Modifying Bathing Environments To Reduce Aggression and Agitation in Residents with Dementia-Related Diagnoses

By

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DEDICATION

First and foremost, I would like to dedicate this thesis project to my mother. She has taught me everything I know about hard work, determination, and perseverance. Her ongoing support and encouragement made me believe that I could handle the large, complex and time consuming task that was this thesis project. I admire her strength and dedication and am grateful to have her at my side as my guide through this life.

Second, I would like to thank my siblings and my boyfriend for being there. I could always count on them to provide me with comic relief and stress free times when I needed it. Know that you are important to me and that I am truly grateful.
ABSTRACT

The goal of this study was to reduce the aggression and agitation in patients with Dementia-Related Diagnoses during the bathing experience by modifying (enriching) the bathing environment. This study was informed by earlier research on the effects of environmental enrichment, spa environments, and best practices in nursing techniques. The paucity of research in this area is so limited that it makes this study of value. This work aims to restore for patients with Dementia-Related Disorders the experience of bathing as refreshing, calming, and safe. A brief manual was provided to the nursing home staff to explain the importance of the project, expected costs, and further actions to take.
ACKNOWLEDGEMENTS

I would like to acknowledge the long-term care facility for allowing me to come into their Agency and have the opportunity to make suggestions for areas of improvement. I would also like to thank everyone at the facility for their trust and support. My Agency Supervisor, M.M., was a great asset to me in the development of this thesis project. Her dedication to improving the lives of the residents truly made a difference in the momentum and development of this project. Lastly, I would like to give thanks for the opportunity to work with the residents and learn about their dementia. The residents and staff were the basis of this research and getting to know them was a life changing experience.

I would also like to acknowledge my thesis supervisor Colleen Cairns for her ongoing support, assistance, and encouragement throughout this challenging thesis project. Colleen is a very intelligent and professional individual; having her guidance and assistance made the thesis process a great learning opportunity for me, personally and professionally. Without her, the process would have been extremely difficult.
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CHAPTER I: INTRODUCTION

Modifying Bathing Environments To Reduce Aggression and Agitation in Residents with Dementia-Related Diagnoses

Overview

For years, behavioural psychology research has shown that modifying environments can produce appropriate changes in behaviour. Why have environmental modifications been under utilized in bathing environments to reduce aggression and agitation in residents of long-term care facilities who have dementia-related diagnoses?

In long-term care settings, the bathing area is one of the strongest remnants of the old institutional model, where the goals of efficiency and utility still reign supreme over the psychological and emotional comfort of the person being bathed (Barrick, Rader, Hoeffer, Sloane, & Biddle, 2008, pp 110).

This quote highlights the importance of modifying bathing environments to enhance the well-being of residents living in long-term care facilities. Even slight changes may make a significant difference.

Rationale

Bathing is a task that occurs from birth to the end of life. It is a necessary activity for daily living, regardless of whether people are able to do it by themselves or require some assistance. Bathing and bathing environments are an under studied area. This is unfortunate given the potentially significant impact bathing can have upon the lives of the elderly.

People who reside in long-term care facilities lose the ability to bathe on their own. Baths are scheduled and supervised or baths are provided by care providers. Often, there are staffing changes with care providers who assist with bathing and residents must become
comfortable with new staff members. As well, illness may cause residents to not recognize familiar staff members or misinterpret the bathing situation. In these circumstances, many residents will likely refuse or become combative during bathing.

Options need to be examined and changes need to be made to ensure that the residents’ hygiene and dignity are maintained. Bathing should be a refreshing and relaxing activity. This has typically been achieved in spa environments, which help to calm and relax people. A common technique used in spa environments is the stimulation of each of the five senses (Cheever, 2010). Accordingly, this technique of stimulating the senses will be applied to the long-term care bathing environment. Changing the bathing environment in this manner will create a spa-like experience for residents in long-term care facilities. The change from that of an institution-like atmosphere to a spa-like atmosphere may have a positive effect on the residents’ behaviours, such as reducing the occurrence of aggression and agitation in residents with dementia. Non-contingent reinforcement and best practices in bathing the elderly will also be used.

**Hypothesis**

It is proposed that modifying the bathing environment will reduce aggression and agitation and thus, improve the quality of life in elderly persons with dementia-related diagnoses residing in long-term care facilities.
CHAPTER II: LITERATURE REVIEW

This chapter will highlight and elaborate upon the many different topics that are incorporated into this thesis project.

Many aspects need to be considered, in order to make the necessary modifications to the bathing environment to reduce the aggression and agitation of residents diagnosed with dementia residing in long-term care facilities. There currently are a limited number of research studies in which environmental modifications made in the bathing environment are examined in order to decrease the frequency of these problem behaviours. Therefore, the following sections will explain the elements involved with modifying (enriching) the bathing environment to reduce aggressive and agitated behaviours, how those elements pertain to this thesis project, and their importance as well as discuss the findings of some of these research studies.

Dementia

An understanding of dementia is needed in order to appreciate what residents in long-term care facilities who have dementia-related diagnoses must face on a daily basis. Dementia most commonly affects individuals who are aged 65 years or older and is more predominant in females than males. It is estimated that approximately 500,000 people are living with dementia in Canada (Wilkinson, 2009).

What is dementia? According to Lewis et al. (2010), dementia is a collection of multiple symptoms that are caused by various diseases that affect the brain. Individuals who are diagnosed with dementia will have impaired memory, orientation, attention, and problem-solving ability as well as changes in behaviour. Dementia can be caused by both treatable and untreated conditions. The two most common causes of dementia are neurodegenerative conditions and infectious conditions. Neurodegenerative conditions are incurable but symptom management is
available. Infectious conditions, such as bacterial meningitis or viral encephalitis, are treatable and dementia symptoms will disappear after treatment is completed.

