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THE RELATIONSHIPS BETWEEN LICENSED VOCATIONAL NURSES' CARE, DOCUMENTATION, AND PERCEPTIONS OF DEMENTIA-COMPROMISED BEHAVIORS IN THE NURSING HOME

by

JENNIFER J. YEAGER

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
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Abstract

THE RELATIONSHIPS BETWEEN LICENSED VOCATIONAL NURSES' CARE, DOCUMENTATION, AND PERCEPTIONS OF DEMENTIA-COMPROMISED BEHAVIORS IN THE NURSING HOME

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December 2013

Behavioral and psychological symptoms of dementia increase as Alzheimer’s disease and related dementias progress; these symptoms occur in as many as 80% of persons with dementia living in nursing homes. Behavioral and psychological symptoms of dementia, also known as dementia-compromised behaviors, are a source of stress for nursing home staff, family members, and other residents and adversely affect the quality of life and safety of residents. Ethnonursing, a qualitative research method, was used to examine the relationship between licensed vocational nurses’ responses to dementia-compromised behaviors, documentation, and perceptions of dementia care. Data analysis resulted in three overarching themes related to the licensed vocational nurse caring for persons with dementia residing in the nursing home who exhibit dementia-compromised behavior: (a) the resident with dementia; (b) the licensed vocational nurse; and (c) documentation of dementia-related behaviors. Licensed vocational nurses provided safe and effective care to persons with dementia residing in nursing homes. However, results of this study supported findings from previous research; while the licensed vocational nurses translated theory into practice, knowledge and practice were inconsistent in their documentation.

Chapter 1: Overview of the Research

Overall Purpose of the Study

A new diagnosis of Alzheimer's is made every 68 seconds in the United States; by 2050, the prevalence is expected to be a new diagnosis every 33 seconds (Alzheimer's Association, 2013). Alzheimer's disease (AD) constitutes the majority of dementia cases, accounting for 60-80% of those diagnosed, followed by vascular dementia, dementia with Lewy bodies, frontotemporal dementia, mixed dementia and others. Dementia is a syndrome characterized by progressive decline in memory, cognitive ability, and problem solving to the point it interferes with the individual's ability to attend to personal needs, communicate effectively, and increases the risk for the development of behavioral and psychological symptoms of dementia.

Informal discussions with three nursing home directors of nursing (DONs) in rural Texas revealed two significant details: (a) nursing home nurses have difficulty interpreting the needs of persons with dementia, and (b) nursing home nurses view behavioral and psychological symptoms of dementia as routine, and do not document behaviors and the circumstances surrounding their occurrence. Supervisors were unable to explain why licensed vocational nurses (LVN) normalize behavioral and psychological symptoms of dementia, also known as need-driven dementia-compromised behaviors (NDBs), and were concerned omissions in documentation represented ineffectual care or interventions.

Licensed vocational nurses echoed these comments. Informal conversation with two LVNs at a nursing home in rural Texas revealed they do not document NDBs when a particular behavior became frequent. According to the nurses, they documented when behavior changed or when an incident involving another resident or staff member occurred.

Need-driven dementia-compromised behaviors include agitation, aggression, anxiety, apathy, appetite disturbances, depression, delusions, disinhibition, euphoria, hallucinations, pacing, psychosis, picking, rummaging, sleep disturbances, and wandering (Tampi et al., 2011; Wetzels, Zuidema, De Jongbe, Verbey, & Koopmans, 2010). Dementia-compromised behaviors might lead to staff avoidance of residents (Van Camp, Lerman, Cherry, & Bielecki, 2005), unmet needs (Rossby, Beck, & Heacock, 1992), and adverse impact on residents' quality of life and safety, and significant increase in the cost of care (Herrmann et al., 2006; Voyer et al., 2005). Additionally, these behaviors increase the likelihood of being prescribed antipsychotic drugs off-label, even though pharmacologic measures have limited effectiveness in curtailing NDBs, and carry the risk of deadly side effects (Recupero & Rainey, 2007; Wetzels et al., 2010). The purpose of this study was to examine the relationships between LVNs' responses to NDBs, documentation of NDB, and the nurses' perceptions of dementia care.

Introduction of Articles Appended

The first article presents the state of the science of licensed vocational nurse care of the person with dementia (PWD) who exhibits NDBs, and resides in nursing homes. Review of the literature derived three aspects of care: (a) interventions for NDBs, (b) education to manage NDBs, and (c) documentation of LVN care. Additionally, gaps in

the literature were identified as disparity in conceptual definitions and poor documentation practices lead to confusion and disrupted communication. Recommendations for future research are presented, based on these findings.

The second article presents findings from an ethnonursing study of the relationships between licensed vocational nurses, persons with dementia residing in the nursing home who exhibit dementia-compromised behavior and documentation. Data immersion revealed three overarching themes related to the LVN-resident dyad and documentation of nursing care: (a) the resident with dementia, (b) the licensed vocational nurse, and (c) documentation of NDBs. Following presentation of findings, recommendations for future research are presented. Dissemination of the results from this study will increase quality of LVN nursing care provided PWD who reside in the nursing home.

Manuscript #1

Vocational Nurses and Nursing Home Residents with Dementia: State of the Science

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Abstract

Background: A progressive decline in memory, cognition, and judgment characterizes dementia. As the disease progresses the prevalence of dementia-compromised behavior increases. The current perspective suggests triggers of dementia-compromised behavior are unmet needs, and the person with dementia is unable to communicate in a manner typically understood by others.

Purpose: The purpose of this manuscript is to (a) describe the state of the science for vocational nurse care of persons with dementia, (b) identify gaps in the literature related to vocational nurse care of persons with dementia who exhibit dementia-compromised behavior, and (c) provide recommendations for future research.

Discussion: First line therapy for dementia-compromised behavior has been coined non-pharmacologic interventions. Non-pharmacologic interventions include activity-oriented, psychosocial, and sensory interventions. There are few studies validating nursing interventions; however, research is promising for massage, music, and animal-assisted therapy, functional analysis, physical activity and Montessori based activities.

Conclusions: A thorough understanding of vocational nursing care of persons with dementia residing in nursing homes who exhibit need-driven dementia-compromised behavior will occur through further qualitative and quantitative research.

Keywords: need-driven dementia-compromised behavior, licensed vocational nurse, nursing home, person-centered care

Person-centered care places the nursing home resident at the center of decision-making by incorporating individual choice into the care plan. Person-centered care leads to empowerment and behavior change, increased quality of care for the resident, and increased satisfaction for nursing home staff (Morgan & Yoder, 2012). In the nursing home environment, person-centered care has become part of the culture change movement. Long-term care websites promote culture change in nursing homes as a means of encouraging individualized services, endeavoring to reinforce dignity, promote well-being, and improve quality of care for nursing home residents (Advancing Excellence in America's Nursing Homes website, 2013). A thorough, individualized evaluation, the key to person-centered care, provides the front line staff in nursing homes the information necessary to develop tools to manage behavioral and psychological symptoms of dementia exhibited by persons with dementia residing in their facilities.

Background and Significance

Every four seconds, a new diagnosis of dementia occurs, accounting for more than 7.5 million new cases a year (Greenblat, 2012). The World Health Organization reports more than 65 million people will be living with dementia worldwide by 2030 (Greenblat, 2012). Alzheimer's disease (AD) constitutes the majority of cases of dementia, accounting for 60% to 80% of diagnoses, followed by vascular dementia, mixed dementia and others ("What is dementia?" 2013). Dementia is a syndrome characterized by progressive decline in memory, cognition and judgment, affecting the individual's ability to perform routine tasks ("What is dementia?" 2013).

As the disease progresses, the prevalence of behavioral and psychological symptoms of dementia (BPSD) increases, occurring in as many as 80%

(Lyketsos et al., 2000; Margallo-Lana et al., 2001) to more than 95% (Steinberg et al., 2008) of persons with dementia (PWD) living in nursing homes. Behavioral and psychological symptoms of dementia include aggression, agitation (Turner, 2005; Wetzels, Zuidema, De Jongbe, Verbey, & Koopmans, 2010), depression, apathy (Steinberg et al., 2008; Wetzels et al., 2010), psychosis (Wetzels et al., 2010), screaming, restlessness, wandering, culturally inappropriate behaviors, hoarding, cursing, shadowing (Turner, 2005), sexual disinhibition (Steinberg et al., 2008; Turner, 2005), anxiety and hallucinations (Steinberg et al., 2008). These behaviors increase the likelihood of antipsychotic drug prescription, even though pharmacologic measures have limited effectiveness in curtailing behavioral and psychological disturbances and carry the risk of deadly side effects (Wetzels et al., 2010).

Behavioral and psychological symptoms of dementia are a source of stress for nursing home (NH) staff, family members, and those around them. The Centers for Medicare and Medicaid Services (CMS) use the Minimum Data Set 3.0 (MDS 3.0) to monitor an array of behaviors exhibited by PWD residing in NHs. Nationwide, 5.2% of nursing home residents wander, 7.8% verbally abuse others, 4.6% are physically abusive towards others, 7.1% exhibit behaviors not directed at others, and 10.3% reject care (Centers for Medicare & Medicaid Services [CMS], 2013). These behaviors adversely affect the quality of life and safety of residents and significantly increase the cost of care (Herrmann et al., 2006; Voyer et al., 2005).

The current perspective is unmet needs trigger BPSD; Algase et al. (1996) refer to BPSD as need-driven dementia-compromised behaviors (NDBs) and developed a model describing the interaction between the disease process, the individual and behavioral expressions of need. The PWD might be uncomfortable, or in distress, and unable to communicate their needs in a manner typically understood by others. Understanding the dynamics between NDBs and unmet needs is paramount to the provision of person-centered (Dettmore, Kolanowski, & Boustani, 2009). The cost of failing to determine these underlying needs is poor health outcomes, social isolation, caregiver strain, and an increase in economic burden (Beck et al., 2002).

Purpose

The purpose of this paper is to (a) describe the state of the science for vocational nurse care of person with dementia residing in nursing homes who exhibit dementia-compromised behaviors, (b) identify gaps in the literature related to vocational nurse care of persons with dementia residing in nursing homes who exhibit dementia-compromised behaviors, and (c) provide recommendations for future research.

Review of the Literature

Articles included in the review of literature related to vocational nurse care of persons with dementia (PWD), pertained to persons over the age of 65, residing in nursing homes (NHs), and who exhibited dementia-compromised behavior (NDB). Exclusion criteria included, (a) not related to care of PWD, (b) only pertained to informal caregivers or unlicensed care staff, (c) related to issues other than NDBs, (d) dealt with medical issues related to dementia or end of life care, or (e) related to care provided in non-NH facilities (e.g., residential care homes). Three categories emerged from the literature: (a) interventions for NDB, (b) education to manage NDB, and (c) documentation of vocational nursing care.

Interventions in Need-driven Dementia-compromised Behavior

Interventions to prevent, diffuse, or de-escalate NDBs were categorized into pharmacologic and non-pharmacologic strategies. Pharmacologic interventions comprised the use of conventional or atypical antipsychotics and cholinesterase inhibitors for the management of NDBs. Non-pharmacologic strategies included activities outside the purview of medications or physical restraints.

Pharmacologic interventions. Antipsychotic prescribing, including off label use, to manage NDBs was widespread, even though risk benefit analysis demonstrated a significant increase in the risk of stroke, transient ischemic attack, and death (De Deyn et al., 2005). In spite of known risks, atypical antipsychotic prescribing rates were roughly 32% in United States nursing homes (Kamble, Chen, Sherer, & Aparasu, 2009). Through the Partnership to Improve Dementia Care, the Centers for Medicare and Medicaid Services (CMS) implemented a nationwide program to reduce antipsychotic drug prescribing in NHs by 15%. The desire to improve physical, mental, and social quality of life in residents predicated implementation of this program. By promoting person-centered care, which included a thorough, individualized evaluation, the PWD residing in a NH underwent a trial of non-pharmacologic interventions prior to prescription of antipsychotic medications, unless the person had experienced significant mental distress and risk of physical harm (Advancing Excellence in America's Nursing Homes website, 2013). The nurse was vital to ensuring the selection and implementation of non-pharmacologic interventions for NDB and documenting resident response. Documentation served to disseminate information to the multidisciplinary team and ensure antipsychotic drugs were not used to chemically restrain, but to improve function and quality of life (Abdallah, Remington, Melillo, & Flanagan, 2008; Jenkins & McKay, 2013). Documentation also ensured accurate information was available for Minimum Data Set 3.0 (MDS 3.0) completion and care planning (Straker & Bailer, 2008).

Non-pharmacologic interventions. Non-pharmacologic interventions for NDBs encompassed therapies designed to modify behavior through comfort, attention, and stimulation. The categories of therapies that follow are: (a) sensory interventions, (b) psychosocial interventions, and (c) activity-oriented interventions (see Table 1).

Sensory interventions. Sensory interventions encompassed a wide range of interventions aimed at altering individual stimulus. Several small studies reported a decrease in anxiety and agitation (McClive-Reed & Gellis, 2011; O'Neil et al., 2011) and aggression (Suzuki et al., 2010) using hand massage and touch. Hand massage and touch might be used as adjuncts to other therapies, such as aromatherapy using essential oils (Brooker, Snape, Johnson, Ward, & Payne, 1997) or music therapy (Hicks-Moore & Robinson, 2008); however, there was not enough evidence to support their use in isolation or recommend change in practice (Hansen, Jorgensen, & Ortenblad, 2008).

Music therapy took on two forms: individualized or environmental. During mealtime, music reduced agitation (Ho et al., 2011), physically aggressive, and verbally aggressive behaviors (Chang, Huang, Lin, & Lin, 2010). Background music and singing by care providers reduced aggression and increased communication during activities of daily living (Gotell, Brown, & Ekman, 2009). Individualized music therapy, where the resident chose the music, reduced afternoon anxiety (Sung, Chang, & Lee, 2010) and sundowning (Lesta & Petocz, 2006). Although small sample size and short study duration made it difficult to draw conclusions, music therapy should not be discouraged (Vink, Bruinsma, & Scholten, 2011).

Multisensory stimulation, also known as *snoezelen*, involved individualized care aimed at multiple senses. Encouraging residents to choose their own clothes and including touch, and music or aromatherapy during activities of daily living (ADLs) reduced resistance in one study (Van Weert, Van Dulmen, Spreeuwenberg, Ribbe, & Bensing, 2005). In an effort to reduce wandering, Cohen-Mansfield and Werner (1998) implemented environmental modifications that stimulated sight, sound, and smells representing the outdoors; they reported a downward trend in trespassing and exit seeking. Snoezelen rooms were trialed in NHs, affording residents a variety of self-selected interaction alternatives (e.g., aromatherapy, bubble tubes, fiber optic lights, beanbag chairs, tape player) resulting in a reduction in agitation (Minner, Hoffstetter, Casey, & Jones, 2004; Robbins & Norton, 2011) and apathy (Verkaik, Van Weert, & Francke, 2005). Others noted no difference between individualized multisensory stimulation and individualized activities, such as playing cards (Forbes, 2004). Overall, due to the lack of rigor in studies, there was no evidence to support the benefit of multisensory stimulation or snoezelen (Chung & Lai, 2009).

