more encouraging and reassuring than male HCPs (Burgoon, 1994; Roter, Hall, & Aoki, 2002; Roter & Hall, 2004).

Gender role and impact added a layer of complexity to care providing. AD patients have multiple challenges physically and in their daily life relating to emotion and satisfaction. Communicating effectively with their HCPs is a great way to eliminate such adverse effects. On the other hand, HCPs present multiple challenges, and these challenges are getting severe as AD populations grow. As discussed above, two-thirds of AD patients are females, and most HCPs are females. Thus, there are some crucial questions needed more in-depth exploration. For example, whether female patients work better with female HCPs, or male patients are more comfortable with male HCPs, if male patients feel more obstacles with female HCPs, and in what situation should male HCPs show dominance in the relationship with patients? The interpersonal communication environment within the context of AD is dynamic. However, little attention has been paid to explore that occurs between HCPs and AD patients. Therefore, it is worthy to explore how gender might affect patient-provider communication in the Alzheimer's caregiving context.

To address how gender impact patient-provider communication within the AD context, research is needed to explore the knowledge and awareness that HCPs have when caring for AD patients, what types of communication they already engage in, what are differences between male HCPs and female HCPs, how the environment and AD patients affect HCPs' communication styles, and how future communication about this topic should be presented. This work can serve as formative research to inform much-needed public health and patient-provider communication about gender role within the AD context. To fully explore this topic, it is important to utilize a strong foundation of previous health behavior research. The next chapter will explore and describe how the use of the Ecological Model has guided previous work and will guide this project.

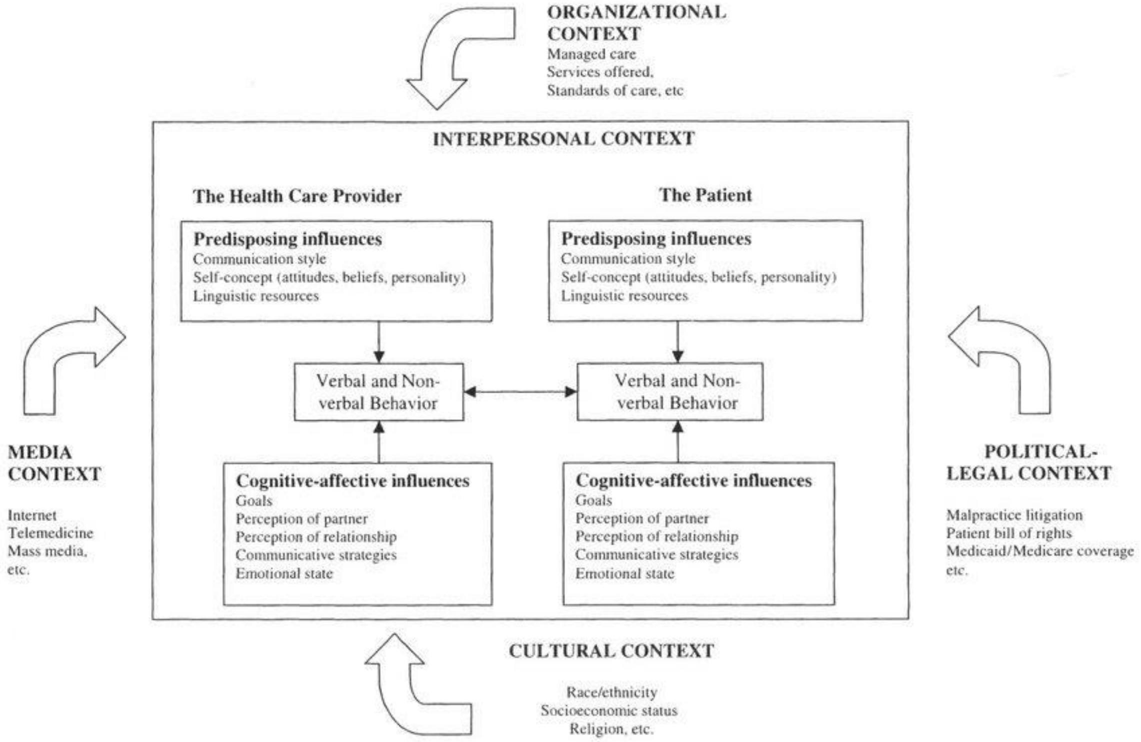
CHAPTER TWO: THEORETICAL FRAMEWORK

Chapter Two discusses the importance of using a robust theoretical framework to guide this research. A theory is defined as a "set of interrelated concepts, definitions, and propositions that present a systematic view of events or situations by specifying relations among variables to explain and predict events or situations" (Glanz et al., 2008, p. 26). To examine gender communication in AD caregiving, this study utilized the ecological model (Street, 2003) that considers the interplay of multiple contextual factors that influence patient-provider interactions. This chapter will review the components and how it was widely used in communication studies.

The Ecological Model of Communication

The ecological model explores various influences on health behaviors and demonstrates the complexity of interpersonal communication in the medical encounter (Street, 2002, p. 202). See Figure 1.

Figure 1: The Ecological Model of Communication



Note. Figure 1 is from Street (2002, p. 202).

According to the ecological model, first, people have developed a diverse style of communicating attributed to personality, identity, socialization, and linguistic skill. Second, interactants adapt their behavior based on goals, purpose, stereotypes, impressions, and familiarity, categorized into strategic, attributional, and relational considerations. Third, from a broader perspective, the interaction between HCPs and patients is also influenced by the organizational context (e.g., managed care, standards of care), the cultural-socioeconomic context (e.g., race/ethnicity, the socio-economic status), the political and legal context (e.g., malpractice litigation, patients' bill of rights), and the media context (e.g., Internet, mass media) (Street, 2003). It posits that "medical encounter may be contextualized…by the interpersonal, organizational, media, political-legal, and cultural environments within which they take place" (Street, 2002, p. 64). For example, a physician might adapt a reserved style when interacting with elderly patients but a more expressive style with children.

Interpreting the Contexts of the Ecological Model

Medical encounters occur in context, and the way HCPs and patients communicate with each other may in part depend on the cultural background of both parties, the type of organization, and the use of media. Not surprisingly, any of these contexts may largely or slightly have an impact and mutual influences on patient-provider communication.

Organizational Context

The organizational context considers the influence of communication within formal organizational systems (e.g., hospitals, health social services). Within this context, patient-provider communication has particularly important implications for medical decisions, and the interaction has an impact on outcomes (e.g., treatment, resolution). Besides, the policies, practices, and culture of an organization could result in greater provider control of the interactions, less trust between patients and provider, and more discussion of topics related to health promotions (Street, 2003). As noted previously, AD patients have unique medical needs that might affect interactions with HCPs (e.g., repeat sentences, retrieve recent memory). Hence, characteristics of organizations (e.g., the climate or culture of an organization, leadership within an organization) may influence how HCPs of an organization contribute to the treatment or consider their role during the caregiving.

Media Context

As technology develops, media (e.g., internet, telecommunications) became an essential part of our everyday living, and medical encounters do not exist independent of these technologies. Although several media types serve in this capacity, the one that received the most attention, and the one examined within the ecological model, is the Internet (Street, 2003). The Internet has significant potential to alter the way HCPs and patients interact with one another. For example, patients' ability to gather information through the Internet can facilitate greater participation in caregiving by increasing their knowledge. Virtual consultations can largely influence patients' attitudes toward sharing and communicating, comparing with face-to-face consultations.

Political-Legal Context

The experience and knowledge of legislative and judicial actions of HCPs may directly or indirectly influence his or her attitudes toward patients during caregiving. For example, patient protection laws might encourage HCPs to give more information and use more partnership building. Roter and colleagues (1997) found physicians who had at least two malpractice claims conducted shorter visits, spent less time orienting patients than physicians who never had a claim. However, of all the contexts identified in this model, the political-legal context is the one that least studied. More studies will be needed to understand how provider's experiences with courts and legislatures influence their care providing (Street, 2003).

Cultural-socioeconomic Context

Culture refers to "values, beliefs, knowledge, art, morals, laws, and customs acquired by individuals and groups" (van Servellan, 2009, p. 67). Culture and religion can influence individuals' beliefs, norms, rules, communicative behavior, and connect to individuals' definitions of health (Pecchioni, Ota, & Sparks, 2004). For example, religion plays a vital role in the mental health of older African American adults' religious participation (Taylor, Chatters, & Levin, 2004).

Everyday Interpersonal Context

In addition to identified contexts by Street, Head and Bute (2008) developed Everyday Interpersonal Context based on this model. In the medical encounters, they stated the context of everyday communication about health should be a contributing factor to cover as much as communication phenomena. Evidence showed that everyday interactions shape medical encounters in numerous ways. For example, when thinking about health and healthcare, specifically consider how to encourage people to discuss particular issues during appointments, and influence patients' decision-making during conversations with clinicians (p. 789).

The Application of the Ecological Model

The ecological model has been widely utilized to guide research in patient-provider communication. Cegala (2011) has examined the factors that potentially promote or retard patient participation. Patient participation disclosure scores were selected as the dependent variable in a multilevel regression analysis, and 19 predictor variables were used to represent the cultural, organizational, and interpersonal factors of the ecological model. The analysis revealed eight significant predictors of patient participation, such as patients' age, perception of experiencing physical limitation, and pain due to their medical condition. This model illustrated a dynamic communication environment, and the essential idea is that individual differences cannot be examined in isolation of other variables that also account for communicative action.