Ambient temperature, lighting, and noise affected resident quality of life in the NH (Garre-Olmo et al., 2012). Altering environmental stimulation through a reduction in noise decreased resident agitation in the NH (Ragneskog, Gerdner, Josefsson, & Kihlgren 1998; Joosse, 2012) and sleep disturbance (Koch, Haesler, Tiziani, & Wilson, 2006). The introduction of *white noise* into the environment of PWD reduced verbal agitation (Burgio, Scilley, Hardin, Hsu, & Yancey, 1996). Physical barriers, such as a colored cloth strip placed across an entryway, successfully prevented PWD from entering restricted areas (Feliciano, Vore, LeBlanc, & Baker, 2004) or leaving secured areas (Dickinson, McLain-Kark, & Marshall-Baker, 1995). However, Price, Hermans, and Evans (2009) reported there is no rigorous research supporting the use of barriers to prevent wandering or elopement.

Bright light therapy received significant attention in the literature. The use of bright light boxes to provide light therapy during the morning improved sleep quality (Fetveit, Skjerve, & Bjorvatn, 2003; Lyketsos, Veiel, Baker, & Steele, 1999), reduced restlessness (Haffmans, Sival, Lucius, Cats, & Van Gelder, 2001) and positively influenced circadian-rhythm disturbance (Skjerve, Bjorvatn, & Holsten, 2004). Installation of high intensity, low glare fixtures demonstrated modest improvement in sleep when used in the morning or throughout the day (Sloane et al., 2007). In contrast to these findings, Barrick et al., (2010) and Skjerve et al. (2004) reported that alterations in ambient lighting through high intensity, low glare light fixtures or the use of light boxes did not benefit agitation or other behavioral disturbances. Issues with study rigor adversely affected the ability to recommend light therapy for cognitive, behavioral or sleep issues in PWD (Forbes et al., 2009).

The use of essential oils, known as aromatherapy, positively influenced NDBs, specifically agitation (Ballard, O’Brien, Reichelt, & Perry, 2002). Therapy was implemented by burning the oils, spraying them on bedding or using them for massage (Holmes & Ballard, 2004). Limited research provided insufficient evidence to recommend aromatherapy as treatment for agitation in PWD (Holt et al., 2009).

Psychosocial interventions. Pet therapy has gained widespread attention. Studies demonstrated a reduction in aggression with pet visitation (Majic, Gutzmann, Heinz, Lang, & Rapp, 2013; Williams & Jenkins, 2008), decreased agitation (Richeson, 2003; Williams & Jenkins, 2008), increased socialization (Richeson, 2003) and decreased apathy (Motomura, Yagi, & Ohyama, 2004; Williams & Jenkins, 2008). Dogs were the prevalent therapy animal; however, stuffed animals (Marx et al., 2010) and robotic pets (Kramer, Friedmann, & Bernstein, 2009; Marx et al., 2010) were also used. Additionally, pets either lived at the facility or simply visited (Filan & Llewellyn-Jones, 2006). Although rigorous evidence was limited, animal assisted therapy showed potential during care of PWD (Filan & Llewellyn-Jones, 2006).

Therapy involving simulated presence used audio or video tapes of loved ones talking to the nursing home resident with dementia. Study results were equivocal, with decreased agitation noted (Camberg et al., 1999; Bayles et al., 2006), and mixed results reported (Miller et al., 2001). Although listening to audio tapes of family members improved attention and social behaviors in some residents, when implemented late in agitation episodes or during hallucinations, behavior escalated (Miller et al., 2001). Zetteler (2008) suggested further research before recommending simulated presence therapy for NDBs.

Reminiscence therapy, validation therapy, and reality orientation fell under the purview of cognitive therapy, or psychosocial interventions. Group reminiscence therapy facilitated by NH staff centered on a common theme (e.g., childhood experiences or family, with or without accompanying photographs) demonstrated improved well-being

(Booker & Duce, 2000), reduced depression, and increased cognitive functioning (Wang, 2007) among participants.

Validation therapy involved listening to the PWD with empathy, validating their life experiences, and assisting them to resolve issues, either through one-on-one interaction or in small groups (Deponte & Missan, 2007; Morton & Bleathman, 1991). Validation therapy reduced behavioral disturbances (Deponte & Missan, 2007), specifically agitation, irritability, and apathy (Tondi, Ribani, Bottazzi, Viscomi, & Vulcano, 2007), and improved socialization (Morton & Bleathman, 1991).

Reality orientation took place one-on-one or in small groups. One-on-one interaction usually consisted of repeated, consistent, orientation to time, place, and person. In small group orientation, reinforcement of selected topics occurred verbally and through placards (Hogstel, 1979; Spector, Davies, Woods, & Orrell, 2000). Additionally, PWD were encouraged to accomplish tasks, such as ADLs, without assistance in an effort to promote self-esteem (Hogstel, 1979). Reality orientation appeared to have a positive impact on cognition and socialization for persons with mild to moderate dementia, but not those with severe dementia. Benefits were short term (Patton, 2006; Spector et al., 2000).

Activity-oriented interventions. Studies examining the benefit of activity-oriented interventions to reduce NDBs in PWD varied in type, duration, and frequency of activity. Walking might be beneficial in reducing depression, agitation, wandering (Thune-Boyle, Iliffe, Cerga-Pashaja, Lowery, & Warner, 2012) and sleep disruption (Connell, Sanford, & Lewis, 2007; O’Neil et al., 2011; Thune-Boyle et al., 2012), as well as aggression (Buchanan, Christenson, Ostrom, & Hofman, 2007). Connell et al. (2007)

reported decreased verbal aggression with outdoor activities, such as gardening. Hernandez (2007) reported increased overall sense of well-being, as well as decreased agitation and stress among residents using a wander garden that offered gardening opportunities. Due to the lack of rigor in studies examining the effect of physical activity on NDB, its benefits were uncertain (Forbes et al., 2008).

A variety of other interventions fell under the guise of activities to address NDBs. Spa baths reduced aggression during activities of daily living (Buchanan et al., 2007), and relaxing in a glider swing was reported to reduce aggression throughout the day (Buchanan et al., 2007). Dancing, whether socially or as part of a dance-based exercise program, increased socialization; but, authors cautioned extra care to avoid increasing confusion and anxiety (Guzman-Garcia, Hughes, James, & Rochester, 2013). Finally, Montessori-based activities provided individualized activity for PWD residing in NH; these activities, brightly colored and made of everyday tools from a home, increased socialization and decreased passivity (Orsulic-Jeras, Judge, & Camp, 2000). As with other therapies, there was insufficient evidence to support changing practice.

Vocational Nurse Education to Manage Need-driven Dementia-compromised Behavior

For many researchers, staff education, was an avenue to reduce NDBs in PWD (Buchanan et al., 2007; Perkins, 2012). Formal education programs (so designated by a proper name, many times copyrighted) were available for purchase or request by others outside of research (see Table 2). Other education programs were less formal and had no copyright (see Table 3).

Formal education programs. Developed by Landreville, DiCaire, Verreault, and Levesque (2005) in Quebec, Canada, implementation of AGI (program name taken from the first three letters of the word agitation, pronounced ajee) served to educate licensed and unlicensed caregivers of PWD to manage episodes of agitation. Built on the ABCs (A = activating event; B = behavior; C = consequences) of behavior management framework (Crombie, Snell, & Boyd, 2008); the goal of agitation management was to determine the trigger, or antecedent, of the behavior. De-escalation or prevention of agitation occurred by determining the underlying cause and modifying, or eliminating, the trigger (Crombie et al., 2008; Landreville et al., 2005).

The Commonwealth Department of Health and Aged Care, Australia, developed the Emotional Responses as Quality Indicators (ERIC) to apprise NH care staff of needs-based care of PWD exhibiting NDBs. The program focused on resident emotions as the reason for underlying needs (Chrzescijanski, Moyle, & Creedy, 2007).

The Electronic Dementia Guide for Excellence (EDGE), developed by the New York State Department of Health, was an Internet-based resource based on the biopsychosocial model of practice, combined with Maslow’s hierarchy of needs. The program goal was to instill person-centered care practices in NH staff who work with PWD; the program was Internet-based in order to reach care staff residing throughout the state. Developed for a New York State audience, it was available to anyone accessing the Internet site (Ronch et al., 2004).

The CARES® program was another internet-based education program with the overall goal of improving resident care, specifically care related to quality indicators set forth by CMS. CARES® was derived from “Connect with the resident; Assess behavior;

Respond appropriately; Evaluate what works; Share with the team" (Hobday, Savik, Smith, & Gaugler, 2010, p. 14). HealthCare Interactive Incorporated developed the program in conjunction with the Alzheimer's Association and a panel of experts in the field of gerontology.

The Alzheimer's Association also developed The Foundations of Dementia Care training program. This program was different from others in that it was a packaged program sold and taught by an association-sponsored team. The program was comprehensive, interactive, and focused on enhancing the quality of life experienced by PWD residing in NH by teaching caregivers to communicate with residents and learn to understand their behavior (Zimmerman et al., 2010). Content details of the formal education programs are in Table 2.

Informal education programs. Informal education programs included a variety of topics pertaining to dementia (Crombie et al., 2008; Hagen & Sayers, 1995; Kuske et al., 2009; Testad, Aasland, & Aarsland, 2005), management strategies for aggression (Hagen & Sayers, 1995; Testad et al., 2005) and management strategies for NDBs in general (Crombie et al., 2008; Davison et al., 2007; Monette et al., 2008; Testad et al., 2005). Other programs addressed decision making processes regarding use of restraints (Testad et al., 2005), pharmacological and non-pharmacological interventions for NDBs (Crombie et al., 2008; Monette et al., 2008), environmental considerations (Kuske et al., 2009), communication (Kuske et al., 2009), care goals (Hagen & Sayers, 1995) and maintaining resident and staff safety (Hagen & Sayers, 1995). Follow-up meetings to discuss implementation issues were part of some training programs (Davison et al., 2007; Testad et al., 2005) while other programs did not include follow-up meetings

(Crombie et al., 2008; Hagen & Sayers, 1995; Kuske et al., 2009; Monette et al., 2008). Please refer to Table 3 for detailed information concerning each informal education program.

Researchers investigating staff training arrived at varied conclusions. Chrzescijanski et al. (2007) determined while training reframed staff perceptions of NDBs from that of a problem to an expression of need, education did not result in a long-term decrease in frequency of aggression. McCabe et al. (2002) and Kuske et al. (2009) also noted regression in resident behavior several months following the educational program. Testad et al. (2005) reported an education program combining theory with practice and follow-up sessions resulted in a 50% drop in restraint use, but no change in resident agitation. The researchers interpreted this to mean staff developed increased understanding of NDBs. Their study did not include long-term follow-up, so it cannot be determined if the change in practice persisted over time. Crombie et al. (2008) and Hobday et al. (2010) also reported an increase in staff knowledge; Landreville et al. (2005) reported increased staff self-efficacy, and job satisfaction after implementation of staff training programs.

Documentation of Vocational Nursing Care

The Centers for Medicare and Medicaid Services required documentation of behavior, antecedents, and consequences prior to administration of antipsychotic medications. Additionally, response to medication administration and monitoring of potential side effects was to be evident as well. It was not enough for a resident to carry a diagnosis of psychosis. Resident charts were to clearly state NDBs had not responded to non-pharmacologic interventions, were not due to stress within the NH environment, or were the result of altered communication secondary to dementia (O'Hara, n.d.).

In 2012, The Department of Health and Human Services (DHHS) conducted a survey examining documentation on residents receiving antipsychotic medications in the NH. Researchers determined 99% of records audited failed to meet documentation standards. Documentation failures occurred during all steps of the nursing process: resident assessment, care planning, documentation of interventions and evaluation (Pattison & Whitley, 2012). Supporting the findings of DHHS, Kverno, Rabins, Blass, Hicks, and Black (2008) found over 40% of residents with neuropsychiatric symptoms had no documentation of care; when documentation was present, it most often concerned physical safety (e.g., alarms, belts), not interventions to reduce agitation or aggression.

Other researchers found a variety of documentation issues in the NH. Martin, Hinds, and Felix (1999) determined multiple forms led to documentation omissions and difficulty retrieving data, resulting in poor communication between healthcare providers. Voyer et al. (2013) noted this as well, stating NH shift reports contained more pertinent resident information than chart documentation. Voutilainen, Isola, and Muurinen (2004) echoed a similar sentiment. Researchers' determined NH staff developed a vast amount of knowledge concerning their residents that was pertinent to daily care; however, only 21% of charts they audited contained daily updates on condition. Voutilainen et al., (2004) concluded inaccurate documentation affected continuity of care and resident safety.

The high rate of staff turnover in NHs made it extremely important that documentation was timely and thorough. Time constraints compounded by high staff to resident ratios, affected documentation (Martin et al., 1999; Voyer et al., 2013). As stated by Voyer et al. (2013), “nursing staff often [found] themselves confronted with a choice between delivering care, or documenting it” (p. 13).

Vital to nursing home survival; assessment data documented in the chart was submitted to CMS at designated intervals to satisfy required reporting on resident physical and clinical conditions, abilities, and care wishes. Quality scores derived from CMS data told the public how well nursing homes were doing at meeting resident needs (Centers for Medicare & Medicaid Services [CMS], 2013). Funding for Medicare and Medicaid services also came from documentation. In order to receive Medicare coverage for skilled services, documentation of functional improvement was required ("Medicare," n.d.); individual’s cognitive function and medical co-morbidities were used to determine Medicaid eligibility for NH coverage ("Nursing facilities," n.d.). Documentation promoted continuity of care and safe, effective care. Little research was available concerning documentation of care in the NH; indications were documentation was not adequate.

Discussion and Recommendations

A literature search to determine the state-of-the-science of vocational nurse care of persons with dementia (PWD) residing in nursing homes (NHs) who exhibit dementia-compromised behavior (NDB) revealed three categories of research: (a) interventions for NDB, (b) education to manage NDB, and (c) documentation of vocational nursing care. Few studies were located that validated non-pharmacological interventions for NDBs. Research was promising for massage therapy as an adjunct, music therapy, animal-assisted therapy, functional analysis, physical activity and Montessori based activities.

Staff education programs were available to teach facility caregivers methods to intervene with resident behavior; however, the long-term benefit of education programs was inconclusive. Finally, nursing documentation was inadequate; omissions occurred throughout the nursing process. The use of multiple forms led to fragmented care and difficulty retrieving data.

A common thread through all categories was poor rigor. Studies utilized small sample sizes, inconsistent conceptual definitions, disparate outcomes and outcome measures, and short durations of study; therefore, generalizability of findings was not possible.

Gaps in the literature persist concerning vocational nurse care of PWD residing in NHs who exhibit NDB. Concepts, such as passivity, verbally aggressive behaviors, confusion and agitation, require definition with standardized terminology used throughout the NH industry. The overarching term used for this analysis, need-driven dementia-compromised behavior, was not consistently used, even in papers espousing the theory that resident needs drive behaviors in dementia.

Future research needs to focus on massage, music, and animal-assisted therapy, functional analysis, physical activity, and Montessori based activities as possible interventions for NDB. These interventions closely align with person-centered care. Researchers need to determine if a knowledge deficit exists among licensed vocational nurses (LVNs) in the NH who provide care to PWD who exhibit NDBs. Research is necessary concerning documentation in NH. One possibility is whether deficiencies will improve with the advent of electronic medical records. Root cause analysis is necessary to determine why nearly 50% of NDBs go undocumented.

Conclusion

Nurses have dedicated much effort to improve outcomes for nursing home residents with dementia, but there is still much to learn. An integrated approach to nursing interventions that addresses need-driven dementia-compromised behavior, nurse education, and documentation of care might bridge the identified areas of need. A thorough understanding of nursing care of persons with dementia residing in nursing homes who exhibit need-driven dementia-compromised behavior will occur though further qualitative and quantitative research.

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Table 1

Table 1

Non-pharmacological Interventions for Need-driven Dementia-compromised Behavior

Category	Intervention	Targeted Behavior
Sensory Interventions	Massage/Touch	Agitation, aggression, anxiety
	Music	Aggression, agitation, verbal behaviors, social interaction
	Multisensory	Agitation, aggression, pacing, elopement, trespassing, resisting care, wandering
	Altering Environmental Stimulation/White Noise/Barriers	Agitation, nighttime restlessness, elopement, wandering
	Bright Light Therapy	Improved sleep, restlessness
	Aromatherapy	Agitation, restlessness
Psychosocial Interventions	Pet Therapy	Agitation, aggression, social interaction, apathy
	Simulated Presence	Agitation
	Reminiscence Therapy	Mood, cognition, well-being
	Validation Therapy	Behavioral disturbance, socialization, agitation, apathy, irritability
	Reality Orientation	Cognition, socialization
Activity-oriented Interventions	Walking, Physical Activity	Agitation, improved sleep, socialization, wandering, aggression
	Individualized Activity	Agitation, social interaction

Note. Compilation of interventions for need-driven dementia-compromised behavior derived from the literature. The information provided in this table does not imply effectiveness of interventions (Buchanan et al., 2007; Cohen-Mansfield, 2001; O’Neil et al., 2011; Thune-Boyle et al., 2012; Turner, 2005).

Table 2

Formal Staff Education Programs: Need-driven Dementia-compromised Behavior

Training Program	Description	Topics	Measurement Tools
AGI (Landreville et al., 2005)	Train staff to prevent and/or reduce agitation	Agitation and dementia, assessment of agitation, non-aggressive agitated behavior, aggressive agitated behavior, working as a team to manage agitation	Use of Behavioral Techniques for Managing Agitation Self-Efficacy at Managing Agitation Staff Satisfaction with the In-service French version of the Cohen-Mansfield Agitation Inventory
Emotional Responses as Quality Indicators (Chrzescijanski et al., 2007)	Improve staff understanding of the emotions and subsequent needs of the person with dementia thereby managing aggression	Assists staff to recognize six emotions: affection, anger, pleasure, anxiety/fear, helplessness and pain/discomfort.	The BAGS Aggression Scale The Mini-Mental State Examination Attitude to Elderly and Severely Mentally Infirm Care Scale
The Electronic Dementia Guide for Excellence (Ronch et al., 2004)	Self-paced internet-based training program to promote person-centered care in long-term care settings by meeting resident needs	Building staff-resident relationships, looking at resident quality of life, understanding resident needs (biological needs, daily living needs, societal needs, interpersonal needs, creative needs and symbolic needs) when looking at physically aggressive behavior, working with the difficult resident, communication, putting principles into practice and care planning	Program evaluation forms Focus groups
The CARES® Program (Hobday et al., 2010)	Internet based multi-media program designed to improve dementia care practice	Connect with the resident; assess behavior; respond appropriately; evaluate what works; share with the team	Dementia Care Knowledge CARES Evaluation
Foundations of Dementia Care (Zimmerman et al., 2010)	Educational program developed by the Alzheimer's Association to increase quality of care for persons with dementia	Basics of dementia, behavior, communication, pain management, food and fluids, social engagement, falls, wandering, restraints, end of life care	Approaches to Dementia Work Stress Inventory Staff experience working with demented residents Perceptions of training and confidence regarding pain Interview following video of staff providing care to resident

Note. Compilation of formalized staff education programs derived from the literature. Formalized programs are those developed, named, and packaged for use by other facilities.

Table 3

Table 3

Informal Education Programs: Need-driven Dementia-compromised Behavior

Description of Program	Topics	Implementation	Measurement Tools
Program designed to reduce problem behavior and restraint use (Testad et al., 2005)	Dementia, aggression, problem behavior, decision making, alternatives to restraint use	Following six-hour seminar, monthly one-hour guidance sessions for six months	Clinical Dementia Rating Scale Brief Agitation Rating Scale
Program based on the antecedent-behavior-consequence model of behavior management (Crombie et al., 2008)	Dementia, delirium, depression, challenging behavior, pharmacological and non-pharmacological interventions, protocols	Educators taught representatives from multiple facilities who then returned and trained their staff.	Knowledge test
Program designed to facilitate interaction between staff and residents and improve staff competency (Kuske et al., 2009)	Dementia, person and environment, communication	13 one-hour sessions over 13 weeks	Clinical Dementia Rating Scale German version Mini-mental State Examination Barthel Index GEROLF staff questionnaire (German questionnaire used to determine quality of life of NH residents) Maslach Burnout Inventory Beschwerdeliste (list of health complaints to measure global health) Use of physical restraints Use of sedative drugs
Program designed to reduce resident aggression (Hagen & Sayers, 1995)	Dementia, aggression, goals of care for persons with dementia, strategies to prevent aggression, strategies to de-escalate aggression, protection	Three 30 minute modules; taught one module per month	Formed derived from the Ryden's Aggression Scale and form used by Juan de Fuca Hospital in Victoria, BC
Program focused on skills needed to care for persons with dementia (Davison et al., 2007)	Dementia-related behaviors	Eight sessions 60 to 90 minutes each, followed by five peer support sessions of 30 to 60 minutes.	Human Services Survey of the Maslach Burnout Inventory Self-Efficacy of Dementia Care Scale of Nursing Performance Cohen-Mansfield Agitation Inventory
Program designed to raise awareness of non-pharmacological treatment of disruptive behaviors (Monette et al., 2008)	Disruptive behaviors, non-pharmacological approaches, behaviors more/less likely to respond to antipsychotics, antipsychotic dosing, reassessing after drug administration	Training session for nursing staff 1.5 hours; for aids 45 minutes; for doctors and pharmacists 1.5 hours	Use of restraints Use of antipsychotics Nursing Home Behavior Problem Scale Stressful Events Qustionnaire

Note. Information derived from review of the literature. Informal education programs are those developed by individual facilities, but not named and packaged for use by others.

Manuscript #2.

The Relationships Between Licensed Vocational Nurses' Care, Documentation, and Perceptions of Dementia-Compromised Behavior in the Nursing Home

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Abstract

Purpose: The purpose of this study was to examine the relationships between licensed vocational nurses' responses to dementia-compromised behavior, documentation, and perceptions of dementia care.

Methods: Qualitative research; ethnonursing

Findings: Data immersion resulted in three overarching themes related to the licensed vocational nurse caring for nursing home residents who exhibited dementia-compromised behavior: (a) the resident with dementia; (b) the licensed vocational nurse; and (c) documentation of dementia-related behaviors.

Conclusions: Licensed vocational nurses provided safe and effective care to residents exhibiting dementia-compromised behavior. Vocational nurses translated theory into practice. However, practice was inconsistently documented, which has the potential to propagate lapses in quality and lapses in continuity of care.

Clinical Relevance: Dissemination of the results from this study will bring focus to the practice-documentation gap, thus enhancing holistic person-centered care for nursing home residents with dementia-compromised behavior.

Keywords: licensed vocational nurse, nursing home, dementia-compromised behavior, ethnonursing

Degeneration from preclinical Alzheimer's disease to dementia results in an increase in the prevalence of behavioral and psychological symptoms of dementia (BPSD). Sixty to eighty percent of persons with dementia (PWD) living in nursing homes exhibit such symptoms (Alzheimer's Association, 2013; Lyketsos et al., 2000; Tampi et al., 2011; Zuidema, Derksen, Verhey, & Koopmans, 2006). Behavioral and psychological symptoms of dementia, also known as need-driven dementia-compromised behaviors (NDBs), include agitation, aggression, repetitive movements and vocalizations, hallucinations and delusions, and wandering (Tampi et al., 2011; Wetzels, Zuidema, De Jongbe, Verbey, & Koopmans, 2010). Nursing home residents with NDBs have a 50% or higher incidence of off-label antipsychotic medication prescription (Huber et al., 2012), even though antipsychotic medications benefit only 20% of recipients with dementia, and death or other serious side effects have been reported (Pandya, 2012).

Dementia-compromised behaviors might lead to staff avoidance of residents (Van Camp, Lerman, Cherry, & Bielecki, 2005), unmet resident needs (Rossby, Beck, & Heacock, 1992), adversely affect the resident's quality of life and safety, and significantly increased the cost of care (Herrmann et al., 2006; Voyer et al., 2005). The purpose of this study was to examine the relationships between licensed vocational nurses' (LVNs) responses to NDBs, documentation of NDB, and the nurses' perceptions of dementia care.

Theoretical Model

The Need-driven Dementia-compromised Behavior model, a mid-range theory developed in an effort to reframe behaviors of persons with dementia (Algase et al., 1996), guided this study. Authors suggested that underlying needs or goals are expressed through behavior (Algase et al., 1996; Kovach, Noonan, Schlidt, & Wells, 2005). Responding to resident's expressions of unmet needs promotes person-centered, holistic care, and enhances the quality of life of nursing home residents with dementia (Kovach et al., 2005).

Residents attempt to communicate through dementia-compromised behaviors (NDBs), which are possible outcomes of the interplay between background factors and proximal factors (Algase et al., 1996). Dementia-compromised behaviors are categorized as: (a) physically non-aggressive behaviors; (b) physically aggressive behaviors; (c) problematic vocalizations (Kolanowski & Whall, 2000); and (d) problematic passivity (Colling, 2004; Whall & Kolanowski, 2004). Background factors are the relatively stable characteristics of the individual. Proximal factors are psychological, social, and environmental issues influencing NDBs (see Figure 1).

Ethical Considerations

The University of Texas at Tyler and Tarleton State University institutional review boards approved this study. Nursing home administrators and directors of nursing (DONs) granted permission to recruit licensed vocational nurses (LVNs) and surrogates for residents with dementia in their facility. Licensed vocational nurses were invited to participate during shift changes and, upon agreement, provided written informed consent. Family members provided written proxy consent for the nursing home residents with dementia. A packet containing a letter of introduction, proxy consent form, and self-addressed, stamped envelope were sent to residents' family members. After receiving proxy consent, the researcher visited residents, introduced herself, and gained verbal assent. By incorporating resident assent and autonomy, dignity was maintained.

Methods

Research Question, Design, and Philosophical Underpinnings

The following question guided this research study: What is the relationship between licensed vocational nurses’ responses to dementia-compromised behavior, documentation, and perceptions of dementia care? Nursing home culture utilizes healthcare symbols and interaction, but embraces a philosophy establishing a homelike environment and person-centered care in the face of chronicity and terminal illness (Cruttenden, 2006; Molony, 2010), making it uniquely suited to qualitative research utilizing interpretive ethnography. Nursing has adopted a variant of interpretive ethnography coined ethnonursing (Leininger, 1985). Instead of searching for the underlying meaning of symbolic interactions within a larger culture, ethnonursing searches for meaning in a specific problem identified within a social institution or family. Ethnonursing analysis aims to develop a holistic view of the nursing phenomena under study. Data analysis is viewed from the perspective of the participants (emic), but the perspective, knowledge and biases of the researcher (etic) are not ignored (Leininger, 1997).

The problem identified for this study evolved from informal discussion with nursing home directors of nursing (DONs). The directors voiced concern that licensed vocational nurses had normalized dementia-compromised behaviors (NDBs) and were no longer documenting their occurrence. This became problematic; without documentation of the circumstances surrounding behavior, resident care was compromised. In addition, communication among providers regarding resident status was incomplete because NDBs were not entered into the Minimum Data Set 3.0 (MDS 3.0) and therefore not included in individual care plans. Consequently, providers faced difficulty with medication adjustments; additionally, without documentation, the behaviors could not be documented in the Minimum Data Set 3.0, creating an incomplete picture of the resident with dementia. In an ethnographic study, a single researcher gathers problem focused data through participant observation and semi-structured interviews over a limited period of time (Muecke, 1994). For the purposes of this study LVNs were observed providing care to residents exhibiting NDBs, charts were reviewed to identify documentation of NDBs, and LVNs were interviewed to gain understanding of their perceptions of NDBs.

Setting and Sample

Licensed vocational nurses and residents with dementia were recruited from three nursing homes (NH) in rural Texas between November 2012 and May 2013. The three homes were Medicare and Medicaid certified. Facility size ranged from 81 to 118 beds and all were for-profit nursing homes (Nursing Home Compare website, n.d.).

Inclusion criteria for NH residents were: (a) age 65 and over, (b) diagnosis of dementia, (c) presence of behavioral symptoms according to the DON, or present on most recent MDS, (d) lived in the facility at least three months, and (e) was expected to remain in the facility for the duration of the study. Exclusion criteria included acute illness or unstable medical condition. There were no exclusions based on type or stage of dementia. Family members provided proxy consent for 14 out of the 33 residents invited to participate (39%); one resident was withdrawn from the study due to acute hospitalization and change in status. Of the 13 residents enrolled in this study, 11 resided in secure dementia units. Resident age ranged from 74 to 96 (*M* = 84.62, *SD* = 6.84), 84% were female; all were Caucasian, not of Hispanic descent. Table 1 presents chart audit data related to frequency of medical diagnosis and medications; data the researcher collected from the nurse's notes, recording on the Cohen-Mansfield Agitation Inventory (CMAI) is available in Table 2. The Cohen-Mansfield Agitation Inventory has never been used in this manner; thus, there is no reliability or validity data. Table 3 presents data concerning falls, vital signs (VS), weight, and laboratory data.

Seven of the 10 LVNs who participated worked on secure units and three worked the general NH. Inclusion criteria were (a) English speaking, (b) held an LVN license in Texas, and (c) assigned to work with persons with dementia who exhibited NDBs. Purposive sampling was used for this study and participants were recruited until data saturation was achieved and no new themes identified (*n* = 10). The participation rate for LVNs was 100%. All informants were female, Caucasian and not of Hispanic descent. Age ranged from 24 to 57 (*M* = 40.80, *SD* = 12.22). Experience as an LVN ranged from 0.67 to 36.50 years (*M* = 15.07, *SD* = 11.18). Seventy percent reported receiving training in dementia care as part of their LVN program.

Data Collection and Analysis

The researcher observed LVNs interacting with residents in the NH setting. Observation took place over two-hour periods and at times when residents were most likely to exhibit NDBs. The researcher documented and transcribed field notes following each observation period.