This model also has been utilized to frame research relating to gender. Kim and Moen (2002) investigated the relationship between retirements and gender. In this study, a critical contextual consideration was gender, given that the retirement experience may well be a different process for females than it is for males due to work histories, employment opportunities, and general life experiences. And psychological well-being was another key contextual consideration, with two possible models of their moderating effects. The results suggested the importance of examining various resources and contexts surrounding retirement transitions (gender, psychological well-being, spouses' circumstance, and income adequacy) to understand the retirement transition dynamics. Besides, Thurston and Vissandjee (2005) examined culture as a determinant of women's health through the ecological model. Gender helps establish and is established by micro-level politics: patterns of expectations; processes of everyday life; self and identity; desire; interactions among friends, and language and symbolic language (Lorber, 1994). In combination with gender and culture, Thurston and Vissandjee (2005) believed migratory experience must be considered as a determinant of the health of immigrant women's rights. Taking gender and the migratory experience into consideration was essential to understanding the health of immigrant women, attending to the individual but focusing on social factors at the micro- and macro-levels.

The essence of medical encounters is dyadic interaction (Street, 2003). And caregiving is conceptually different from daily interactions between AD patients and providers. The ecological approach provided a method to combine these relevant factors to understand gender as a factor better to impact patient-provider communication with AD patients. Some studies have examined one variable's influence, such as age (e.g., Greene, Adelman, Charon, & Friedmann, 1989). However, the impact of any one variable (e.g., gender, ethnicity) may vary depending on the presence of other factors (e.g., patient's health literacy, HCPs communication style). HCPs population in the U.S. is snowballing, and they are diverse in age, cultural background, socialization, gender, ethnicity, creating a dynamic environment for patient-provider communication. Therefore, the most valuable part of this model for this study is it provides insight into interpersonal context within the context of the other "environments" that might influence it (e.g., the media, organizational, culture-socioeconomic, and political-legal contexts). Within the context of interacting with people with Alzheimer's, the ecological model serves as a framework to think through the potential influence derived from aspects other than medical circumstances, such as the organizational context of HCPs, cultural background of patients and HCPs, or media environment on the communication enacted by AD patients and providers.

The Current Study

Medical encounters unfold according to a complex interaction of style, perception, and adaptation. However, little research and even fewer interventions have considered how gender might impact interpersonal communication when examining the challenges in communication for HCPs with AD patients. Insufficient attention to gender's impact may largely overlook the situation that HCPs usually encounter with AD patients' different communication burdens in their daily care. As the population with the disease is growing steadily worldwide, it would be beneficial to explore the HCPs gender impact interacting with AD patients in-depth, which might inform further research. As a result, this study has the following research questions:

RQ1: How do male and female HCPs differ in their perceptions of and reported behaviors when communicating with persons with AD?

RQ2: How do HCPs describe differences communicating with male and female persons with AD?

CHAPTER THREE: METHOD

This study utilized qualitative methods through semi-structured interviews with open-ended questions. Among all qualitative research methods, semi-structured interviews could offer opportunities to get details in depth from the participants and gather more data from interpersonal communication, which is more aligned with this study's objectives. This method allowed HCPs to enter deeply into the caring experience and to bring out valued data. Participants were recruited from March to May 2020 through the websites *Care.com* and *Callforparticipants.com*, and Indiana Alzheimer's Disease Center. Original research plans were altered due to Coronavirus Disease-19 (COVID-19) pandemic. Prior to the recruitment, this study received IRB approval as an exempt study through the University of Indiana's Institutional Review Board (Protocol Number 2002532262).

Method

Participants and Recruitment

Participant Inclusion and Exclusion Criteria

Participant inclusion for this study was composed of the following criteria: must be an HCP who has experience of caring for the person(s) with AD. Because this study explores how gender plays a role in patient-provider communication, participants are better to have experience of caring for both male and female patients. However, this is not used as an inclusion criterion. Other than that, participants should speak and read English, have internet access to receive and complete a demographic survey, have access to a phone to complete the telephone interview, and agree to participate in a telephone interview lasting 30 to 60 minutes.

Participants were excluded if they do not have experience of caring for AD patients. This helped guarantee that the information they provided was accurate and relevant enough to avoid bias to some extent. Participants were also excluded if they were non-formal because this study was to examine how gender might affect HCPs' communication when caring for AD patients. However, there is one non-formal caregiver among 11 participants. I will explain it later.

Recruitment Strategies

To delineate a range of possibilities, this study applied maximum variation sampling (Kuzel, 1999) at the beginning of recruitment. After obtaining IRB approval, I first contacted Indiana Alzheimer's Disease Center (IADC) to ask them if they could help recruit HCPs for a 45ish minute's semi-structured interview. The contact message for IADC can be found in Appendix A. I introduced my study to one staff working for IADC and shared an introduction of this study and the interview guide with him. He was willing to pass my recruitment messages to their members. We agreed that he would send me the potential participants' contact information if someone were interested in my study. Other than that, I posted a digital recruitment flyer which can be found in Appendix B through the website *Callforparticipants.com* to see more participants. I also posted a social media post on my personal Facebook asking friends and family to help in the recruitment process. After three weeks, I reshared all my postings and contacted IADC if they made any progress. Besides, I asked him or her to help recruit more participants if they were interested in this study for each participant.

Recruitment began in March 2020 and was closed in May 2020. Published recommendations for qualitative sample sizes suggested that saturation occurs with 12-20 interviews (Kuzel, 1999). Therefore, I expected to recruit 20 participants. Despite this goal, recruitment during the pandemic was more difficult than excepted, especially given that the potential participants were facing unexpected challenges and may not have time and energy to complete an interview as scheduled. In the end, a total of 11 HCPs participated in the study. Among those participants, seven are women, and four are men, with an average age of 41.5, and years of practicing is from one year to over ten years. It is important to note that ten out of 11 participants are professionals, and one is a family caregiver. The reason I did not exclude one male non-formal caregiver was that he was referred by another participant. He had a strong desire to be involved and convinced me he could well-contribute to my study.

Initial Contact and Email Correspondence

No participant was recruited through IADC. All participants were from websites by expressing interest through emailing me directly or responding to the social media post, nine came from *Care.com*, and two came from *Callforparticipants.com*. I responded to each interested participant and answered their questions (e.g., the purpose of my study, scheduling a date and time for the interview, and whether I have obtained IRB approval). I lost four potential participants through this iterated process. One female HCP emailed me and showed her interest in this topic. Then, I sent her an introduction of this study and interview guide. She expressed concerns about the rationale of this study. Two female HCP scheduled a date and time for the interview but cancelled later: one is due to time management, and one is for no reason. One male HCP did not answer the telephone for two times and never responded later.

Procedures

Using a qualitative approach, to understand better how gender plays a role in communicating with AD patients, I collected survey data and conducted the interviews with HCPs with the purpose of gathering a variety of different perspectives from both male and female HCPs who are facing challenges of effectively communicating with their patients.

Once a participant was confirmed for participation, they were emailed with an introduction of this study, demographic survey, and interview guide. They were asked to complete the demographic survey and respond with a date and time that worked best for either a fact-to-face interview or a telephone interview. The demographic survey was sent as an attachment through the email, and participants responded to it either by responding an email or answering each question during the interview.

Demographic Survey

The survey included age, gender, ethnicity, years of caring of persons with AD, if currently care for persons with AD, and their income. Because I intended to explore the differences of HCPs communicating with male and female patients, I also included the genders of patients they cared for. The demographic survey can be found in Appendix C.

Ten participants emailed me their responses before the interview. One female participant did not fill out this survey through the email. She said she was busy and answered each question of the demographic survey at the beginning of the interview. Because there are only eight questions and 11 participants, I input the data and calculated means and average numbers by hand.

Interviews

During the survey completion, participants set up a date and time that best worked with their schedules for an interview. The interviews were projected to take 45 minutes of their time; actual interview times ranged from 28 to 51 minutes. Although I intended for all interviews to be conducted face-to-face after obtaining informed consent, nine interviews were done by telephone due to COVID-19, and two interviews were face-to-face at Starbucks.

At the start of each interview, participants verbally consented and agreed to an audio recording of the interview. I then used the interview guide to lead the discussion with each HCP by asking about their experience of caring for patients. The interview guide was comprised of three sections: caring experience focusing on working with AD patients, communication challenges especially they were facing, and experiences of taken and perceived feeling of communication training. Most questions were open-ended to prompt dialogue with each participant. A few questions were not open-ended (e.g., Have you taken care of both women and men with AD?), and then I had different questions for each direction. The interview guide can be found in Appendix D.

Using the Ecological Model (Street, 2002), I had a few questions that related to the contextualized environments in medical communication (e.g., How do you feel the disease (Alzheimer's) gender makes interpersonal communication different? Do you have specific communication strategies you use to communicate with people with AD?) This interview guide was completed with one of my courses in Spring 2020, which is Qualitative methods. I revised it several times during the class and began practicing interviews with classmates while obtaining IRB approval.

I started the official interviews in April. The first two interviews were scheduled at Starbucks. I think the first interview would be essential and can reflect the potential problems of the interview guide. The first female participant was professional and made me feel comfortable and confident with the topics we talked. Because I had experience of living with AD patient, I started with sharing my feelings about living with patients. My intention was to allow participants to feel closer to me. The second participant was a non-native English speaker, which adding difficulties to the interview. I wondered if I should have a simplified version of the interview guide, allowing participants to focus more on one specific section. However, I dropped off this idea later. Instead, I decided to ask as many questions as possible in the interview guide if I feel I cannot follow my original order of questions. Compared with telephone interviews, face-to-face interviews allowed me to observe participants' body language better understand their perceived feelings working with AD patients. Other nine interviews were conducted through telephone due to the environment changed. During the interviews, I assessed the potential psychological distress of communicating with AD patients, how those HCPs struggle with caring for them, what obstacles they believe are damaging the relationship with patients. In retrospect, I was asked by some participants the reason I did this study. They mostly believed gender could affect interpersonal communication but questioned how such a study could benefit their work in the real world. I shared Street's (2003) article with one participant who was greatly interested in gender role in communication.

Overall, I enjoyed conducting the interviews, but the whole process was harder for me than expected. I found that most HCPs were willing to share their thoughts, and they somewhat shared similar answers or cannot share more profound thoughts for some questions. After each interview, I completed an informal analytic memo and made notes to those surprising me during the interview. This boosted the analysis process because I was able to make special notes of any unique answers and observations I made during the interview. The analysis process is described more fully below.

Incentives

Due to the voluntary nature of the project, the IRB determined that a $20 gift card did not provide any undue influence for subject participation due to the minimal amount of the incentive. Hence, I set up $20 as a compensation standard and informed each participant during the recruitment. Participants received a $20 gift card along with a Thank you card, which was mailed to them as compensation for participating after completing the interview; IADC will be compensated with one copy of the finished paper after completing the whole project.

Data Analysis Process

Demographic Survey

Because there are only 11 participants, I input by hand the demographics survey data to Microsoft Excel. Once data was in Excel, I calculated means and descriptive data (e.g., age, years of caring) for each variable before accuracy checking. The Yes or no questions (e.g., if caring for both male and female patients) were analyzed along with interview transcribe. I note each participant with "Caring for both male and female patients," "Just caring for male patients," and "Just caring for female patients" at the beginning of the transcription for future analysis. The summary of demographic survey can be found in **Table 1** in Chapter Four.

Interviews

All interviews were one-on-one and have been audio-record. To analyze the 11 interviews, I first transcribed each interview. I was able to better familiarize myself with the data during typing the transcription. After all interviews were transcribed, I transcribed and checked all audio recordings for accuracy. All identifying information was removed from the transcripts to meet confidential rules.

The de-identified interview transcripts were coded into potential themes based on how female and male HCPs communicate with AD patients through thematic analysis. The thematic analysis is widely used in qualitative research, offering an accessible and theoretically flexible approach to analyzing qualitative data (Braun & Clarke, 2006). There are several phases of thematic analysis that Braun and Clarke state: (1) to familiarize yourself with the data, (2) initial coding, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report (Braun & Clarke, 2006). This method has been used in similar studies examining patient-provider communication and gender communication (e.g., Matthias et al., 2013; Guan et al., 2018).

The analysis and interpretation of data were carried out and finished in two phases. First, I typed the transcriptions myself and be able to better familiarize myself with the data, and brainstorm potential codes emerging. To analyze the data, I read all transcripts several times and became familiar with the data. Then, I identified items of interest in the data (e.g., a few words such as safety, aggressive, and a short phrase such as holding hands). As Braun and Clarke (2006) view coding as data reduction and interpretation, my third step was to generate initial themes and considered what works and what does not work within themes. For example, several HCPs talked about communication skills and how they make connections with patients, such as holding hands, kneeling and looking at patients' eyes horizontally when talking. I interpreted and coded those skills as a non-verbal communication strategy. Then, I have the draft of the results done and shared it with Thesis Committee chairs.

I received some suggestions and feedback on developing richer results and dynamic methods of data analysis (e.g., printing out all transcripts and mark each keyword by color marker, using a poster board to jot down any potential codes) from committee chairs. By those ways, I analyzed the data for the second time. I re-read all transcripts and found that some potential patterns and themes were emerging within the data. Then, initial coding was reviewed and refined to more specific themes after the discussion and guidance. Finally, I read and re-read the data to determine if current themes relate back to the data set. Once the data had been exhaustively coded, the eight final codes were collated into the three following general themes: healthcare provider gender and communication, patient gender and communication, and communication challenges across all genders. Subthemes are also included and explored in the Chapter Four.

Summary

Chapter Three included details about the methods and procedures used in this study, the steps, and efforts I engaged in with each participant, and how I analyze the data. In the following chapter, the results of the demographics survey and the thematic analysis will be revealed.

CHAPTER FOUR: RESULTS

Chapter Four includes qualitative results and descriptive information from the demographic survey and interview data. I will first delve into the descriptive information collected from the surveys before discussing the three themes that emerged from the interview data. Despite a small sample size, the qualitative results provided some preliminary evidence of HCPs' perceptions of how gender may impact AD patient-provider communication. The themes that emerged from the analysis of interviews are presented below: (a) Healthcare Provider Gender and Communication, (b) Patient Gender and Communication, and (c) Communication Challenges Across All Genders.

Results

Descriptive Information from Demographic Survey

There were 11 HCPs who participated and completed both the survey and interview that followed. Participants had an average age of 41.5 years, and seven out of 11 were Caucasian. Years of practicing ranged from one year to over ten years, and the average years of practicing is 4.45. Ten out of 11 participants are professionals, and one is family caregiver. More descriptive and background information is listed in **Table 1**.

Table 1: Sample Descriptive

Participant	Gender	Age	Years of Caring
Participant 1	Female	48	10
Participant 2	Male	35	5
Participant 3	Female	28	2
Participant 4	Female	32	1
Participant 5	Male	47	9

Participant 6	Female	50	2
Participant 7	Male	53	8
Participant 8	Female	41	3
Participant 9	Male	44	4
Participant 10	Female	32	1
Participant 11	Female	46	4
Average	N/A	41.45	4.45
Mean	N/A	41	4

Background of Participants

Participant 1 is a female, Caucasian, cared for both male and female patients with ten years of caring experience. She also has caring group experience of up to 25 persons when she worked for caring institutions. After that, she transferred to in-home caregiving and cared for one-on-one basis.

Participant 2 is a male, African American, cared for male and female patients in every stage for about five years. He is a non-native English speaker. He participated in several communication training before working as an HCP.

Participants 3, 4, and 10 are similar. They are younger than the rest of the participants, female, Caucasian, and newer in caring for patients. All of them cared for both male and female patients but only a few. They were recruited from Care.com, and they work as in-home HCPs.

Participant 5 is a male with rich experience in caring and communication teaching. He is talkative and compassionate for his HCP work. He emphasized the importance of training, both in communication and caregiving, before pursuing caregiving as a career. He prefers using a metaphor when doing the interview as well as communicating with his patients.

Both participants 6 and 11 have leader experiences in caring group. When asked about the differences between one-on-one caring and group caring, they believe one-on-one caring is more suitable for working with AD patients. Most of AD patients are vulnerable, and both patients and HCPs need more attention to be engaged in care providing.

Participant 7 is a male and only cared for his aunt, who was in the late AD stage for about eight years. He is not a formal caregiver and not eligible for this study. The reason I did not exclude him was that he was referred by another participant. He had a strong desire to be involved and convinced me he could well-contribute to my study.

Participants 8 and 9 are similar in age and caring experience and cared for both male and female patients but only a few. They were also recruited from Care.com, and they work as in-home HCPs.

Themes

The remainder of this chapter is dedicated to exploring the three themes that emerged from the qualitative interview data. It is important to remember that these themes are derived from the HCPs' perspective.

It is important to note that, among 11 participants, ten were formal caregivers, and each cared for at least three AD patients. Thus, making this study produce richer data of perceived feelings for AD patients. The 7th participant was a family-member caregiver who cared for his aunt. Hence, only having one family-member caregiver does not provide enough data to make any conclusions.

Theme One: Healthcare Provider Gender and Communication

The first theme from the data is about the varied understanding of how HCPs think of better ways to communicate with persons with AD, and their perceptions of how HCPs' gender might impact how they talk to patients and how patients' gender might affect that in return. Four subthemes emerged from the data, which provided insight into characteristics of HCP's gender communication.

More Effort on Strategy. In this study, female HCPs seem to be more aligned with applying a group of strategies, such as body language, and shared understanding for a more efficient communication. Participant 1 (female) said,

> "If they were in a wheelchair, you want to be face-to-face, you don't want to stand over to them, you don't want to lord over them and make them feel intimidate. But if you come down straight and face-to-face, it is not getting the situation either. See if you can be an angle, you want to be eye level, that is a good communication strategy. And I am trying to think…like I said handholding.... They feel more secure, and you want to calm them. For some reason it comes into effect."

Participant 4 (female) stated,

> "I am trying to talk to them tactically. They don't know me really until you get used to be there with them. The greatest part is when you can take something from their past, music or pictures or memory, and you can relate to them."

Starting with storytelling is another strategy female HCPs in this study applied in practice. Participant 10 offered, "Alzheimer's can remember things year and year ago in the past. I start with asking them to tell me more, and I want to hear stuff like that because that was a good talking about a good time, I think that gives them pleasures too." Participant 1 said, "One way I started is asking them good memories, stories. The greatest part is when you can take something from their past, music or pictures or memory, and you can relate to them."

Female HCPs in this study also believe "treat[ing] patients with dignity" would be a significant tool to build connection with patients. Participant 11 (female) said, "I know these guys [persons with AD] well, they suffer a lot. I believe I can see their pain and disappointment for themselves sometimes, when they feel they messed up again. So, my feeling is if you could act like normal, nothing wrong, they would be more comfortable. My way is always treating patients as they are fine like us."

Overall, the communication strategies female HCPs in this study frequently used are treating patients like they are normal, face-to-face when talking, paying more patience, and getting closer to patients by talking more about their memories and past stories. Male HCPs in this study did not express these strategies.