Chart audits were performed by the researcher and the following data was recorded: NDBs, interventions, effects of the interventions and clinical data including diagnosis, medications, vital signs, weights, falls, and laboratory data. In addition, the CMAI was used to provide structure for documentation related to dementia-compromised behavior. Semi-structured recorded interviews took place with the LVNs at the nursing home following observation and chart review. Upon completion of the interview, each LVN was given a $5 Starbucks gift card. Verbatim transcription of the recorded interviews and field notes followed data collection.

Analysis began during data transcription with identification of codes and categories in observational field notes, chart audit data, and interviews. Line-by-line coding took place using NVivo 10, qualitative data analysis software. The development of patterns and themes reflecting the values, beliefs, and practices of study participants was an iterative process, and occurred through repetitive reading of transcripts. As themes developed, so did understanding of what it means to be an LVN working with persons with dementia who exhibit need-driven dementia-compromised behavior.

Member checking, reflection, triangulation, and maintenance of an audit trail helped achieve credibility in data analysis. Multiple methods of data collection aided triangulation (Munhall, 2012). Comparing the codes and themes derived from the data to existing theories and concepts during interpretive writing achieved theoretical triangulation (Munhall, 2012). In addition, a doctorally prepared nurse with a strong background in gerontological nursing and qualitative research reviewed analytical coding. As part of member checking, LVNs read their interview transcripts, verified accuracy, and reviewed identified themes. None of the LVNs suggested revisions to either interview transcripts or themes derived from the data. Neutrality will be addressed by continuing reflexivity, which critically identifies personal biases and makes them explicit throughout the study. Maintaining secure files of explicit field notes, drawings, transcriptions, tapes, chart audits, memorandum, computer files and other items related to the study ensured an audit trail and study dependability. Security was maintained using a password protected computer; data files, observation and interview notes and interview tapes were kept locked in a safe.

Results

Data immersion resulted in three overarching themes related to the relationship between licensed vocational nurses' (LVNs) responses to dementia-compromised behavior (NDBs), documentation, and perceptions of dementia care: (a) the resident with dementia; (b) the licensed vocational nurse; and (c) documentation of dementia-related behaviors. Figure 2 presents a model of the relationships between themes and subcategories that emerged from the data. Thick description of the themes follows.

Theme 1: The Resident with Dementia

Four subcategories emerged related to nursing home (NH) residents with dementia who exhibit NDBs: (a) dementia is different for each resident, (b) dementia-related behaviors exhibited by persons with dementia (PWD), (c) response to LVN interventions, and (d) triggers of NDBs (see Figure 3).

Dementia is different for each resident. During interviews, it became apparent LVNs were aware of the heterogeneity inherent in PWD. One LVN stated, "Some people are gradual; some people are overnight. Everybody's different." Heterogeneity was not limited to the pace at which dementia progressed, but also to the outward expressions of dementia. As stated by another LVN, "Each one is different. Each one has their own, you know, [way] of handling stuff and calming down, way of communicating."

Dementia-related behaviors exhibited by persons with dementia. Dementia-related behaviors were those behaviors resulting from the disease process' effect on the individual's ability to interact socially or participate in normal daily activities.

Aggressive behavior. Physically aggressive behavior involved one resident assaulting another resident or staff member. During her interview, one LVN related the following incident, "She became agitated and combative, verbally abusive. She stabbed somebody. She tried to hit; she was hitting people with her merry walker." Another LVN described a situation of resident-on-resident aggression in her charting, "This resident had ahold of another resident's arms. The other resident was bleeding from bottom lip. Residents separated by [certified nursing assistant]."

According to the LVNs, sometimes aggression resulted from residents trying to protect themselves because they did not understand what was going on. The LVN said, "She doesn't know what we're doing, even if we're explaining it to her. It's like, 'Oh my gosh, these people are hurting me.'" Another LVN reflected similar thoughts in her documentation, "Resident often becomes agitated and resists care. Appears to get scared and grabs anything she can hold onto."

Verbal expressions of aggression frequently involved cussing. As one LVN reported, "We had [a] lady that cursed constantly at the top of her lungs, up and down, up and down the hall." During observation, a resident yelled while being showered, "Help, help, help, momma. Goddamn you, you son of a bitch. I want to go to bed."

Anxious behaviors. Anxious behaviors indicated unease, distress, or fear. The LVN stated residents do not deal well with change; it makes them anxious, "And, if one thing is off, it throws their whole day off. They become agitated and hard to console.

And, they don’t want to do anything.” Another LVN said, “We try to keep them on a pretty set routine for them to be able to cope. Anything you do different from their routine and they get anxious, and get upset.”

Many of the LVNs described the residents as becoming more anxious after the sun goes down. One LVN found it difficult to explain saying, “It just seems like a different person is coming out. Their attitude, or the way they’re behaving, things like this.” An evening shift LVN stated, “We have a lot of people who seem to have sundowners, and it seems the level of anxiety is very high at the start of the shift.”

Changes in behavior. During their interviews, the LVNs indicated they were able to detect behavior change, whether it was a significant change or inconsistency in residents’ normal behavior. Most of the LVNs attributed an acute change in behavior with illness or a physiologic need. One LVN succinctly stated,

> You just have to watch different things that they do and their facial expressions. Sometimes, if they’re all wrinkled up, frowning, you know they’ve got something going on; we do a [urinalysis] on them and find out they’ve got a urinary tract infection. And, that causes some of their discomfort, and changes in behavior.

Another LVN pointed out the change in behavior does not always need to be extreme; sometimes it is subtle,

> She normally kept her hands and fingers spread; when she didn’t feel well she clenched them. I had her sent to the [emergency room] because of these non-specific findings, and got some grief from staff there; but, when she was worked up we found out she had [heart failure].

Communication losses as the source of dementia-compromised behavior. Residents with dementia did not communicate in a way that was always understood by others. Many times, they used non-verbal communication. One LVN described a situation where a resident was too warm, “She was too hot, and started pulling her shoes off, socks off; her feet were too hot in them and she just takes them off. [Then she] starts taking her top off." Another described a resident using behavior as a means of communication,

> He has real problems with getting aggressive early in the morning, because they go in there and get him up and dressed for breakfast and he doesn't like that, so he's doing the swinging and he's doing stuff like this because he's wanting to stay in bed. That's his way of telling us, 'leave me alone; let me sleep.'

Disorganized speech affected residents' ability to communicate needs. When residents spoke without any apparent connection between sentences, it was difficult to determine the goal of communication, as exemplified by this resident's speech:

> Relax, don't burn down. When I pull the shoes off, it'll go right back the way I had it. You want one of these? Christmas things here on your head? You don't have to pick it up and eat it. What you can do for me? Do you have the table set? We got light bread to be sure that we had bread. Would you put it out and show me?

Gathering behaviors. Gathering behaviors were those where residents collected things; many times the things were not theirs. In her interview, one LVN described PWD "going through peoples' stuff, hoarding, and pilfering." Another LVN reported a similar story saying, "We have one resident who will go into everybody's rooms and she takes it all into her room and she's got it all in her stuff." During observation, residents took food or ate off another's tray.

Hallucinations and delusions. At times, PWD experienced hallucinations and delusions. An LVN described one resident's experience, "at times she'll be talking to somebody who's not there." Another stated, "Basically, [its] dementia with hallucinations or delusions, and not knowing the difference between reality and what she thinks she's really seeing." Documentation of hallucinations and delusions occurred without further elucidation.

Inappropriate touching, handling, or use. Dementia interfered with some resident's ability to use everyday items. During observation, an LVN brought a washcloth to a resident, and the resident tried to put it in her mouth. She said they could not give the resident paper napkins, as she would put those in her mouth as well; "she tries to put everything in her mouth." Repeatedly during the evening, the resident put wooden toys and any other object within reach into her mouth. Another LVN said they had "one who eats pretty much anything she can get her hands on, food or not."

Memory loss and confusion as the source of dementia-compromised behavior. Confusion was described repeatedly during interviews with the LVNs. One stated, "Some of it they know and some of them just don't register anything." Another said, "You have to understand that it's not the same and sometimes they just don't understand. They can't; that process is disrupted." One LVN documented a resident had "trouble concentrating," "little interest," "inattention" and "disorganized thinking," but without further explanation. When asked to explain, she said, "She can't keep a train of thought. I think she has a hard time trying to stay focused on what's going on around her."

Emotional reactions. Resident mood appeared to be a reflection of their emotional state and attitude. It incorporated expressions of anger, frustration, and passivity. Residents were described as expressing anger or irritation, or as having a "very short temper, easily, easily annoyed." One LVN felt residents with early dementia were angry because, "sometimes they don't remember, and sometimes they remember what they didn't remember; that's the hardest to deal with. [They are] aggravated and have a lot of anxiety and they are pretty much pissed off all the time." Another felt persons with early dementia had the most anxiety because they realize what is happening to them.

An additional emotional reaction exhibited by PWD residing in the NH was passivity. One LVN said, “We encourage activities, because most of them will just lay in their room if we don’t.” She went on to say, “We have others who don’t want to come out of their room. We chart how we tried to get them out and involved.”

Sexually inappropriate behavior. Although not mentioned often as an issue, one LVN said some residents are “sexually inappropriate or they like to strip and run around, or anything else that might make everyone around them uncomfortable.”

Suspiciousness and paranoia. During their interviews, LVNs told stories about residents becoming suspicious and paranoid. An LVN related this story about a resident, who told her doctor he was not a real doctor,

> We couldn’t convince her that he was [her doctor]; and just ‘no you’re not; y’all are lying, just lying to me. I know [Dr.] and that’s not you.’ And then she said, ‘The last one that came to see me was a short, fat man’ and [Dr.] said ‘Well, I fit that description.’ And, she said ‘no, he had a fat butt, not a fat belly.’ Then she followed him around the halls, watching him, making sure he was not doing anything he wasn’t supposed to be.

Response to licensed vocational nurse interventions. According to the LVNs, residents responded to interventions both positively and negatively. One resident responded positively to toileting, “We take her to the bathroom and most of the time she’ll settle back down.” When working with residents who tried to elope, another LVN stated, “We make sure we toilet them, and check on them throughout the day, offer them food and fluids to make sure all of their needs are satisfied and so they don’t feel the need to go out the door.” Another resident would respond positively to gentle reassurance most of the time, “but sometimes it doesn’t matter what we do. Sometimes she doesn’t calm down.” Other residents, responded negatively to interventions; she “screams, just screams out sometimes [and becomes] combative; she gets combative when anybody tries redirecting."

Triggers of dementia-related behavior. Many of the LVNs mentioned triggers of NDBs. Triggers included the external environment, physical environment, resident needs, and the social environment.

External environment. The external environment dealt with factors outside of the resident or facility's control. One factor mentioned by nearly a third of the LVNs was the full moon. One LVN described it as follows,

> I know everybody says it's a superstition, but the full moon. You can definitely tell when there's a full moon. I mean, right on! They don't sleep; they're up all night. It's like, wow, what's going on. It's the pacing, it's the, hollering out.

Another LVN said, "Changes with the weather. Rain, cold weather; it seems their behavior tends to get, you know, more hyper. They pace more; they get upset easily."

Physical environment. Aspects of the physical environment that influenced behavior in PWD included lighting, sounds and noise. An LVN stated, "We try to keep the TV down low back there; and, as soon as I can, I try to get the lights going down. They do better after there is less stimulation." During one observation period, the action movie *The Avengers* (2012) was playing on television. The first thing the LVN told her aid as she came on shift was, "turn it off if it gets too intense, as it might rile them up." Less than 20 minutes later the movie was been changed to *It's a Wonderful Life* (1946).

Resident needs. The majority of comments from the LVNs indicated residents became restless or anxious if they needed to void or defecate. One LVN painted a picture of the resident with dementia indicating a need to urinate,

> They're pacing or anxious because they've got to go. Even the ones who are incontinent; sometimes, for a day, or a half a day, or an hour, they're continent, or they remember they have to go, and they can't voice that.

Other LVNs mentioned hunger and thirst as triggers of NDBs.

Social environment. The social environment encompassed activities provided for the NH residents or persons interacting with the residents. The LVN stated the "tone around them affects them. If you're anxious, they feel it and they feed off of it. They feed off the environment more than anything else."

Personal space and boundaries blurred for the NH residents. As stated by one LVN, "they'd go take a nap in someone else's bed if they'd get a chance to, because they didn't know their territory. They didn't know their boundaries." Overstepping boundaries led to physical confrontation. As reported by another LVN, "Some of them don't like anybody else in their space. If somebody comes in their space, they're going to reach out and grab at them or, they might try and push them down."

Theme 2: The Licensed Vocational Nurse

Data immersion resulted in seven subcategories related to the LVN-resident dyad: (a) character traits required to work with PWD, (b) communicating with the PWD, (c) nursing interventions for NDBs, (d) philosophy and outlook, (e) responses to NDBs, and (f) education (see Figure 4).

Character traits required to work with persons with dementia. Three characteristics representative of the LVNs as a group were patience, compassion, and understanding.

Patience. The LVNs repeatedly stated one needs patience to work with PWD. Patience was required to answer questions repeatedly and participate in unclear conversations. One LVN stated, “I think with dementia and Alzheimer’s patients, patience is the biggest quality I think you must have.” While observing another LVN interact with her residents, she answered questions repeatedly; if residents left the dinner table before their trays arrived, she patiently brought them back as often as necessary; and she carried on conversations with the residents when topics changed rapidly and the speech was not clear.

Compassion. The desire to ensure the quality care of the residents resonated with the LVNs. One LVN said, “I try to always treat them like they’re my grandparents or my parents, or how would I want my grandparents, my parents, or myself even to be treated.”

Understanding. Understanding the PWD was an important aspect of caregiving. One LVN stated it this way, “You have to understand that it’s not the same and sometimes they just don’t understand.” Another voiced the need for acceptance stating, “You’ve just got to accept and know how to take care of all of that.”

Communicating with the person with dementia. Resident interaction involved communicative processes that were not always clear. Licensed vocational nurses commented on both non-verbal and verbal communication skills used.

Non-verbal. Important aspects of non-verbal communication included eye contact, listening, physical stance, and touch. As an LVN said, “I found that if they’re agitated, if I get down at eye level; look them in the eyes, sometimes they communicate better. It’ll settle them down sometimes.” During observation, the LVNs would sit and look directly at their resident when interacting. Eye contact alone was not always enough to engage residents. Listening was an important part of exchange, in an attempt to understand what the resident was trying to impart. As one LVN said, “Like I say, you gotta pay attention, and listen, you know. Sometimes they get a little thing in there, you know. So, you just gotta listen. Pay attention."

In order to appear open to communication, one LVN said, "we learn stances; you don't want to stand with your arms crossed in front of them, you know; you don't want to seem confrontational." The LVNs used open stances when working with residents. One would stand with hands on her hips, not appearing to be rushed; another would put one hand on her hip and the other on the table or other nearby object.

Another LVN described used touch as a means of reassurance, "She'll be sitting there asleep, and then all of a sudden she'll start repeating, 'Momma, momma, momma, momma, momma.' You know, we'll go over, sit down and we'll hold her hand. We'll talk to her very calm, very softly."

Verbal. Verbal communication with PWD was often complicated. Verbal communication involved (a) answering repeated questions with consistency, (b) communicating with respect, (c) not arguing, (d) using a calm voice, (e) reassurance, (f) providing step-by-step instructions, and (g) telling white lies.