Differing Views on Authority. Gender seems to influence how HCPs develop authority when giving orders, making decisions, and delivering bad news. Female HCPs in this study believe authority will have an adverse impact on effective communication with AD patients. Participant 6 (female), who has leader experiences in group caring, stated,

> "I don't argue with them, I don't confound with them. And they are always right. That is very interesting because when back to the day in the very beginning, the concept was we always need to correct patients when talking something was not true. That involved redirecting them. But it changed right now."

Participant 10 (female) said,

> "Although at time you may have to talk to them like you are the authority figure, you don't want to talk to them like parents even they mostly reverted back to…usually their 20s. So, it is talking to them… instead of saying 'well your mom passed away years ago', you may want to say, 'I

> called mom and she know where you are, and it was going to be Ok'. It is not the truth, but it alleviates staff like worries they have inside of them. That is your main purpose."

While female HCPs tend to be more tender when dealing with patients with resistance, male HCPs in this study seem to be more dominating. Participant 2 (male) said: "Sometimes they had no plans to talk, just be silent you know. If they want to write something at somewhere, and then just write it down. But sometimes you have to reject it and say no, even if something not positive. I am a strong man and I have passion for my job, it means I need to stand out and show them I am right." He also believes male has advantages in caring for persons, especially when caring disable patients, because male usually develops better in authority and strengthens which can benefit caring process.

Male HCPs in this study believe that giving orders to AD patients directly, instead of discussing with them, can benefit communication outcomes (e.g., avoid time-consuming). They seem to not likely to consider the side effects of being tough and showing powerful positions. Female HCPs in this study seem to be gentler and softer when achieving their goals during caring for AD patients.

Perceptions of Negative Emotional States. Male HCPs in this study seem to focus more on patients' negative emotional states derived from the disease. To show an evolving understanding of patients, participant 7 (male) with over ten years of caring experience stated,

> "Confusion, agitation, and violence are the most difficult part. Sometimes they are really aggressive. They tend to be aggressive. They really want to combat. It wasn't easy for me to take care of them."

Additionally, male HCPs in this study showed an awareness of patients' vulnerability, and they believed it was their responsibility to reduce that vulnerability. Participant 9 (male), who has group caring experience, mentioned,

> "Even in late stage, the woman I was one-on-one still knew that she needed that help. And she apologized if there were accidents or apologized for me having to sit in the restroom with her, having to wash her completely. I feel like even in late stage, until almost to the point of death, they still feel that vulnerability."

Using Metaphor. Male HCPs in this study prefer using metaphor to explain their perspectives on caregiving during the interview, as well as communicating with their patients as they stated. Metaphor is a way of directly referring to one thing by mentioning another for rhetorical effect. Participant 5 (male) stated this can help him to better communicate with his patients, especially when he felt difficulty in talking to aged patients. When he explained his perceived complexity of process of listing, responding, and understanding of interpersonal communication, he said, "You know how wiring like an electrician, how they wire things up? You have a circuit, and the wires could be crossed, anyone could be going on by their heart, no clue at all. They response to things differently, they might act differently." He also emphasized the importance of trainings, both in communication and caring, before pursuing caring as a career. He stated medicine changes every day, every year.

When mentioned the challenges of talking to AD patients, participant 7 (male) used "invisible drawing" to express his feeling of caring someone with impaired memory. He said, "They might not pay attention to what you were saying. Like point A to point B, there may be a disconnection between these two points, there may be several invisible points between them. Like something drawings or pictures you can't see clear. We don't know. Sometimes when you tell them to do something, they might not pay attention to you with their disability." He also used "balance is off" to describe patients' fear and helpless condition, "Sometimes their balance is off. I had a particular person with Dementia, he has a condition with brain. When he moved out of the state, and the environment changed totally, his balance is off. He fears a lot and very unstable."

Overall, female HCPs in this study are more aligned with direct methods to communicate with AD patients, while male HCPs in this study pay more attention to indirect methods, such as metaphor.

Theme Two: Patient Gender and Communication

The second thematic category emerging in the analysis is related to how HCPs think the gender of patients might impact on AD patient-provider interaction.

More Engagement. Participants in this study described female AD patients as more engaged in every stage of Alzheimer's, regardless of patients' language deterioration or verbal skills. Participant 6 (female) said:

> "I think men are more disinterested, I think they are harder to engage. To me, women are easier to engage. I don't know if that is my personal, just the way I interact with others. Because women can sit for puzzle, women can make a pie or knit. Men want to be out, working on a truck. Men are harder to engagement, especially with Alzheimer's. I just think they are not engaged for a conversation at a time."

Participants also identified that female patients in this study seem to be more meticulous, and male patients seem to be harder to react from simple words. Participant 5 (male) reported: "The man was more stubborn, so I have to talk to them longer. Sometimes they do not want anything, they don't want medication. You have to convince them with longer time and more words."

A more detailed example is,

> "A lot of men want to find their car, they want to go somewhere, they have responsibility to go get the family to have the car. And to me they are a bit of combat or harder to turn back around again, to get them to believe 'Your car in the shop and you can't go to get your car right now'. And I have a little bit difficult to get them to buy the story or calm down a little bit. I am not having many women who don't get up easily. To women, I can talk to them lots of things and convince them by easier ways."

Although not all, male AD patients have been identified as more stubborn than female AD patients by HCPs in this study. Female AD patients are easier to get connections and to engage in conversations and other daily activities with HCPs, reported by participants in this study.

Inadequate Security and Uneasiness. Inadequate security is another subtheme that participants in this study identified as differences between male and female AD patients. For example, "Women fears and want more security. When someone has disease, they feel unstable. They want to be close to you, want somebody around them."

Participant 5 (male) reported that,

> "I have cared three women in past few years. They always want me to double check appointments with them, to ensure my duties to them. I don't feel uncomfortable because I know they just feel not safe. I remember one. She told me it's terrible to realize she would forget everything eventually. She felt that she was losing her memory little by little. Her only daughter lived a little far from her, so she asked me if I could call her every day to talk to her."

When asked if patients' gender affect how they talk, HCPs reported that female patients are more likely uneasy especially when their HCPs are male. Participant 5 (male) offered, "I look at their gender and they look at my gender also. There are certain ways I talk to women. To me, women are usually a bit uneasy since I am a man."

Participant 11 (female) stated, "[Women patients] have to follow directions, when you tell them or suggest something. If there are too much for them to deal with, and they might get frustrated. They became very defense and uneasy."

In a nutshell, lacking security and uneasiness are more related to female AD patients, especially when they are working with male HCPs, reported by HCPs in this study.

However, not all participants in this study believe there are noticeable differences between male patients and female patients, as well as how gender affects HCP's responding to persons with AD. For example. Participant 1 (female) said,

> "I don't see lots of difference. Sometimes they do something and don't know what they were doing and saying, and sometimes they do something and do know what they did and said. It is not about the gender; it is the disease."

Theme Three: Communication Challenges Across All Genders

The third thematic category emerging from the analysis is common challenges perceived by HCPs in communication across all genders.

Repetition is unavoidable. Both female and male HCPs in this study reported repetition is challenging when communicating with patients with AD, regardless of the patient's gender. Participant 8 (female) said,

> "The most difficult part? The repetition. I find that challenging. I try to react at the first time, but after four times it is challenging to be as enthusiastic as I did at the first time. So again, I try to change the subject, because I can't maintain my first responding."

Participant 4 (female) stated,

> "I think the only thing is kind of troublesome when there is repetition. I actually clean a house for a woman with dementia right now. She is in early stage, but every time I go, she shows me her wedding dress when she got married 50 years ago. And she shows me multiple times while I was

> there. It could be easy to get frustrated and trying to do something else. ‘Have you seen my wedding dress?’ I just stop what I was doing and go back. To Someone who doesn’t have patient with Alzheimer’s, that could be frustrated.”

Participant 2 (male) reported that,

> “They will forget what you told them. You have to repeat the same thing over and over, and they will repeat same thing over and over. You act like it is brand new when you would do that with someone who has Alzheimer’s. But a beginning conversation with someone, it keeps us the same. And I just see where they were because it was going to be vary.”

Build Trust with patients. In this study, both male and female HCPs were convinced of the importance of building trust with AD patients. As discussed above, people with Alzheimer’s usually feel unsafe. Participant 3 (female) mentioned, “Suspicion is the main thing.” Meanwhile, HCP’s goals are usually maintaining patients’ physical safety, assisting patients with daily activities, and avoiding hospitalization. Trust between HCPs and patients involves understanding and supporting a person, which can be accomplished through more efficient communication. Thus, they believe that building trust is challenging and essential to achieve their goals during the caregiving.

Participant 9 (male) said,

> “I feel like even [when they were] in late stage, until almost to the point of death, they still feel that vulnerability, and they want someone they can trust. The woman I was one-on-one even was in late stage, she still knew that she needed that help. And she apologized if there were accidents or apologized for me having to sit in restroom with her, having to wash her completely. That is very challenging to step in and say trust me. They don’t know me really until you get used to be there with them.”

Participant 3 (female) said:

> “I feel like in every stage, they want someone they can trust. That is very challenging to step in and say trust me. It is especially important to take your time, be gentle, take softly, and gain their trust. If you gain their trust,

> they will talk to you and tell you something they wouldn’t tell anybody else.”

Participant 5 (male) stated:

> “For me, there is not much difference dealing with man or women. I pretty much to use soft tone, try to work with them with trust. You have to pay first, then they might trust you. I have taken one guy for many years, and it is hard for him to take medicine and eventually to take anything. He was thinking like ‘I was old, and I am doing fine’. One day, I felt he was not ok, and asked him again and again. The he finally said he haven’t pee for 2 days. So, I called the office, and his doctor took him to hospital immediately. Had I not stayed for a while it was never known that. It could be a bad ending.”