The LVNs stressed the importance of consistency in answering questions to decrease confusion, "You know, we might answer that question a hundred times, but it's always the same answer." One LVN reinforced the concept,

> Resay it over and over and over till they get it, then move on to the next subject. But, you have to be consistent. If you're not, then they'll pick up on it. It's not that they'll remember it, but they just know; if you say it over and over it just sinks in. But, if you say different things every time, then they don't remember any of it.

The LVNs stated PWD needed to be treated as intelligent adults. One LVN said, "I just try to talk to her like she's an adult and just tell her 'I know you aren't feeling good, and, you know, it's going to be okay; we're going to work through this.'" During observation time with another LVN, she spoke to each resident as an adult. She talked to the residents about craft projects each made during activities; she complemented a resident on her new hair coloring and provided encouragement to a resident with a swallowing disorder.

All of the LVNs acknowledged arguing with PWD served no purpose. One said, "I just don't argue with her; I just go on, because I know it probably wouldn't do any good to argue with her." In addition, another said, "You got to be able to accept that you can't talk back to them, or talk down to them; you can't scold them." Moreover, a third went on to say, "we all get tempted to argue with them. You can't help it; we're human."

Approaching the residents and speaking in a quiet voice kept them calm, as one LVN said, "The way you approach somebody is a big, big thing with Alzheimer's. So, your approach, calm voices, soft voices, you know. Just because they're Alzheimer's doesn't mean they're hard of hearing."

Communicating reassurance to residents was an important aspect to keeping them calm during interaction. During observation, when a resident repeatedly asked questions about activities, one LVN reassured her they would come and get her so she would not miss them. Additionally, step-by-step instructions worked best to cut down on care refusals. As stated by another LVN, "Tell them everything you're going to do step-by-step before you do it. You don't walk in there and just rip their covers off."

Occasionally LVNs found themselves in the position where they felt compelled to tell white lies. An LVN tried to explain this,

> A lot of them will ask, ‘where’s my husband?’ I don’t tell them ‘your husband’s dead.’ I just tell them, ‘well, maybe he’ll come by later,’ or ‘he’ll be here later.’ Because, she’ll have to relive his death all over again, and then tomorrow she won’t remember anyway. So it’s better to keep them calm. I don’t know if we’re really supposed to do that, but I do.

Nursing interventions for dementia-related behaviors. The LVNs providing care to PWD described interventions for NDBs that fell into six categories: (a) altering stimulation, (b) chemical restraints, (c) involvement of outside resources, (d) redirecting and distraction, (e) assessing the resident, and (f) safety.

Altering stimulation. The LVNs altered stimulation in an attempt to diffuse NDBs. One LVN said they “decrease the noise in the room” to reduce agitation that affects others. When residents become aggressive, another said, “If there are two of them not getting along, depending on who it is, we can usually separate them.” Another LVN said giving the resident space worked, but added, “We try to, not necessarily isolate, but we will remove that resident from the general population.” When giving space, a different LVN said it was important to ensure the resident did not feel as though they punished or abandoned.

Ensuring resident needs were met was another method of altering stimulation. When describing a situation with an agitated resident, one LVN said, “We did everything that could be done. We did the toileting, we did the food, did the beverage and so we did all the basic needs of life, so, we do those first.”

Chemical restraints. All of the LVNs believed chemical restraints were an intervention of last resort. One identified reasons to administer chemical restraints, “I try not to use medication unless I have to. Because, I don’t want them to fall and be over medicated. Unless they're about to harm someone else, or their behavior is really bad, I don't use medication."

During an observation period, after redirecting failed to work, a LVN administered as needed (PRN) Ativan gel for a resident who was agitated and verbally aggressive. The chart audit revealed the reason for administering PRN medication and the plan for continued observation,

> This resident had ahold of another resident's arms. . . . Residents separated by CNA when she walked out of shower room. . . . PRN administered for agitation. No injuries noted to this resident at this time. Resident continues to be agitated at this time. Sitting by nurses' station in merry walker. Will continue to monitor.

Involvement of outside resources. In order to resolve issues related to NDBs, at times it was important to involve outside resources, such as family or psychiatric services; in extreme cases, it required relocation of residents to facilities better suited to their needs. As one LVN explained, a resident's spouse was able to assist, "Her husband can usually always get her [to cooperate]. We've called him several times because we couldn't get her to do something. You know, we can't leave her sitting in soiled clothes or whatever. He's very good about it."

Several LVNs related experiences whereby residents were relocated to other facilities due to NDBs. Describing one such situation, an LVN said,

> The lady cursed constantly at the top of her lungs up and down, up and down the hall. And, families, and of course staff, it offends people. . . . They [found] a place that better suited her. Because they have homes that are suited; everybody in there may do that. She fits right in, but not here.

Redirecting and distraction. Activities and real or perceived barriers were used to redirect and distract residents with NDBs. An LVN said, "Try to get them busy doing other things, you know." She also said it sometimes required the involvement of the activities person, “She’ll do their nails, and stuff like that. . . . They really like that. They hold very still for that, too. Even the ones that you wouldn’t think would.” Another participant explained, “We have other residents who don’t talk a whole lot, but you put them in front of the piano, and they can play beautifully; without errors; without looking at anything; just by memory.” Real or perceived environmental barriers prevented residents from entering other’s rooms. One LVN said,

> We can use different approaches, like a Velcro stop sign in front of the door. They’ll go up to it, but won’t go through it. Or, you can use what we call a blackout spot in front of the door. We will make like a black spot on the floor, looks like a hole, and they won’t cross it.

Assessing the resident. When residents experienced a change in behavior, the LVNs stated residents were assessed to determine if there was a treatable, underlying cause. Assessment consisted of asking simple questions to elicit resident report of symptoms, observation, assessing pain, obtaining vital signs, and using the process of elimination. Many times, these assessment components took place simultaneously. One LVN noted observation was key, “So we just kind of watch and see what is wrong with them [as they may not] have enough of it mental to let us know that it burns or they’re having problems.”

Another LVN said part of all assessments included, “an assessment of basic heart rate, blood pressure, [and] make sure if they’ve had bowel movements lately.” One participant added, “that’s the first thing we always ask for, a [urinalysis], this person’s acting more confused or is acting different, you know, not acting like they normally do.”

Yet another LVN stated finding the underlying cause of behavior change is a “process of elimination because they can’t tell you.” “You know, there’s no textbook answer for any behavior or anything on any of them. It's all kind of guesswork. Try something, if it doesn't work, try something else."

Safety. LVNs said safety was paramount. During the interviews, "if they're not in danger or putting another resident in danger" became a recurring statement. When physically aggressive incidents occurred between residents, LVNs said, "We put them on 15 minute checks"; or, "Somebody just had to be one on one with them for a while, until they settled down."

Philosophy and outlook. The LVNs developed a certain philosophy and outlook about caring for PWD. Many of the LVNs said working with PWD was like dealing with small children. One LVN stated,

> 'Cause, it is kind of like working with kids; but, they're adults, you know. And you, you can't . . . it's hard to not treat them like a child. You have to treat them like an adult and not scold them for things, doing something wrong; or, because they really don't, some of them don't know.

Indicating staff never know what will happen next, an LVN said, "It's always an adventure. You never know what's going to happen. You never know how they're going to act or how they're gonna react to anything." Regardless of what happens, one LVN said, "You just deal with the new situations as they come, I guess." Repeatedly, the LVNs summed up their philosophy and outlook with statements such as, "My, motto is, live in their world" and "You just have to be in their space; have to know them."

Responses to dementia-related behaviors. The LVNs discussed multiple challenges when working with PWD exhibiting NDBs, but also reported many positive aspects.

Multiple challenges. Licensed vocational nurses characterized working with PWD as challenging. "It's a challenge. And, it, only certain people can do it; some days can be very challenging and you want to pull your hair out." They found NDBs to be frustrating at times and resulted in multiple conflicting demands. One LVN related, "I was giving report and she'd keep coming back, going 'nurse' and she'd keep coming back, 'nurse.' What she was wanting me to do for her is tell her what she was thinking, because she couldn't think what it was."

Positive aspects of dementia care. Dementia care had its positive aspects. One LVN said, "it's rewarding to be able to, you know, try to help them the best way that you can." Moreover, another related, "It was my first experience with elderly people, and I really kind of decided back then it was my niche. Kinda liked the work."

Education. Education provided a knowledge base for the LVNs. Seventy percent of the LVNs reported they had received dementia-specific education. Gerontological content during their LVN programs included clinical rotations in the NH. One stated, "We spent the first part of our clinical in long-term care facilities with dementia patients." For those who did not have dementia-specific content in their LVN program, information on aging, according to others, "was just all blended in."

The LVNs all indicated they participated in-service education and continuing education credits (CEUs). The topics covered, "how to deal with dementia, and difficult, combative [behaviors], and so on and so forth".

Theme 3: Documentation of Dementia-related Behaviors

Licensed vocational nurse documentation was broken into the following categories: (a) the nursing process, (b) documentation formats, and (c) frequency of documentation (see Figure 5).

The nursing process. The nursing process consisted of (a) care planning; (b) documentation of behavior; (c) documenting responses to interventions; (d) looking for patterns in behavior; and (e) medication administration.

Care planning addressed behavior that was considered normal for the resident. As stated by one LVN, “We’ve had residents that have crawled around on the floor for activity. After its care planned, we don’t document on it anymore because it’s normal for them.” Chart audit revealed charting by exception was the norm.

At all of the homes, the LVNs indicated they usually documented when there was a change from the resident’s usual behavior pattern. As one LVN said, “If it’s something out of the ordinary, we need to go to the chart and write a narrative on it. Just because it’s something different. It may be a symptom of something else, you know.” During an observation period, the researcher noted one resident was wandering, exhibiting repetitive behavior, restless, and inappropriately using objects. She said the following,

> More room outside than inside. If you knew my kin, you’d throw me out. Do you know Martha? Four or five different names she’s gone by. Wear warm clothes when you go out. I’ve hired, down here, about 12 years. Kids missed the first terms. Trying to cut Hispanic toe nails was a fun job.

Associated documentation by exception for this resident included, “Little interest or pleasure in doing things; trouble concentrating; hallucinations” and “Up in wheel chair, calmly sitting in dining area. No distress noted. Chair alarm on.” No indication was made whether the behavior was usual or out of the norm for this resident.

When LVNs intervened for a change in condition, especially if the intervention was a PRN medication,

> A lot of [documentation] is medication specific too; . . . for each medication they may be on, there are different behaviors that can happen, and side effects and stuff like that; you have to document that.

The LVNs inconsistently documented resident responses to interventions. One nurse's note read, "PRN medication was effective [given for agitation]. Resident has accepted some fluids and a light snack and is now in bed with eyes open, but laying still, without complaints or discomforts noted." On the other hand, during one observation period, a resident was agitated, verbally aggressive towards other residents, visitors, and staff. The LVN administered PRN Ativan, but no associated assessment data was documented. During the interview the LVN explained, "I didn't document very much on that; I just gave her some medication. I documented that I gave her medicine. 'Cause, if I document every single episode, I'd never leave the computer."

The LVNs indicated they documented changes in behavior in order to look for patterns. An LVN said it this way, "we'll do that, follow up with that for seven days and see if there's a pattern, there's something else that make her upset." No patterns were identified in available documentation; however, due to time limited data collection period, it is unknown if this is an accurate finding.

Documentation formats. Documentation occurred on multiple forms and formats: (a) behavior sheets, (b) documentation by exception, (c) narrative charting, and (d) electronic medical records.

In one NH, LVNs documented NDBs on behavior sheets. According to one LVN, "We have behavior sheets. So, as long as we have it on there, we don't have to do extra in the chart." Another explained, "We chart by exception on behavior." When clarifying this statement, one of the LVNs agreed, "once it's determined what their normal behavior pattern is, and it's care planned, then you only document by exception." Charting on behavior sheets was inconsistent. During observation, a resident refused to eat and several attempts were made to assist her; however, “refusing care” was not charted. In another instance, hallucinations and delusions were marked on the flow sheet as a behavioral exception for the resident, but there was no explanation of the behavior provided in the narrative.

The LVNs stated narrative charting clarified resident behavior, “Now, if it’s something out of the ordinary, we need to go to the chart and write a narrative on it.” The LVN went on to describe the importance of narrative charting to ensure the proper interventions for resident behaviors,

> For instance, this resident, you will chart what she says word for word, you know. And, use your quotations. When other homes would come to look at her and see if they would accept her, you know, that’s in our notes; because it lets them know her behaviors and if they would accept her.

One NH had transitioned to electronic medical records (EMRs) and LVNs charted using narrative format on the computer. For example, the following narrative was noted, “Resident stayed in bed sleeping …when she got up was in a pleasant mood, no agitation noted. No issues with other residents.”

Frequency of documentation. Frequency of charting varied according to the reason. One LVN said,

> We do a weekly summary of the patients; kind of a note on how they are doing that week. If they eat, how they’re eating, and if there’s any skin changes, and how they’re ambulating and if there’s changes. And, you know, their ADLs.

She continued saying, “and we also do a monthly summary.” One LVN said if there was a change in the resident, “We’ll follow up with that for seven days.” There were situations where more frequent charting was necessary due to resident behavior, “Some people we chart behaviors every day,” for another resident it was, “Hourly charting, for her . . . every hour we are documenting her activity, her mood, if there’s been any behaviors, any aggression, combativeness, or anything like that." In contrast to the nurse's explanation; however, the LVN only documented resident assessment three times during the shift.

Although the LVNs stated charting formats captured the documentation of resident behaviors, charting inconsistencies occurred. Of the residents participating in this study, 32% had documentation reflecting NDBs; 50% exhibited such behaviors during observation. Please see Table 4 for further details.

Discussion

The purpose of this study was to examine the relationships between licensed vocational nurses' responses to dementia-compromised behavior, documentation, and perceptions of dementia care. To address this purpose, data collection occurred through observation, chart audit, and interview.

The Resident with Dementia and the Licensed Vocational Nurse Dyad

An investigation of the licensed vocational nurse (LVN)-resident dyad took place within the culture of the nursing home (NH). Licensed vocational nurses' expressed accurate understanding of dementia and provided theoretically based care. Vocational nurses utilized a broad knowledge base to diffuse and prevent dementia-compromised behavior (NDBs), which they perceived to be an expression of unmet needs. The relationship between the person with dementia (PWD) residing in the NH who exhibited NDBs and the LVN operated within the nursing process, a feedback loop.

Effective interventions for NDBs include identification of the underlying cause and implementation of person-centered care (Enmarker et al., 2011; Keady & Jones, 2010). The LVNs stated on multiple occasions that the best way to work with PWD was to get in their world; understand the situation from the resident's point of view, "Try to step in the situation and see what works." The LVNs stated if one intervention did not work to de-escalate NDBs, other options were attempted. All of the LVNs stated the use of antipsychotic medications was a last resort. The literature supports this stance, with non-pharmacological interventions identified as best practice for PWD who exhibit NDBs (Perkins, 2012) and use of antipsychotic medications a questionably safe practice replete with significant adverse outcomes (Richter, Meyer, Mohler, & Kopke, 2012). Licensed vocational nurse responses and perceptions of PWD exhibiting dementia-compromised behaviors were reflective of the Need-driven Dementia-compromised Behavior model.

Documentation of Dementia-related Behaviors

Licensed vocational nurses were knowledgeable; their perception and understanding of the care required when working with PWD exhibiting NDBs was expansive. While no gap between theory and practice was uncovered, they inconsistently documented practice. Not all documentation described non-pharmacological interventions and resident response to interventions prior to administering as needed (PRN) medications; follow-up documentation for behavioral exceptions and PRN administration was inconsistent; further elucidation did not accompany behavioral exceptions. Consistent with the directors of nursing (DONs) original concern, because charting was inconsistent, and LVNs charted by exception (CBE), it was unclear when nurses considered NDBs the norm for a resident. This has the potential to paint an inaccurate picture of the resident and propagate lapses in quality and continuity of care.

Documentation of current resident status, including NDB, is critical to completion of the Minimum Data Set 3.0 (MDS 3.0), a resident assessment tool, and required reporting to the Centers for Medicare and Medicaid Services (CMS; Taunton, Swagerty, Smith, Lasseter & Lee, 2004). Nursing home care-plans are detailed, address resident behavior, and interventions appropriate for the specific resident; they are derived from MDS 3.0 data and multi-disciplinary team updates (Dugan, White, & Cusick, 1995; Taunton et al., 2004). Inconsistent documentation may formulate an inaccurate picture of the PWD. Without accurate supporting documentation, the MDS 3.0 does not reflect current resident status, and care plans do not accurately reflect current resident needs. A recent study by Jeon et al. (2013) found 30% to 65% of care plans did not reflect resident NDBs. Care plans that do not reflect an accurate picture of the resident result in a failure to provide person-centered care.

There is little recent research on resident care-plans and no studies were located that supported or refuted the efficacy of CBE in the NH. Kerr (2013) determined nurses felt CBE was only appropriate for uncomplicated patients; they struggled with thoughtful, deliberate decisions about data that was an exception; and were concerned about protecting their patients, themselves, and their employers. The effects of CBE on resident care plans, quality of care and NH reimbursement is unknown. Templates that encourage and support accurate documentation of DCBs and interventions within the new mandatory EMR are necessary.

Study Limitations

This study has several limitations. The small sample was Caucasian, female and English speaking. The researcher's expertise in gerontology might have led to an assumed understanding of concepts and preformed image of the licensed vocational nurse (LVN)-resident dyad. Additionally, researcher presence might have affected both resident observation and LVN care. Any change can upset persons with dementia (PWD); a new person in the environment might have caused disruption. At the outset of the study, it was not known that documenting by exception was the norm; thus, review of care plans was not deemed necessary. The new finding, documentation by exception as a cultural norm among nursing home LVNs, and the impact on resident care plans requires further examination. Finally, the chart audit was limited by a 72-hour period.

Nursing Implications

Nurses learn the phrase, “If it wasn’t documented, it wasn’t done,” early in their education. Documentation of resident assessment, diagnosis, intervention, and evaluation is central to provision of safe, effective, person-centered care, and continuity of care. No gap was found between theoretical knowledge and practice of licensed vocational nurses (LVNs) in the nursing home (NH) environment; however, there is a gap between practice and documentation. Based on these findings, nursing homes need to adopt structured, systematic charting methods and train staff to consistently document across all shifts. With electronic medical records on the horizon, NH have the opportunity to implement effective and efficient forms of documenting LVN care of persons with dementia and dementia-compromised behaviors. Electronic medical records designed to capture accurate descriptions of resident behavior, nursing interventions and resident response to interventions are vital to the provision of safe, appropriate, person-centered care.

Conclusions

As the population ages, more people will be diagnosed with some form of dementia and many will live out their lives in nursing homes. This study focused on the relationship between licensed vocational nurses' responses to dementia-compromised behavior, documentation, and perceptions of dementia care. Licensed vocational nurses provided safe and effective care to residents exhibiting dementia-compromised behavior. Vocational nurses translated theory into practice. However, practice was inconsistently documented. Documentation is essential for the provision of high quality care and continuity of care. Dissemination of the results from this study will bring focus to the practice-documentation gap, thus enhancing holistic person-centered care for nursing home residents with dementia-compromised behavior.

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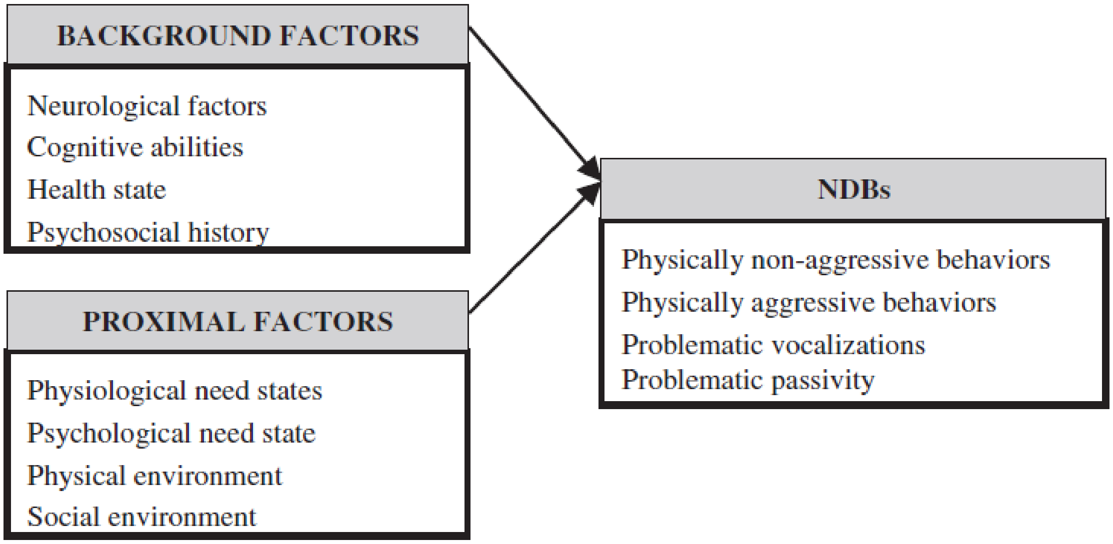
Figure 1



Note. The Need-driven Dementia-compromised Behavior Model. This figure shows the relationship between background factors, proximal factors, and dementia-compromised behavior (NDB). Adapted from “Editorial: The need-driven dementia-compromised behavior model—a framework for understanding the behavioral symptoms of dementia,” by A. L. Whall, and A. M. Kolanowski, 2004, Aging & Mental Health, 8(2), p. 107. Copyright 2004 by Routledge. Reprinted with permission.

Table 1

Descriptive Data Nursing Home Residents

Descriptor	Count	Percent
Hypertension	10	76.9%
Falls, gait abnormality, and weakness	10	76.9%
Pneumonia, urinary tract infection, sinusitis, and cellulitis	9	69.2%
Anxiety	9	69.2%
Depression	9	69.2%
Hypothyroid	9	69.2%
Osteoporosis, osteoarthritis	9	69.2%
Antidepressants	10	76.9%
Thyroid medications	8	61.5%
Vitamins and minerals	8	61.5%
Antibiotics	7	53.8%
Antihypertensive medications	6	46.2%
Benzodiazepines	6	46.2%
Antipsychotics	6	46.2%
Medications for constipation	6	46.2%

Note. Comorbidities and routine medications listed most frequently on the current monthly summary of nursing home residents with dementia who participated in this study.

Table 2

Table 2

Data from Cohen-Mansfield Agitation Inventory

Behavior	Count	Percentage
Pacing	2	20%
Repetitive requests for attention	1	10%
Hitting	2	20%
Kicking	2	20%
Grabbing	2	20%
Restlessness	1	10%

Note. In an effort to quantify dementia-compromised behaviors from the chart audit, the Cohen-Mansfield Agitation Inventory was used to provide structure. It has never been used in this manner; thus, there is no reliability or validity data.

Table 3

Chart Audit Data

Resident	Fall	Fall Injury	Temp	Pulse	Resp	SBP	DBP	O2Sat	Weight	Gain/Loss	Labs
#1	No		98^3	75-93	18	118-129	77-84	93-97%	130.9-136.8	Both	None
#2	x	x	x	x	x	x	x	x	171.4	No	*Yes
#3	Yes	*Yes	97^9-98^3	68-74	16-20	112-134	58-76	95-97%	156.2-162.5	Gain	No
#4	No		97^5-98^4	66-84	18-20	123-143	63-76	93-97%	161-163	Loss	*Yes
#5	Yes	No	97^4-99^4	60-80	16-22	116-174	60-94	92-98%	158-167	Gain	*Yes
#6	No		97^8-100^7	58-98	x	115-155	65-80	x	202-206	Gain	No
#7	No		98^2	58-82	14-22	x	x	x	182-183	Loss	No
#8	No		98^5	65	18	88-162	58-91	x	147-155	Loss	No
#9	No		97^5-98^4	74-82	x	110-171	69-86	x	114	No	No
#10	No		x	x	x	x	x	x	114-115	Loss	No
#11	No		x	x	x	x	x	x	172-179	Both	*Yes
#12	No		97^4-98^0	66-85	16	103-121	59-85	x	113	No	No
#13	No		97^8	65	x	113-155	59-85	x	93-96	Gain	x

Note. Data collected from resident chart audit. [x] indicates no data in chart.
Resident #2 withdrawn from study due to acute illness. *Sodium 156-175 sent to hospital.
Resident #3 hit head (fell asleep in chair and fell) – unresponsive with pin point pupils; sent to ER for evaluation.
Resident #4 * UA with UWBC 6-10, Bacteria 1+, and negative leukocyte esterase & nitrite
Resident #5 * UA protein 100, trace blood, negative leukocyte esterase & nitrite UWBC 0-5, urogenital flora
Resident #11 * TSH 0.42

Figure 2

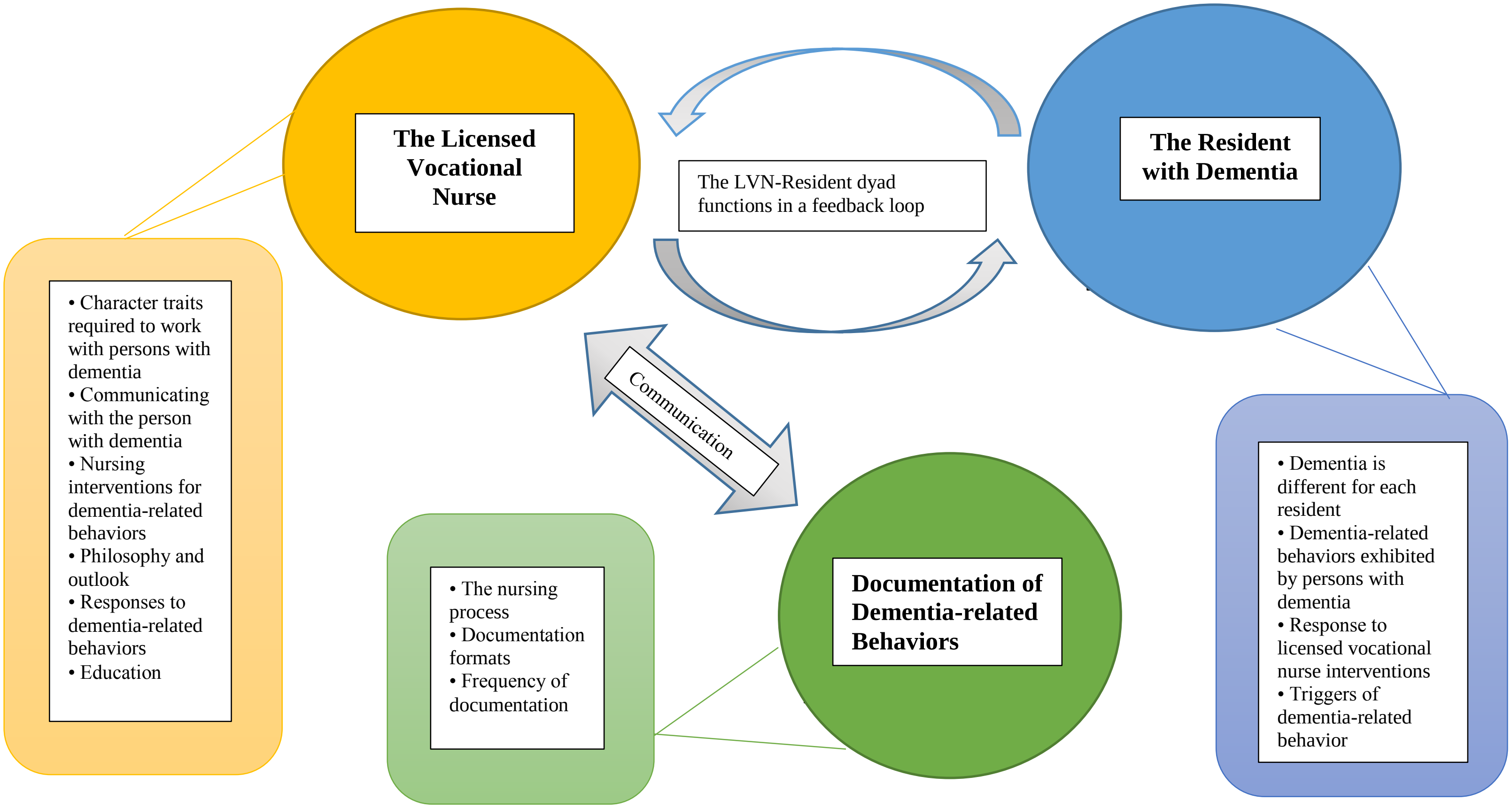


Figure 2: Overarching themes. This model portrays the relationship between the three overarching themes and their associated major subcategories.

Figure 3

Dementia is Different for Each Resident

Dementia-related Behaviors Exhibited by Persons with Dementia

- Aggressive behavior
- Anxious behaviors
- Changes in behavior
- Communication losses as the source of dementia-related behavior
- Gathering behaviors
- Hallucinations and delusions
- Inappropriate touching, handling, or use
- Memory loss and confusion as the source of dementia-related behavior
- Emotional reactions
- Sexually inappropriate behavior
- Suspiciousness and paranoia

Response to Licensed Vocational Nurse Interventions

Triggers of Dementia-related Behavior

- External environment
- Physical environment
- Resident needs
- Social environment

Figure 3. The resident with dementia. This figure shows subcategories and attendant codes related to this theme.

Figure 4

Character Traits Required to Work with Persons with Dementia

- Patience
- Compassion
- Understanding

Communicating with the Person with Dementia

- Non-verbal
- Verbal

Nursing Interventions for Dementia-related Behaviors

- Altering stimulation
- Chemical restraints
- Involvement of outside resources
- Redirecting and distraction
- Assessing the resident
- Safety

Philosophy and Outlook

- It's like dealing with small children
- You never know what will happen next
- You've got to live in their world

Responses to Dementia-related Behavior

- Multiple challenges
- Positive aspects of dementia care

Education

- In-service and continuing education
- LVN program

Figure 4. The licensed vocational nurse. This figure shows the subcategories and attendant codes related to this theme.