Overall, the common challenges perceived by HCPs in this study seem like generating from the characteristics of AD patients. As discussed above, AD patients, both male and female, usually have difficulties on several levels, such as memory loss, language decline, social isolation, and depression (Small & Perry, 2012). And both male and female HCPs reported obtaining patients’ trust is challenging but essential for caring satisfaction.

Summary

Chapter Four examined qualitative data and descriptive information collected during this study. As shown in this section, although male and female HCPs encounter similar difficulties and challenges, participants in this study expressed the varied experience of medical communication within the context of AD caregiving.
They demonstrated their perspectives on gender’s influence on strategies and skills during patient-provider interaction. Chapter Five will focus on the discussion and implications derived from these findings.

CHAPTER FIVE: DISCUSSION

Chapter Five will discuss the findings described in the previous chapter, the implications for these findings and theoretical method, the limitations of this study, and will conclude with considerations for future research about gender role in patient-provider communication within the context of Alzheimer's, as well as the suggestions for further designing of communication training.

Communicating with and caring for AD patients is challenging and can be stressful and emotionally draining for both family members and HCPs. With the understanding that communication is one of the most significant issues in caring for individuals with AD, as well as gender might be a role affecting the outcomes and perceived feelings during the interaction, the current study aimed better to understand gender's potential role in patient-provider communication when caring for AD patients. The ecological model is a valuable tool that guides research about the interplay of several variables impacting patient-provider communication, including gender, and how it plays a part with multiple contextual factors that influence patient-provider interactions.

This research used qualitative methods to understand varied perspectives of communication barriers, challenges, advantages, and knowledge from male HCPs and female HCPs when caring for Alzheimer's patients of both sexes. Maximum variation sampling was used to recruit HCP participants after obtaining IRB approval, and these participants were recruited from *Care.com* and *Callforparticipants.com*. As participants, HCPs were asked to complete a demographic survey and then a semi-structured interview. Two interviews were conducted face-to-face, and the rest of the interviews were by telephone.

Chapter Four highlighted the findings and themes that emerged from the qualitative data using thematic analysis. The first research question in this study asked how male and female HCPs differ in their perceptions of and reported behaviors when communicating with AD patients. These themes reveal that male and female HCPs have different perceptions of negative emotional states, varied views on authority, and attitudes in applying communication strategies. This study revealed that, compared with male HCPs in this study, female HCPs of this study tend to be more tender when dealing with patients with resistance, focused less on patients' negative emotional states, and seemed to be more aligned with applying a group of strategies (e.g., body language, eye contact) for more efficient communication. With these strategies, it appeared that female HCPs seemed to be more confident when caring for AD patients than male HCPs do in this study. However, male HCPs in this study were convinced that they were also equipped with tools when interacting with AD patients, which is using metaphor. This finding is not consistent with current studies to some extent and will be discussed more later.

The second research question asked how HCPs describe differences when caring for and communicating with male and female AD patients. As discussed in Chapter One, female AD patients suffer a more significant deterioration in language than male AD patients at advanced ages, indicating the possibilities of more challenges of a female in a later stage of AD (Irvine, Laws, Gale, & Kondel, 2012). However, HCPs in this study offered that female AD patients from this study seem to be more engaged in every stage of Alzheimer's, regardless of patients' language deterioration or verbal skills, than male AD patients do. The reason behind this finding is varied and will be discussed more later.

Besides, female AD patients were more likely uneasy than male AD patients, especially when working with male HCPs, reported by HCPs of this study. Besides, HCPs in this study described common challenges in caring for and communicating with AD patients across all genders. Notably, because these findings were derived from this study's small sample, I was not claiming these as categorical gender differences, but the phenomenon and reported behaviors I observed from this study.

The following discussion section will further explore the theoretical and applied implications, potential directions for future research, suggestions for designing communication training, and possible limitations of this study.

Discussion

This study aimed to examine gender impact in interacting with AD patients from HCPs perspectives. Overall, participants expressed their perceptions of gender influences in patient-provider communication when caring for AD patients. Thematic analysis of the interview data and descriptive analysis of the demographic survey data led to discovering three themes; discussion of each of these themes follows.

Healthcare Provider Gender and Communication

This theme in Chapter Four acknowledges that male and female HCPs have differing attitudes and views on authority, emotional states, and communication methods towards caring for AD patients, and gender impact does exist in interacting within the context of Alzheimer's. Two findings are consistent with existing research and conclusions of past studies, and the other two findings are not compatible with current findings to some extent.

More Effort on Strategy

The first subtheme in this theme supported the significant importance of communication strategy and showed how male and female HCPs might differ in applying these strategies.

First, this finding fits into the existing conclusions from past research: female HCPs seem to be engaged in more positive nonverbal communication and provided more health-related information (Ports, Reddy, & Barnack-Tavlaris, 2013), compared to male HCPs. In this study, HCPs confirmed that they use communication strategies purposely when caring for patients. And female HCPs seem to be more aligned with applying a group of communication strategies than male HCPs do, such as body language, shared understanding, and building connections with AD patients. Other than common strategies, one interesting finding from this current study is that some HCPs discussed starting with storytelling and proved to be useful when caring for AD patients. AD patients usually have difficulties on several levels, such as memory loss, language decline, social isolation, and depression (Small & Perry, 2012). To gain more information from patients and get closer to them, female HCPs in this study usually start a conversation by asking their stories many years ago and then building a stronger connection with them.

Second, some strategies female HCPs of this study tend to be applied in their caring activities can be categorized into existing scholarship. For example, Smith and colleagues (2010) have identified compensatory or facilitative strategies to assist with common areas of challenges, and structured these under the mnemonic MESSAGE: maximize attention and avoid distractions, watch your expression and body language (e.g., relax and calm, show interest), keep it simple, short and familiar, support their conversation (e.g., repeat and rephrase, find the word, and reminders the topic), assist with visual AIDS (e.g., gestures and actions, pictures and objects), get their message both verbal and nonverbal, and encourage and engage in communication. In addition to verbal communication strategies, the use of nonverbal communication strategies has also been recommended, including eye contact, face to face, using gestures to help explain commands and a calm tone of voice, using instrumental touch to guide a person through tasks, using overemphasis and exaggerated facial expression, and moving slowly (e.g., Beck et al., 1993; Goldfarb & Pietro, 2004; Small et al., 2003). Female HCPs in this study also confirmed the effectiveness of body language (e.g., eye contact, face to face), and they assured the advantages of applying such strategies in practice.

To reduce stress and strain on both patients and HCPs, and job turnover among healthcare workers, previous studies have formulated more strategies other than ones mentioned above. For instance, Small, Kemper, and Lyons (1997) found that syntactically simple sentences were more easily comprehended than complex ones by individuals with AD, which encouraging HCPs to use more simple sentences with persons with AD. Other communication strategies included the following: slowed speech rate, verbatim repetition, closed-ended questions (yes/no response to questions), simple sentences/reduced complexity, asking or giving one thing at a time, and avoiding baby voice/words (e.g., Beck, Heacock, Rapp, & Mercer, 1993; Hopper, 2001; Small, Gutman, Makela, & Hillhouse, 2003). Hence, third, this finding may also provide more strategies (e.g., building connecting by storytelling) to be proved useful for future research, which exploring how to serve better family members and HCPs who care for persons with AD.

Differing Views on Authority

The second subtheme in this theme found that male and female HCPs develop differing views on authority when giving orders, making decisions, and delivering bad news. One male participant believes males have advantages in caring for persons, especially when caring for disabled patients, because males usually develop better authority and strength which can benefit the caregiving process. Past studies show that males may take a more individualistic and instrumental approach to health management (Elderkin-Thompson & Waitzkin, 1999). Thus, they may spend proportionately more on offering advice, expressing opinions, and independently making recommendations for others to accept or reject. This study's finding affirmed this phenomenon, which is male HCPs in this study are more dominating to offer suggestions to patients than female HCPs are.

Female HCPs believe authority will harm effective communication with AD patients, which might be one reason behind this phenomenon. Based on past studies, female physicians often exhibit more patient-centered behaviors, and are more concerned about psychosocial health issues than men physicians (Weisman &Teitelbaum,1985). Another study (Tannen, 1990) indicated that females typically talk to build community and rapport, whereas males use communication as a method of establishing status and independence. Compared with male HCPs in this study who seem to be more dominating in caring for patients, female HCPs of this study are more engaged in their interactions with patients, and they purposefully built trust with patients. And they are more likely to be tender when making decisions of treatment, delivering bad news, and providing feedback.

Perceptions of Negative Emotional States

In the nonverbal domain, females tend to be more expressive and more accurate at perceiving other's emotions than males (Burgoon, 1994). The third subtheme revealed that male HCPs of this study were more aligned with perceiving emotional states when communicating with their patients, especially negative emotional states, which is surprising to some extent. Gender differences in HCPs' communicating styles are in part related to their beliefs and values associated with one's identity and socialization experiences (Giles & Street, 1994). Hence, female HCPs often exhibit more patient-centered behaviors and are more concerned about psychosocial health issues than are male HCPs. On the other hand, males may focus more on biomedical topics, offering advice, expressing opinions, and independently making recommendations for others to accept or reject (Elderkin-Thompson & Waitzkin, 1999).