Figure 5

The Nursing Process

- Care planning
- Documentation of behavior
- Documenting responses to interventions
- Looking for patterns in behavior
- Medication administration

Documentation Formats

- Behavior sheets
- Documentation by exception
- Narrative charting
- Electronic medical records

Frequency of documentation

Figure 5. Documentation of dementia-related behavior. This figure shows the subcategories and attendant codes related to this theme.

Table 4

Table 4

Comparison: Documentation and Observation

Resident	Documentation	Observation
1	Little interest/pleasure in doing things; trouble concentrating; delusions; inattention/disorganized thinking; wanders; restlessness	Repetitive behaviors; restlessness; inappropriate use or touch; wandering; disorganized speech; dressing and undressing
2	(No documentation located)	Disorganized speech
3	No episodes refusing care; no episodes of hitting/kicking	Resists care; repetitive behaviors, wandering; repetitive vocalizations; dressing and undressing
4	No anxiety; no delusions	Repetitive vocalizations; resists care
5	(Study withdrawal)	(Study withdrawal)
6	Resists care	Wanders, paces
7	(No documentation located)	Wanders
8	(No documentation located)	Resists care
9	Agitated; resists care	Resists care; verbal aggression
10	(No documentation located)	Wanders; repetitive vocalizations; resists care; taking what is not theirs; repetitive behaviors; inappropriate touching handling or use; verbal aggression
11	Passivity; refuses care; verbal aggression	(No dementia-compromised behaviors observed)
12	(No documentation located)	(No dementia-compromised behaviors observed)
13	Verbal and non-verbal aggression	Disorganized speech; picking and touching; inappropriate touch or use; wanders; verbal aggression; non-verbal aggression

Note. Comparison of dementia-related behaviors in documentation and those seen during observation.

Chapter 4. Summary Chapter

Evaluation of the Project

The purpose of this ethnonursing study was to examine the relationship between licensed vocational nurses' (LVNs) responses to dementia-compromised behavior (NDB), documentation, and perceptions of dementia care. Data collection occurred via observation, chart audit, and interview. To ensure consistency and reliability of data, instruments were modified as data collection progressed. Additionally, a follow-up interview with one of the LVNs was necessary to clarify data.

Recommendations Based on Findings

Data analysis revealed three major themes: (a) the resident with dementia, (b) the licensed vocational nurse, and (c) documentation of NDBs. While LVNs practice with a sound knowledge base, findings from this research study support findings of previous studies: a gap between practice and documentation exists. Licensed vocational nurses must consistently document across all shifts. Documentation is fundamental to the provision of person-centered care. With mandatory conversion to electronic medical records fast approaching, timing is perfect to develop documentation systems that promote holistic, person-centered care of the person with dementia residing in the nursing home.

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Voyer, P., Verreault, R., Mengue, P. N., Laurin, D., Rochette, L., & Martin, L. S. (2005, November). Managing disruptive behaviors with neuroleptics: Treatment options for older adults in nursing homes. *Journal of Gerontological Nursing*, *31*(11), 49-61.

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Appendix A

Institutional Review Board Approval The University of Texas at Tyler

The University of Texas at Tyler
Institutional Review Board

December 6, 2012

Dear Jennifer Donwerth,

Your request to conduct the study: *The Relationships Between Licensed Vocational Nurses' Care, Documentation and Perceptions of Dementia-compromised Behaviors in the Nursing Home*, IRB #F2012-34 has been approved by The University of Texas at Tyler Institutional Review Board under expedited review. This approval includes: (a) the written informed consent that is attached to this approval letter, and, (b) proxy signing of the Research Participant Authorization to Use Protected Health Information.

In addition, please assure participant/proxy knowledge of the following prior to study participation: this is a research study; participation is completely voluntary with no obligations to continue participating, with no adverse consequences for non-participation; and assurance of confidentiality of their data. In addition, Any research assistants that you engage must be knowledgeable about research ethics and confidentiality, and any co-investigators must have completed human protection training within the past three years, and have forwarded their certificates to the IRB office (G. Duke).

Please review the UT Tyler IRB Principal Investigator Responsibilities, and acknowledge your understanding of these responsibilities and the following through return of this email to the IRB Chair within one week after receipt of this approval letter:

- This approval is for one year, as of the date of the approval letter
- Request for Continuing Review must be completed for projects extending past one year
- Prompt reporting to the UT Tyler IRB of any proposed changes to this research activity
- **<u>Prompt reporting to the UT Tyler IRB and academic department administration will be done of any unanticipated problems involving risks to subjects or others</u>**
- Suspension or termination of approval may be done if there is evidence of any serious or continuing noncompliance with Federal Regulations or any aberrations in original proposal.

- Any change in proposal procedures must be promptly reported to the IRB prior to implementing any changes except when necessary to eliminate apparent immediate hazards to the subject.

Best of luck in your research, and do not hesitate to contact me if you need any further assistance.

Sincerely,

Gloria Duke, PhD, RN

Gloria Duke, PhD, RN
Chair, UT Tyler IRB

Appendix B

Institutional Review Board Approval Tarleton State University

RE: IRB Notification

Eichenberg, Dr. George

You replied on 12/19/2012 10:32 AM.

Sent: Tuesday, December 18, 2012 10:03 AM

To: Evans, Dr. Elaine; Haynes, Dr. R. Michael; Lewis, Dr. Sally; Snider, Dr. Larry Dwayne; Little, Dr. Bertis; Mink, Dr. Dean; Newby, Dr. Robert; Styron, Mr. W. Kent

Cc: Williamson, Ms. Nona; Donwerth, Ms. Jennifer

Dear Colleagues:

Pursuant to federal regulations, this is to notify you that the following application was approved under the 'expedited' classification as having minimal risks to human subjects:

Ms. Jennifer Donwerth, Nursing

The Relationships Between Licensed Vocational Nurses' Care, Documentation, and Perceptions of Dementia-compromised Behaviors in a Nursing Home.

LVN's are the unit of analysis; not patients. Direct observation of care delivery. Risks attendant with normal activity in this setting; data collection should have no impact on care delivery. Possibly high benefits.

If you have any questions or would like to review the applications please contact me.

Thank you,
George

M. George Eichenberg, Ph.D.
Professor of Criminal Justice
IRB-Human Subjects Chair
T-0665 Tarleton State University
Stephenville, Texas 76402

"Quae Sursum Volo Videre" (Quinn family motto).
"Optimism is cowardice" (Spengler, 1931).

https://exchange.tarleton.edu/owa/?ae=Item&t=IPM.Note&id=RgAAAABphhh63etlRI3IjUm%2fkNhfBwC4tT5DTWAfQ6g2nScCmxGuAAr8fSW6AAC4tT5DTWAf... 1/1

Appendix C

Licensed Vocational Nurse Consent

THE UNIVERSITY OF TEXAS AT TYLER
Informed Consent to Participate in Research

Institutional Review Board # F2012-34
Approval Date: 12-06-12

Licensed Vocational Nurse Consent

1. Title of study: The Relationships Between Licensed Vocational Nurses' Care, Documentation and Perceptions of Dementia-compromised Behaviors in the Nursing Home

2. Principal investigator: Jennifer J Donwerth, PhD-c

3. Participant's name:

To the Participant:

You are being asked to take part in this study at The University of Texas at Tyler (UT Tyler). This permission form explains:

- Why this research study is being done.
- What you will be doing if you take part in the study.
- Any risks and benefits you can expect if you take part in this study.

After talking with the person who asks you to take part in the study, you should be able to:

- Understand what the study is about.
- Choose to take part in this study because you understand what will happen

4. Description of Project
The purpose of this research is to understand what it is like to be a nurse in a nursing home.

5. Research Procedures
If you agree to be in this study, we will ask you to do the following things:
I will follow and observe you as you take care of residents. Two weeks later I will ask you some questions about caring for residents in the nursing home. The interview will take about one-half to one hour of your time. I will record our conversation, so that I do not forget anything you have to say. After your words have been written out, you will be offered the opportunity to review it and make corrections. Anything I observe as I follow you and anything you say will be kept strictly confidential.

7. Side Effects/Risks

There is no risk involved in this study except loss of time. There is no direct benefit to you either. However, the results of the study may help us to understand what it means to care for nursing home residents from the LVNs perspective.

Understanding of Participants

8. I have been given a chance to ask any questions about this research study. The researcher has answered my questions.

9. If I sign this consent form I know it means that:

- I am able to describe the study, how much time it requires, what is expected of me, and when it is OK to stop participating in the study.
- I am taking part in this study because I want to. I chose to take part in this study after having been told about the study and how it will affect me.
- If I choose to not take part in the study, then nothing will happen to me.
- I can stop at any time. I know that if I do stop being a part of the study, then nothing will happen to me.
- I will be told about any new information that may affect my wanting to continue to be part of this study.
- The study may be changed or stopped at any time by the researcher or by The University of Texas at Tyler.
- The researcher will get my written permission for any changes that may affect me.

10. I have been promised that that my name will not be in any reports about this study unless I give my permission.

11. I also understand that any information collected during this study may be shared as long as no identifying information such as my name, address, or other contact information is provided. This information can include health information. Information may be shared with:

- Organization giving money to be able to conduct this study
- Other researchers interested in putting together your information with information from other studies
- Information shared through presentations or publications

12. I understand The UT Tyler Institutional Review Board (the group that makes sure that research is done correctly and that procedures are in place to protect the safety of research participants) may look at the research documents. These documents may have information that identifies me on them. This is a part of their monitoring procedure. I also understand that my personal information will not be shared with anyone.

13. I have been told about any possible risks that can happen with my taking part in this research project.

14. I also understand that I will not be given money for any patents or discoveries that may result from my taking part in this research.

15. If I have any questions concerning my participation in this project, I will contact the principal researcher: Jennifer Donwerth, at (phone number) or email (insert email).

16. If I have any questions concerning my rights as a research subject, I will contact Dr. Gloria Duke, Chair of the IRB, at (903) 566-7023, gduke@uttyler.edu, or the University's Office of Sponsored Research:

The University of Texas at Tyler
c/o Office of Sponsored Research
3900 University Blvd
Tyler, TX 75799

I understand that I may contact Dr. Duke with questions about research-related injuries.

17. CONSENT/PERMISSION FOR PARTICIPATION IN THIS RESEARCH STUDY

I have read and understood what has been explained to me. I give my permission to take part in this study as it is explained to me. I give the study researcher permission to register me in this study. I have received a signed copy of this consent form.

Signature of Participant	Date
Signature of Person Responsible (e.g., legal guardian)	Relationship to Participant
Witness to Signature	

18. I have discussed this project with the participant, using language that is understandable and appropriate. I believe that I have fully informed this participant of the nature of this study and its possible benefits and risks. I believe the participant understood this explanation.

Researcher/Principal Investigator	Date

Appendix D

Proxy Consent

THE UNIVERSITY OF TEXAS AT TYLER

Informed Consent to Participate in Research

Institutional Review Board # F2012-34
Approval Date: 12-06-12

Proxy Consent

1. Title of study: The Relationships Between Licensed Vocational Nurses' Care, Documentation and Perceptions of Dementia-compromised Behaviors in the Nursing Home

2. Principal investigator: Jennifer J Donwerth, PhD-c

3. Participant's name:

To the Participant:

You are being asked permission on behalf of _____________, to take part in this study by a doctoral student and nurse from The University of Texas at Tyler (UT Tyler). This permission form explains:

- Why this research study is being done.
- What your loved one will be doing if they take part in the study.
- Any risks and benefits expected if they take part in this study.

After reading this consent, you should be able to:

- Understand what the study is about.
- Choose to agree that your loved one take part in this study because you understand what will happen.

4. Description of Project
The purpose of this research is to learn about LVNs who take care of nursing home residents.

6. Research Procedures
In this study, the research nurse will observe nursing home nurses caring for your family member. This will take approximately two hours. She will also review the resident's chart specifically the nurse's notes about your loved one's health, the nursing care provided, and the effect of that care. .

7. Side Effects/Risks
Because the research nurse will not have direct contact with individual residents, there is no risk for your loved one to participate. However, the results of the study may help us to understand what it means to care for nursing home residents from the LVNs perspective.

Understanding of Participants

8. I have been given a chance to ask any questions about this research study. The researcher has answered my questions.

9. If I sign this consent form I know it means that:

- I am taking part in this study because I want to. I chose to take part in this study after having been told about the study and how it will affect me.

- I can refuse to allow my family member to be involved in this study. If I choose that my loved one not take part in the study, then nothing will happen to them as a result of my choice.

- I can ask that my loved one not be involved in this study at any time. If I ask that my family member stop being a part of the study, then nothing will happen to them.

- I will be told about any new information that may affect my wanting my loved one to continue to be part of this study.

- The study may be changed or stopped at any time by the researcher or by The University of Texas at Tyler.

- The researcher will get my written permission for any changes that may affect my loved one.

10. I have been promised that that my name will not be in any reports about this study unless I give my permission.

11. I also understand that any information collected during this study may be shared as long as no identifying information such as my name, address, or other contact information is provided). This information can include health information. Information may be shared with:

- Organization giving money to be able to conduct this study
- Other researchers interested in putting together your information with information from other studies
- Information shared through presentations or publications

12. I understand The UT Tyler Institutional Review Board (the group that makes sure that research is done correctly and that procedures are in place to protect the safety of research participants) may look at the research documents. These documents may have information that identifies me on them. This is a part of their monitoring procedure. I also understand that my personal information will not be shared with anyone.

13. I have been told about any possible risks that can happen with my taking part in this research project.

14. I also understand that I will not be given money for any patents or discoveries that may result from my taking part in this research.

15. If I have any questions concerning my participation in this project, I will contact the principal researcher: (insert PI name) at (phone number) or email (insert email).

16. If I have any questions concerning my rights as a research subject, I will contact Dr. Gloria Duke, Chair of the IRB, at (903) 566-7023, gduke@uttyler.edu, or the University's Office of Sponsored Research:

The University of Texas at Tyler
c/o Office of Sponsored Research
3900 University Blvd
Tyler, TX 75799

I understand that I may contact Dr. Duke with questions about research-related injuries.

17. CONSENT/PERMISSION FOR PARTICIPATION IN THIS RESEARCH STUDY

I have read and understood what has been explained to me. I give my permission to take part in this study as it is explained to me. I give the study researcher permission to register me in this study. I have received a signed copy of this consent form.

______________________________	____________________
Signature of Participant	Date
______________________________	____________________
Signature of Person Responsible (e.g., legal guardian)	Relationship to Participant

____
Witness to Signature

18. I have discussed this project with the participant, using language that is understandable and appropriate. I believe that I have fully informed this participant of

the nature of this study and its possible benefits and risks. I believe the participant understood this explanation.