Notably, Male HCPs in this study might be more sensitive to emotions, mostly when there were only four male participants in this study. Male HCPs described "agitation, aggressive, violence" as perceived feelings from their patients, and how they were attentive to patients' vulnerabilities. Participant 9 (male) reported that even in late stage, he can still recognize his patients' vulnerability until almost to the point of death. One reason behind this phenomenon might be the similar caring experiences of two male participants in this study. Both male participants who reported negative emotion feelings have taken formal communication training and have several caring certifications. One male participant mentioned he is sensitive to people's emotions, and he believes it is his responsibility to take care of them. When asking how they think of the communication training they have taken, both male participants offered the importance of concerning psychosocial aspects of patients’ health (e.g., lifestyle, family, emotions).

The present study might contribute to the fact that male HCPs in this study expressed more about perceiving emotion status than female HCPs do. Compared to male HCPs, female HCPs in this study seem to focus more on practical aspects of interacting with patients than male HCPs, such as communication strategies for better outcomes, and making a safer environment for patients.

Using Metaphors

In health communication, metaphor is a powerful form of language that offers a range of characteristics particularly suitable for HCPs facing challenges of communicating with patients. Metaphors can be used as a useful device to grasp an unknown (target) concept by using a known (source) concept (e.g., naming and explaining a phenomenon, experience, or illness), which otherwise would remain unintelligible or obscure. Metaphor plays an essential role as they frame patient’s experience of illness, (positively or negatively) influencing their perception of therapy or even of themselves as individuals (Ervas, Montibeller, Rossi, Salis, 2016). Messer and Kennison (2018) believe that individual differences, such as gender identity differences, can play a role in processing novel metaphors. And early evidence suggests a female advantage at higher levels of strategy use, comprehension, motivation, willingness to confront, and authentic input exposure (Bacon & Finnemann, 1992).

However, male participants of this study showed a higher level of using metaphors when doing the interviews. One male participant reported he prefers using a metaphor when doing the interview as well as communicating with his patients. As he mentioned, he used “wiring like an electrician” to explain how he thinks of the complexity of listing, responding, and understanding interpersonal communication. When mentioned the challenges of talking to AD patients, another male participant used “invisible drawing” to express his feeling of caring for someone with impaired memory. Notably, three male participants of this study are talkative and willing to share. Two of four male participants have taken communication training, which might contribute to this finding to some extent.

Patient Gender and Communication

In theme two, participants reported various perceptions of male and female AD patients during patient-provider communication.

More Engagement

The first subtheme described female AD patients in this study as more engaged in the interaction with HCPs, regardless of the stages of Alzheimer’s, patients’ language deterioration or verbal skills from HCPs’ perspective. This finding is interesting if discussing the characteristics of AD patients and past literature.

As mentioned in Chapter Two, Buckwalter and colleagues (Buckwalter et al., 1993; Henderson & Buckwalter, 1994) found that male AD patients retain verbal skills better than female patients in the early to middle stages of the disease. Irvine, Laws, Gale, & Kondel (2012) believed that women suffer a more significant deterioration in language than men at advanced ages, which indicates the possibilities of more challenges of a female in their later stage of AD. Although AD patients mentioned in this study are mainly in the middle to late stages, HCPs in this study reported that female AD patients seem to be more comfortable interacting with HCPs than male AD patients. Female AD patients usually talk more, shared more than male AD patients do, and male AD patients in this study seem to be harder to reach from simple words, reported by HCPs in this study. Future research could be conducted to examine how to improve AD patients' satisfaction based on their gender.

Inadequate Security and Uneasiness

Most AD patients experience neuropsychiatric symptoms at some point during the disease. These symptoms can lead to poorer medical and functional outcomes and increased caregiving burden (Mielke, 2018). Recent studies suggest that the distribution of neuropsychiatric symptoms may vary by patients' gender. In a study of patients with newly diagnosed AD, researchers found females had a higher mean Neuropsychiatric Inventory score for depression, anxiety, and total neuropsychiatric symptoms (Spalletta et al., 2018). Findings from another study indicated that female AD patients have higher depressive symptoms, whereas male AD patients are more likely to have agitation (Lee, Lee, & Kim, 2017).

Findings from this study are consistent with previous conclusions to some extent. Inadequate security and uneasiness are two subthemes identified by HCPs of this study as female AD patients' characteristics. Female AD patients from this study have a lower security level, especially when their HCPs are males, reported by HCPs in this study. This finding was derived from the conversations of how HCPs think patients' gender would affect their communication style and behaviors during the interaction. Thus, better characterization of the gender differences in neuropsychiatric symptoms among AD patients might help identify better treatment targets for females and males and develop more appropriate and efficient communication strategies during caregiving. I will discuss this more in Implications.

Communication Challenges Across All Genders

Theme three discussed the common communication challenges in AD caregiving perceived by HCPs in communication across all genders. Two subthemes emerged: Repetition is unavoidable and Build Trust with patients.

The first subtheme revealed that both female and male HCPs in this study believe repetition is challenging when communicating with AD patients, regardless of the patient's gender. HCPs described "repetition" as repeating instructions and answering patients' questions several times to meet patients' satisfaction. Once asked participants to describe their experience of caring for AD patients and the most challenging part in this career, they expressed repetition is unavoidable and it lowers their satisfaction working with patients. The second subtheme is building trust with patients. In this study, both female and male HCPs claimed that they made every effort to build trust with their patients and make connections to them to have a healthier relationship with them. Trust between HCPs and patients involves understanding and supporting a person, which can be accomplished through more efficient communication. Although challenging, they believe that building trust is essential to achieve their goals during the caregiving.

These findings are associated with symptoms of this progressive disease. The forgetfulness and recent memory loss are most often the first clinical symptoms of AD, shortcomings in language abilities are present in the majority of cases at the earliest stages of the disease, with deterioration in both production and comprehension abilities as the disease progresses (Appell, Kertesz, & Fisman, 1982; Cummings, Benson, Hill, &

Read, 1985; Kempler, 1991). Past literature also reported that at each stage of Alzheimer's disease, cognitive decline, including language impairments and breakdown in communication, negatively affects the patient-provider dyad, leading to time-consuming on functional activities, and increased stress and burden for HCPs (Clark & Witte, 1991; Lubinski & Orange, 2000; Small, Geldart, & Gutman, 2000; Williamson & Schulz, 1993). Memory loss and language impairment can cause a lower perceived safety for AD patients and damage the effectiveness and efficiency of patient-provider communication during HCPs and AD patients.

When asking the participants if they have any strategy to avoid such repetition, most believe there is no better way but to offer more patience. One female participant said she usually has some board with concise drawings (e.g., a pill indicating "time for medicine") with her when caring for AD patients. However, she still believes that repetition is the most common challenge in caregiving AD patients. Except that, some participants apply nonverbal communication strategies recommended by past studies to encourage AD patients to talk and share, including establishing eye contact, using gestures to help explain commands, sitting face to face, using a calm tone of voice, using instrumental touch to guide a person through tasks, using overemphasis and exaggerated facial expression, keeping distractions in the environment to a minimum, giving the patient time to respond, and moving slowly (Bartol, 1979; Beck et al., 1993; Goldfarb & Pietro, 2004; Sheldon, 1994; Small et al., 2003).

Except for all themes and subthemes in Chapter Four, this study also has other findings. Weisman and Teitelbaum (1985) believed that gender congruence (i.e., physician and patient are of the same gender) might lead to more productive provider-patient interactions. However, the current study revealed no apparent pattern. In this study, both male and female HCPs claimed that they do not perceive a difference when caring for female and male AD patients about their communication styles, skills, and perceived connections with patients. They consider each patient unique, which would not affect how they communicate or care for them.

On the other hand, although female HCPs more frequently use partnership-building and other forms of facilitative communication as discussed above, there is no evidence showing whether male or female patients are more expressive and assertive when interacting with female HCPs (Street, 2001) in this study. One participant who has cared for over ten patients said that she has similar perceptions of male and female patients if talking about connections with them as well as their willingness to speak to HCPs. It seems that gender does not affect the congruence during patient-provider communication in this study, whether with the same gender or not.

Implications

This research might contribute to the future studies on patient-provider communication in three important ways.

Future Research

First, although numerous studies have examined gender communication in provider-patient relationships, there is inadequate information on how gender might impact patient-provider communication in the context of Alzheimer’s. This study provides some contradictory evidence about gender impact on AD patient communication, comparing with those studies examining gender impact on the general population. For instance, Mulac (2006) indicated that references to quantity and directives are used more by male’s communication, while intensive adverbs, mean length sentences, and references to emotions are employed more by female’s communication. However, HCPs in this study indicate no significant gender difference in patients’ references in communication, regardless of the stage of AD, age, and gender. One reason might be that female and male AD patients have functional and language impairments, although, at different levels, it is difficult to state the gender impact on the use of references in the context of AD. Therefore, for future studies examining factors that have an impact on patient-provider communication in the context of Alzheimer’s or a similar disease, researchers may want to more focus on other factors that could influence patients’ communication styles instead of gender as a variable. This study provides insight into this type of information, which stands in contrast in some ways to the traditional patient-provider relationship as revealed in the past literature.

Second, the present study supports some past findings regarding gender-based perceptions and stereotypes on patient-provider communication and enlarges the scope of applying these findings. For instance, past studies state males may take a more individualistic and instrumental approach to health management, and they may spend proportionately more on offering advice, expressing opinions, and independently making recommendations for others to accept or reject (Elderkin-Thompson & Waitzkin, 1999). This study found that male HCPs in this study are more dominating to offer suggestions to patients than female HCPs. Not only does this gender impact on patient-provider communication hold true for generic population, but also for people in medical encounters.