____________________________________ _________________

Researcher/Principal Investigator Date

Appendix E

Observational Protocol: LVN ID: _____________

Length of Activity: 120 Minutes Grand Tour Questions: What do I observe during LVN interaction with residents exhibiting NDBs? What antecedents and consequences are observed?	
Descriptive Notes	**Reflective Notes**
Resident 1: NDB: Nurse response:	
Resident 2: NDB: Nurse response:	
Resident 3: NDB: Nurse response:	
Sketch of Work Area	

Lighting

Noise

Temperature

Activities

Personal contacts and caregivers

Stimulation or isolation

Odors/smells

Other notes:

Appendix F

Resident Chart Audit

Grand tour question: What do LVNs write about their interaction with residents exhibiting NDB?	
Date of observation period:	
Resident ID:	
LVN ID:	
Demographic Information	
Age (in years)	
Gender	Male Female
Race/Ethnicity	White AA Hispanic A/PI AI/AN Other:
Data Collection	
Diagnosis listed on most recent monthly orders:	Medications (to include changes made 36 hours prior to and after observation period):
Falls during 36 hours prior to and after observation period: __Yes __No Location: Injuries: __Yes __No Describe circumstances surrounding fall:	Range of vital signs during 36 hours prior to and after observation period: Temperature: ______________ Pulse: ______________ Respiration: ______________ Blood Pressure: ______________ O2 Saturation: ______________
Weight/weight change: Most recent weight: _____ Weight change __Yes __No Amount: ___ (gain / loss)	Range of laboratory values (including blood sugars) during 36 hours prior to and after observation period:

Resident dementia-compromised behaviors documented by LVN ID __________ during the 36 hours prior to and after observation period (to include interventions and resident response to that intervention):

Appendix G

THE COHEN-MANSFIELD AGITATION INVENTORY –
Long Form
with expanded descriptions of behaviors

Date of observation period: __________ Resident ID: __________

AGITATION - SEE SCALE

Resident behaviors documented by LVN ID __________ in the 36 hours prior to and after observation period.

Rating Scale for Agitated Behaviors
1 - Never
2 - Less than once a week
3 - Once or twice a week
4 - Several times a week
5 - Once or twice a day
6 - Several times a day
7 - Several times an hour
8 - Would be occurring if not prevented (e.g., would pace if not restrained)
9 - Not applicable (e.g., cannot pace because cannot walk or move wheelchair)

✂ *If prevented part of the time, estimate how frequently it would happen if not prevented.*
✂ *Do not include rare behaviors that are clearly explained by situational factors.*

1. **Pacing and aimless wandering** - constantly walking back and forth, does not indicate normal purposeful walk, include wandering when done in a wheelchair _______
2. **Inappropriate dressing or disrobing** - putting on too many clothes, putting on clothing in a strange manner (e.g., putting pants on head), taking off clothing in public or when it is inappropriate (if only genitals are exposed, do not rate; see item # 28.) Do not rate person's ability to dress/undress as in ADL's _____
3. **Spitting (including while feeding)** - spitting onto floor, other people, etc.; do not include salivating of which person has no control, or spitting into tissue, toilet, or onto ground outside _____
4. **Cursing or verbal aggression** - only when using words; swearing, use of obscenity, profanity, unkind speech or criticism, verbal anger, verbal combativeness. Nonverbal will be marked under screaming _____
5. **Constant unwarranted request for attention or help** - verbal or nonverbal unreasonable nagging, pleading, demanding (indicate also for oriented people) _____
6. **Repetitive sentences or questions** - repeating the same sentence or question one right after the other (Do not include complaining - see item # 18; even if oriented and even if possibly warranted) _____

7. **Hitting (including self)** - physical abuse, striking others, pinching others, banging self/furniture _____
8. **Kicking** - strike forcefully with feet at people or objects _____
9. **Grabbing onto people or things inappropriately** - snatching, seizing roughly, taking firmly, or yanking ______
10. **Pushing** - forcefully thrusting, shoving, moving putting pressure against _____
11. **Throwing things** - hurl, violently tossing up in air, tipping off surfaces, flinging, intentionally spilling food______
12. **Making strange noises** - including crying, weeping, moaning, weird laughter, grinding teeth ______
13. **Screaming** - loud shrill, shouting, piercing howl _____
14. **Biting** - chomp, gnash, gnaw (people, objects, or self) _____
15. **Scratching** - clawing, scraping with fingernails (people, objects, or self) _____
16. **Trying to get to a different place** - trying to get out of the building, off the property - sneaking out of room, leaving inappropriately, trying to get into locked areas, trespassing within unit, into offices, other resident's room or closet _____
17. **Intentional falling** - purposefully falling onto floor, include from wheelchair, chair, or bed _____
18. **Complaining** - whining, complaining about self, somatic complaints, personal gripes or complaining about external things or other people _____
19. **Negativism** - bad attitude, doesn't like anything, nothing is right _____
20. **Eating or drinking inappropriate substances** - putting into mouth and trying to swallow items that are inappropriate _____
21. **Hurting self or other** - burning self or other, cutting self or other, touching self or other with harmful objects, etc. _____
22. **Handling things inappropriately**. - picking up things that don't belong to them, rummaging through drawers, moving furniture, playing with food, fecal smearing _____
23. **Hiding things** - putting objects under or behind something _____
24. **Hoarding things** - putting many or inappropriate objects in purse or pockets, keeping too many of an item _____
25. **Tearing things or destroying property** - shredding, ripping, breaking, stomping on something _____
26. **Performing repetitious mannerisms** - sterotypic movement, such as patting, tapping, rocking self, fiddling with something, twiddling with something, rubbing self or object, sucking fingers, taking shoes on and off, picking at self, clothing, or objects, picking imaginary things out of air or off floor, manipulation of nearby objects in a repetitious manner _____
27. **Making verbal sexual advances** - sexual propositions, sexual innuendo, or "dirty" talk _____
28. **Making physical sexual advances or exposing genitals** - touching a person in an inappropriate sexual way, rubbing genital area, inappropriate masturbation, when not alone in own room or bathroom, unwanted fondling or kissing _______
29. **General Restlessness** - fidgeting, always moving around in seat, getting up and sitting down inability to sit still

_____

Appendix H

Demographic Questionnaire

Time of Interview:

Date:

Place:

Interviewer: Jennifer J Donwerth

LVN ID:

Demographic Data:

Age (in years): ___________

Gender: Male or Female

Race: White AA Hispanic A/PI AI/AN Other ________________

Ethnicity: Hispanic Non-Hispanic

Experience as LVN (in years and months): _____________________

Appendix I

Semi-structured Interview Guide

Research Question	Grand Tour Questions
Dementia-specific training:	Yes or No
	Details of the training:
How do LVNs perceive NDB in nursing home residents?	1) Tell me about the residents with dementia you take care of:
	2) Tell me about their behaviors:
	3) Tell be about when behavior changes:
How do LVNs respond to NDB in nursing home residents?	1) Please tell me about resident behaviors:
	2) What you do when resident behaviors affect others? Tell me about it.
	3) When you cared for (resident) on (date) he (NDBs). In the chart, you documented (provide specifics). Tell me about your notes. Or Remember that day when I shadowed you? Tell me about the documentation for that shift.

Thank you for participating in this interview. All responses from this and any future interviews will be kept confidential.

Appendix J

Permission Need-driven Dementia-compromised Behavior Model

Title: Special Section—Behavioral symptoms of dementia: their measurement and intervention. Editorial: The need-driven dementia-compromised behavior model—a framework for understanding the behavioral symptoms of dementia

Author: A. L. Whall, A. M. Kolanowski

Publication: Aging & Mental Health

Publisher: Taylor & Francis

Date: Mar 1, 2004

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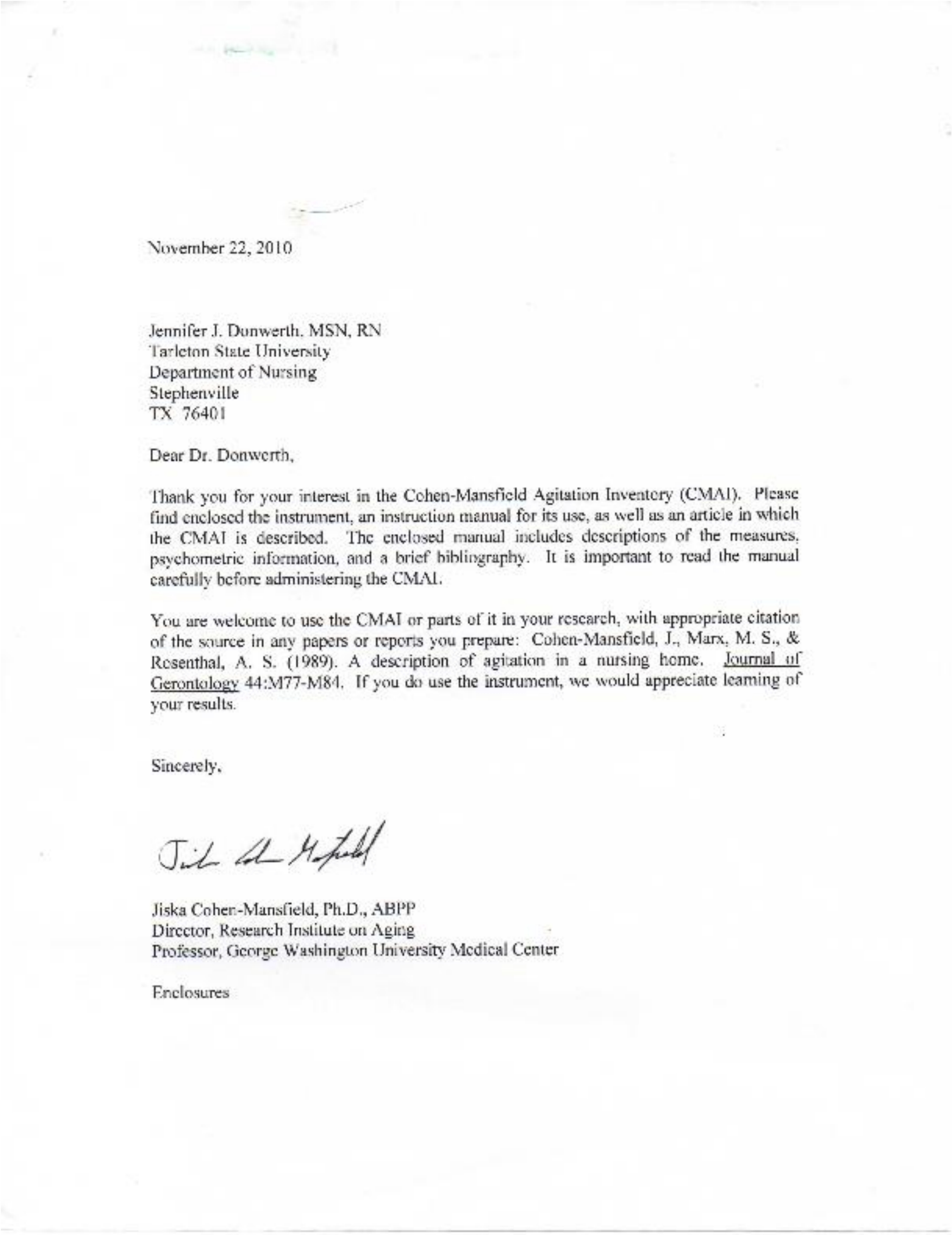
Appendix K

Permission Cohen-Mansfield Agitation Inventory



November 22, 2010

Jennifer J. Donwerth, MSN, RN
Tarleton State University
Department of Nursing
Stephenville
TX 76401

Dear Dr. Donwerth,

Thank you for your interest in the Cohen-Mansfield Agitation Inventory (CMAI). Please find enclosed the instrument, an instruction manual for its use, as well as an article in which the CMAI is described. The enclosed manual includes descriptions of the measures, psychometric information, and a brief bibliography. It is important to read the manual carefully before administering the CMAI.

You are welcome to use the CMAI or parts of it in your research, with appropriate citation of the source in any papers or reports you prepare: Cohen-Mansfield, J., Marx, M. S., & Rosenthal, A. S. (1989). A description of agitation in a nursing home. Journal of Gerontology 44:M77-M84. If you do use the instrument, we would appreciate learning of your results.

Sincerely,

Jiska Cohen-Mansfield, Ph.D., ABPP
Director, Research Institute on Aging
Professor, George Washington University Medical Center

Enclosures

BIOGRAPHICAL SKETCH	
NAME **Jennifer J Yeager**	POSITION TITLE **Assistant Professor, Department of Nursing Tarleton State University Stephenville, TX**
CREDENTIALS PhD, RN, GNP-BC, STTI NFLA Fellow	
EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*	

INSTITUTION AND LOCATION	DEGREE	MM/YY	FIELD OF STUDY
University of Portland, Portland, OR	BSN	05/1987	Nursing
The University of Texas at Arlington, Arlington, TX	MSN	05/1998	Nursing Adult/Gero NP, Educator Role
The University of Texas at Tyler, Tyler, TX	PhD	12/2013	Nursing

A. Personal Statement

The purpose of this study is to examine the relationships between licensed vocational nurses, persons with dementia residing in the nursing home who exhibit dementia-compromised behavior and documentation. Fifteen years as a gerontological nurse practitioner and six years on faculty at Tarleton State University teaching nursing care of the older adult provide a suitable background for research examining any aspect of geriatric living or care.

For the past year, I have been the Co-director of the *Using BSN RN Mentors for Increasing Enrollment and Integrating Simulation Across the Curriculum: Metrics of Success* study grant, sponsored by the Texas Higher Education Coordinating Board Nursing Innovation Grant awarded to Tarleton State University in collaboration with Weatherford College. This, combined with participation in previous research, Improving Pain Management in Long-Term Care Facilities by MDS Use and Staff Education (poster presentation, AGS Annual Scientific Meeting, Baltimore, MD, 2003), have developed research, and grant development skills.

My role as Co-director is part of the Sigma Theta Tau International Nurse Faculty Leadership Academy, a program designed to foster success both academically and professionally and develop leadership skills. My background as an Air Force Officer and nurse made me uniquely suited to thrive under this leadership development program.

B. Positions and Honors

Employment

2012-	Assistant Professor, Tarleton State University
2007-2012	Instructor/Faculty, Tarleton State University
2004-2007	Geriatric Nurse Practitioner, Self Employed, Ft. Worth Texas
1999-2004	Geriatric Nurse Practitioner, Baylor Univ. Medical Center, Dallas, TX
1993-2004	Clinical Transplant Coordinator, Methodist Medical Center, Dallas, TX
2001-2003	Adjunct Clinical Instructor, The University of Texas at Arlington
1987-1993	Officer, United States Air Force

Professional Memberships

2012-	American Nurses Association
2012-	Texas Nurses Association
2011-	National Gerontological Nursing Association
2008-	American Association of Colleges of Nursing
2008-	Sigma Theta Tau International, Iota Nu Chapter; delegate, and treasurer

Honors

2011-	Nurse Faculty Leadership Academy Scholar, Sigma Theta Tau International
2009-2011	Health Information Technology Scholar, University of Kansas School of Nursing in collaboration with Schools of Nursing at University of Colorado, Denver, and Indiana University, in partnership with the National League of Nursing
2009	Nurse Oncology Education Program Faculty Training Program Scholarship, Nurse Oncology Education Program part of the Texas Nurses Association/Foundation

C. Selected Peer-reviewed Publications

Yeager, J. J. (in press) Delirium superimposed on Charles Bonnet syndrome: A case study. *Geriatric Nursing.* http://dx.doi.org/10.1016/j.gerinurse.2013.07.001