This study is to understand better the role of gender, both the patients' and the HCPs', within the context of caring for persons with AD. The findings of this study also demonstrated that not every HCP is mindful of the gender impact in medical communication, let alone applying targeted strategies or improving communication skills based on gender influence. Therefore, there is a clear benefit for researchers to further consider gender impact when examining HCPs and AD patients' interactions. I believe those findings from this research, focusing on gender impact in medical encounters, could serve as appropriate evidence as literature for future research.

Theoretical Implications

According to the ecological framework, interpersonal communication is also influenced within other contexts such as organization context, media context, socioeconomic context (Street, 2003). Thus, the way in which HCPs and patients communicate with one another may in part depend on the type of health care organization (e.g., managed care, fee-for-service), political and legal issues (e.g., experience with malpractice, patients' bill of rights), use of and exposure to media (e.g., the Internet, direct-to-consumer-marketing of medical products), economic factors (e.g., insurance, income), and culture (e.g., ethnicity, religion). While the limited number of participants and limited interview data make sweeping theoretical implications not possible, there are some findings which can be interpreted and understood within the ecological framework.

First, although any of the contexts discussed in the ecological model (organizational context, media context, legal context, and cultural context) may impact medical encounters, the one most fundamentally embedded during the interactions is the interpersonal context (Street, 2003). From this point, what unfolds during the interactions depends on both parties' goals, skills, perceptions, emotions, and reactions from others. Besides, interactants also adapt their responses given situation-specific considerations. According to the ecological model, cognitive-affective factors account for adaptation based on strategic (e.g., goals, purpose), attributional (e.g., stereotypes, impressions), and relational (e.g., trust, familiarity) considerations. That adaptations can also be found in response to a partner's communicative actions (Street, 2002). For example, physicians generally will provide more information, support, and reassurance when they interact with patients who ask questions, offer opinions, and express concerns (Street, 1991; Street, 1992).

This current study's finding affirmed this mutual influence and adaptation to some extent. In this study, male and female HCPs expressed they have varied reactions and response when caring for AD patients. For instance, HCPs of this study usually provide more information and support to AD patients when patients expressed their feelings, concerns, and questions openly. Because female AD patients seem to more engage in the interactions with HCPs as discussed above, HCPs in this study might become more involved when working with female AD patients. Hence, not only both parties' goals, skills, and emotions, but also gender, can have an impact on patient-provider interactions.

Secondly, the organizational context considers the influence of communication within formal organizational systems (e.g., hospitals, health social services). Within this context, patient-provider communication has particularly important implications for medical decisions, and the interaction has an impact on outcomes (e.g., treatment, resolution) (Street, 2003). In this study, three participants of this study have experience of caring for group patients in caring institutions (e.g., nursing homes) for several years, two of them are female, and one is male. Compared with one male HCP working for a health care organization in this study, these two female HCPs mentioned that their perceived primary responsibility is to protect patients' safety. They seem to be more focused on the basic needs of patients and resolution for their families (e.g., schedule appointments, medicine plan), instead of driving patients to appointments, or asking patients to take medicines. This finding has been well interpreted by the ecological model. Meanwhile, female HCPs in this study seems to be more suitable within the organization context, which providing a good example to verify the complicity of interpersonal communication within multiple contexts. Individual differences cannot be examined in isolation of other variables or processes that also account for communicative action.

From these points, gender-linked behaviors can override situation-specific considerations, such as one's perceived role or power in the encounter, to adapt their communication to different situations. For future studies examining gender role in interpersonal communication within the context of AD, gender is but one of the many factors that may correlate with attitudes and behaviors in caregiving.

Communication Training and Interventions for HCPs

First, the findings from this study confirmed the importance of taking communication training from HCPs' perspective and adds to the growing awareness that research is needed to understand what communication strategies are more appropriate with gender during the completion of AD caregiving. Previous studies state that female HCPs often exhibit more patient-centered behaviors and are more concerned about psychosocial health issues than are male HCPs. This study found that male HCPs showed a higher level of sensitivity to emotions, based on this study's reported behaviors. Although sample is small, further explanation for this phenomenon might be that these male participants who reported negative emotions have taken formal communication training and have several caregiving certifications. They stated the effectiveness of communication training they have taken, and willing to take more in the future.

Second, this study could serve deeper understandings for designing robust communication training. For example, participants in this study identified lacking security as differences between female and male AD patients (e.g., Women fear and want more security. Women are more likely want somebody around them). It is worthy of exploring how to cope with female patients to provide them more perceived security by verbal and nonverbal language. Other than that, the findings show that female AD patients in this study seem to be more engaged in every stage of Alzheimer's, regardless of patients' language deterioration or verbal skills, and male AD patients seem to be harder to join the conversations, especially when HCPs' use simple words (e.g., how about you?). Therefore, future communication training from HCPs' perspective could develop and explore more methods for conducting effective conversations when caring for male AD patients.

What is more, because AD patients might develop different connections and communication styles when working with female or male HCPs (e.g., lower perceived safety with male HCPs), future training may consider setting varied goals for female and male HCPs and reinforce the awareness of gender impact in the training. For example, Green (2005) implemented a prototype that used a simple AI model of emotion and a hard-coded script and addressed a qualitative analysis in recordings of conversations in his training program. The training objective is to help HCPs recognize characteristics of AD discourse by using assistive techniques, such as typical coping strategies employed by the patients, and the techniques for keeping a conversation going on no matter how a patient responds as well. Another objective is to teach HCPs how to help an AD speaker reminisce by learning story elicitation techniques, providing psychological benefits to AD patients (Green, 2005). One impossible way of enhancing this training is to add the knowledge of gender differences in AD patients, and the diverse strategies and recommendations caring for female or male AD patients.

Limitations

Like any research study, this one has significant limitations to consider. Limitations of this study include recruitment issues, inadequate preparation of interview guide, and lack of more complex survey measurements.

Though I made every effort to recruit more participants, the relatively small sample size consisted of experienced HCPs who cared for AD patients limited the findings of gender impact in medical encounters. It would be more attractive if the recruitment message sent to IADC be more detailed and informative. Though all participants were recruited online, 10 out of 11 participants are local, which impaired geographic diversity. Geographic diversity can be influence by physical and cultural elements. Thus, data from participants with similar geographic characteristics might lack diversity and damage the generality to a larger population.

Second, this study does not examine gender as a role within more contexts (e.g., cultural context) through the ecological model, such as how HCPs’ cultural and socioeconomic background impact relationship of gender and AD caregiving communication, and what I have learned from the conversations with and observations of the participants that is different with popular views (e.g., In western culture, AD patients can have a better living environment in senior caring institutions instead of being at home. Eastern culture holds the opposite attitudes toward it). I think there are two possible reasons account for this limitation. First, the interview guide was not as detailed and personalized as possible to include questions related to cultural background, personal goals of being HCPs, attitudes, and beliefs. If adding more direct questions related to it (e.g., how the community you lived may impact your way of communicating with AD patients), this study may generate richer data to interpret how gender plays in other contexts during interactions with AD patients. Second, only one male participant in this study was not born in America, which accounts for a relatively small sample.

Third, although examining the relationship of the gender of HCPs and AD caregiving communication, this study did not exclude the data from participant 7, a non-formal caregiver, which might cause bias to some extent. And there are challenges when interviewing non-formal caregivers in this study. Lay caregivers face unforeseen challenges in many aspects, such as lack of emotional support, unpaid, multiple family roles. Therefore, there are several unexpected stops during the process of interviewing him. Thus, damaging the productivity of the data produced by the non-formal caregiver.

Fourth, other than a demographic survey, one more survey or measurement could be conducted to better support this study’s findings. For example, uneasiness and inadequate perceived security have emerged from the qualitative data. A measurement examining how HCPs think of their patients, and their perceived feelings of patients, might help identify the varied characteristics of AD patients based on gender, and strengthen some findings from this study.

Conclusion

Gender differences in medical encounters are real and can significantly impact the communication process and outcomes. Meanwhile, media, cultural environments, and demographics contextualized interpersonal communication. Patient-provider communication within the context of Alzheimer’s is no doubt important for today’s health care system, because the AD population is increasing rapidly in the U.S. This study demonstrates the potential gender role in patient-provider communication within the context of Alzheimer’s. Along with current communication training for HCPs, this study could also bring insights for future training designing based on gender role in patient-provider communication.

APPENDICES

Appendix A: Contact Message to IADC

Dear officer

Hope you are having a great day.

This is Ying Lyu, a master/international student in Applied Communication in IUPUI. My advisor is Marianne Matthias who is a great researcher in Health communication with a major in Chronic illness/pain management. With great respect, I wonder if I can ask you a favor about an interview of caregivers of persons with AD for my master thesis.

I am interested in Alzheimer's for years due to family history. This is also one of my reasons of studying applied communication related Health issues abroad. My thesis focuses on how gender influence the communication outcomes/styles of caregivers of persons with AD. Even though there are some effective training programs for caregivers, they pay little attention to the difference in the performance and symptoms of the male patients and female patients as the disease progresses, as well as the diversified communication outcomes from female and male care providers. Without knowledge and awareness of gender differences, family members or caregivers may frustrate in their attempts to apply unadjusted skills, which can cause more breakdown and stress. Thus, my study would benefit not only family members but also formal care providers.

I have known your prestige institution have done so much for people suffering from Alzheimer's through the studies and cases on the website. I wonder if you could help me to make more progress for my research study by passing my recruitment massage to your members to see if anyone would be interested in my study. As a return, I can share my research paper with them, and I can also provide a $20 gift card for each participant for their contribution.

Eligible parent participants for this study must:

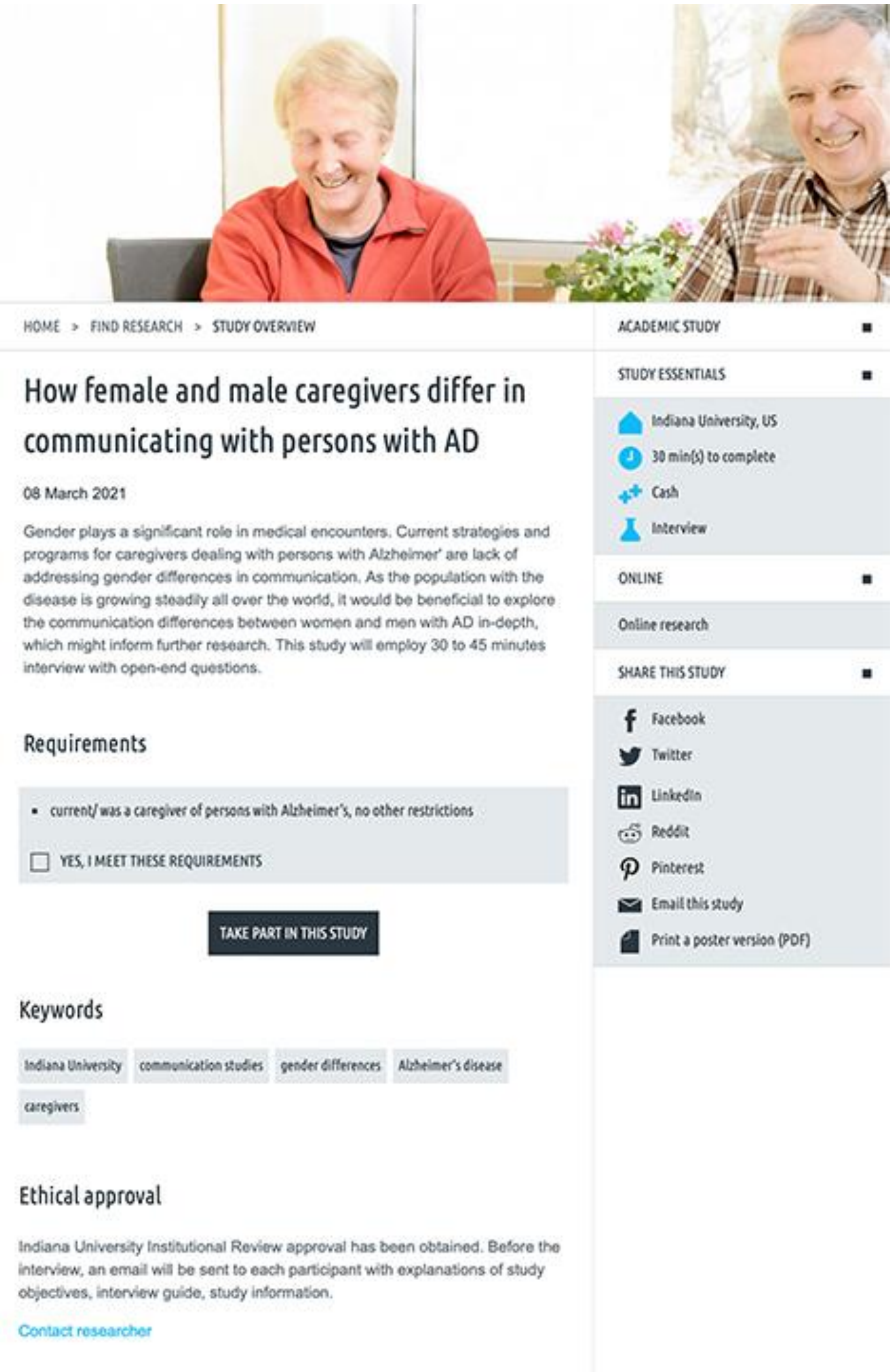
- Being a formal healthcare provider;
- Have experiences of caring for Alzheimer's patients;
- Speak and read English;
- Have internet access for surveys;
- Agree to complete an online survey;
- Agree to participate in a telephone or face-to-face interview lasting 30 to 60 minutes.

And I am not sure if I get the right person to contact but any advice or suggestion are welcomed.

If anyone has interest in enrolling in or learning more about this study, please contact Ying Lyu, by either emailing to ________________ or calling __-___-____. If you know of someone else who may be interested in or eligible for this study, please forward this request to them.

I appreciate your time. And looking forward to hearing from you.

Appendix B: Digital Recruitment Flyer



HOME > FIND RESEARCH > STUDY OVERVIEW

How female and male caregivers differ in communicating with persons with AD

08 March 2021

Gender plays a significant role in medical encounters. Current strategies and programs for caregivers dealing with persons with Alzheimer' are lack of addressing gender differences in communication. As the population with the disease is growing steadily all over the world, it would be beneficial to explore the communication differences between women and men with AD in-depth, which might inform further research. This study will employ 30 to 45 minutes interview with open-end questions.

Requirements

- current/ was a caregiver of persons with Alzheimer's, no other restrictions

☐ YES, I MEET THESE REQUIREMENTS

TAKE PART IN THIS STUDY

Keywords

Indiana University | communication studies | gender differences | Alzheimer's disease | caregivers

Ethical approval

Indiana University Institutional Review approval has been obtained. Before the interview, an email will be sent to each participant with explanations of study objectives, interview guide, study information.

Contact researcher

ACADEMIC STUDY ■

STUDY ESSENTIALS ■

Indiana University, US
30 min(s) to complete
Cash
Interview

ONLINE ■

Online research

SHARE THIS STUDY ■

Facebook
Twitter
LinkedIn
Reddit
Pinterest
Email this study
Print a poster version (PDF)

Appendix C: Demographic Survey

1. What is your age? __________

2. What is your gender?

A. Male

B. Female

C. Other (please specify)

D. Prefer not to say.

3. What is your ethnicity?

A. While

B. Hispanic or Latino

C. Black or African American

D. Native American or American Indian

E. Asian / Pacific Islander

F. Other (please specify)

4. Are you currently caring for the person(s) with AD?

A. Yes

B. No

C. Prefer not to say.

5. What is your relationship with care receivers?

A. Family member

B. Caregivers

C. Other (please specify _______________________________)

6. What is the gender of patients you are caring or have cared?

A. Male

B. Female

C. I have cared both.

7. Whether your income is:

A. Comfortable

B. Just enough to make ends meet

C. Not enough to make ends meet

Appendix D: Interview Guide

Hi! Thank you so much for reaching out and agreeing to participate in this interview. Before we begin, I would like to take just a moment to review the study again with you, this information should be a review from the email and study info sheet you have already received.

Again, my name is Ying, and I'm from the Department of Communication Studies at IUPUI. This study is for my master thesis that examining gender role in patient-provider communication within the context of Alzheimer's. For this interview, I am going to specifically, ask you about your experiences of caring for Alzheimer's patients, how you speak to them, and what is your perceived feelings about the differences between working with male and female patients.

Are you okay with continuing with the (telephone) interview?

Awesome, thank you.

You could just simply express your views in your own words and take as much time as you need.

A. Caring experience

1. How did you first get involved in being a formal caregiver?
2. How long have you taken care of persons with Alzheimer's? How many persons with AD have you taken care of?
3. What difficulties do you have during caring for them?

B. Communicating issue

1. What is your communicating experience when caring for them?
2. How do you interact with people with AD?

3. What do you think is the most difficult part when talking to them?
4. How do you think women and men are diffident when talking/responding? (Can you tell me more?)
5. How do you talk to female persons with AD? How do you talk to male persons with AD?
6. Will you adjust your communication styles/skills when caring men/women? How?
7. (Several people I have talked to have described …. What do you think?)

C. Training programs

1. Do you have any communication strategy? (such as simple sentences/reduced complexity, asking or giving one thing at a time) Does it always useful?
2. Have you taken any professional trainings (or something like that) or asked somebody for help about how to talk to persons with AD?
3. Do you want to take professional training programs to improve communication skills? What do you need most if so?
4. Will you adjust your ways of talking/persuading to them for different goals? How?

Well, that is all I want to know. I want to again thank you so much for your participation. The gift cards will be mailed to you soon. Also, if you know of anyone interested in this study, I would love if you could share my information with them. Once again, thank you so much for participating! Good-bye!

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Education

- M.A. in Applied Communication, Indiana University degree earned at Indiana University-Purdue University Indianapolis. May 2021.
- B. A. in Journalism and Communication earned at Southwest University of Political Science & Law. July 2007.

Professional Experience

Marketing Manager October 2015-July 2018

- Strengthened services branding initiatives by developing communication campaigns, promotional materials, market intelligence information, and databases for Beijing, CHINA market to maximize outreach.
- Introduced new service model by exploring successful experience of overseas for existing and prospective customers.
- Wrote and edited periodicals, web content and CIO presentations.

Consultant March 2014-October 2015

- Self-employed
- Created a closed-loop service model to provide comprehensive service to Chinese customers who need purchasing overseas property
- Supervised project schedules to make sure that important milestones were being met at every phase.

Editor August 2007-March 2014

- Developed and deepened positive relationships with writing, design, and production team members.
- Implemented and improved strategies for online and print publications to optimize coverage, increase revenue and grow subscription numbers.
- Wrote articles with E-magazine of Chinese National Geography.
- Collaborated with writers to maintain individual voice while eliminating issues with factual accuracy, grammar, and spelling.