The most common form of dementia is Alzheimer’s Disease. Vascular Dementia is the second most common form of dementia; it is caused by vascular changes, which is a decrease in blood supply, and narrowing or blocking of the arteries to the brain (Lewis et al., 2010).

Alzheimer’s disease (AD) is a chronic, progressive, degenerative disease of the brain (Lewis et al., 2010). As the most common form of dementia, it accounts for 60-80% of all cases. The most significant risk factor for developing AD is age. AD is a disease that destroys brain cells; it causes individuals to lose their ability to remember and it impairs their performance of cognitive and daily functions (Huether & McCance, 2008). The brain structure and the brain function in AD patients show that there are three factors in the brain that lead to AD. These three factors are: 1) a build up of amyloid plaques between neurons, 2) neurofibrillary tangles, and 3) loss of connections between cells or cell death. Amyloid plaques consist of clusters of insoluble proteins, which form in areas of the brain where memory and cognitive functions occur. Due to these clusters, cell transmission becomes difficult and consequently, these areas begin to lose their function. Neurofibrillary tangles are abnormal collections of twisted protein threads inside nerve cells seen in different areas of the brain. These tangles continually form as the healthy neurons begin to die (Lewis et al., 2010). This damage spreads throughout the entire brain. The loss of connections and cell death in an individual with AD occurs gradually. By the final stage of AD, brain shrinkage is quite significant and the brain size has decreased.

According to Huether & McCance (2008), these three factors cause a wide variety of symptoms for patients living with AD. AD symptoms occur in three stages. In the first stage of AD, the most common symptoms include loss of short-term memory, inability to perform
mathematical calculations, decreased judgement, loss of initiative and interests, geographic disorientation, and inability to comprehend abstract ideas. The most common symptoms in the second stage of AD include difficulty with speech and language (aphasia), changes in personality and behaviour, inability to remember purpose of items (apraxia), wandering, impaired comprehension, seizures, hallucinations, changes in usual grooming habits, paranoia, and depression. The third stage of AD is the most severe with symptoms that include inability to perform activities of daily living, such as eating, dressing and bathing; inability to remember how to walk, swallow, or use the toilet; minimal ability to communicate or inability to communicate; and eventually becoming bedridden and developing complications due to immobility, such as pneumonia, pressure ulcers, and constipation. Depending on the severity, these symptoms make it very difficult for individuals to live alone or at home without constant care. Eventually, patients with AD require an ample amount of assistance with daily activities and this is when long-term care placements are often considered for these individuals.

Vascular dementia is the second most common form of dementia. Vascular dementia is the loss of cognitive function resulting from multiple small strokes that include ischemic, ischemic-hypoxic, or hemorrhage brain lesions. This form of dementia is caused by decreased blood supply from the narrowing or blocking of arteries that supply the brain. Vascular dementia has a distinctive natural history, and the symptoms appear suddenly. It is most common in patients who have a history of hypertension, diabetes, coronary artery disease, or cardiac dysrhythmias. It is usually caused by a stroke or an infection, and can result in severe brain impairment. This impairment can result in decreased cognitive functioning, memory problems, and issues with executive functioning (Huether & McCance, 2008).
Dementia, as a whole, has three classes of symptoms: 1) early or mild, 2) middle or moderate, and 3) late or severe (Huether & McCance, 2008). As the dementia progresses, the symptoms begin to worsen. Often, individuals with dementia will require much assistance with activities of daily living. They need to be constantly monitored, and need help performing tasks. Individuals with dementia may live at home during the early stages but as they progress through the middle and late stages, they will frequently be moved to long-term care or hospital settings (Lewis et al., 2010).

The nature of the disease can lead to the occurrence of inappropriate behaviours. Most predominantly, aggressive and agitated behaviours are associated with dementia. The prevalence of disruptive behaviours in individuals diagnosed with dementia is well documented (Burnside--; Maas--; Rabin--). Neuropsychological changes, such as disinhibition, may potentially interfere with individual ability to regulate or execute behaviour. Poor motor control may also potentially play a role in problem behaviours. In addition, resistive behaviour during bathing has been shown to have a high, albeit indirect, correspondence with memory, attention and visuo-spatial deficits (Algase et al.,1996). However, the full extent of the correlation between cognitive deterioration and disruptive behaviours still remains to be established.

Generally, disruptive behaviours are often considered as a means of communication for the individuals based on their perceived or actual unmet need (Keady & Jones, 2010). Problem behaviours can occur at any stage in the progression of dementia; however, it is not until the moderate to severe stages that the behaviours become problematic enough to cause significant stress for the individual, their families, and their care providers. Since these behaviours can be a form of communication, it is important for care providers to address any concerns that may be
causing distress to the individual. This attempt to understand the needs of the individual may also alleviate the disruptive behaviours.

Some types of dementia, such as those caused by infections or lack of Vitamin B12, are treatable. However, there is no cure for dementia caused by neurodegenerative conditions. For these incurable forms of dementia, the primary goals of treatment are to provide symptom management and/or attempt to decrease the progression of the disease. Treatment with the use of medication is frequently helpful. The most common types of medication used are cholinesterase inhibitors. Cholinesterase inhibitors slow the deterioration of the disease and stabilize the cognitions. Medications can also be effective in stabilizing the individual’s aggressive or agitated behaviours (Lewis et al., 2010). Alternative therapies are typically used to keep the person calm and engaged with other tasks. Some alternative therapies include music, art, aromatherapy, and multisensory approaches (Huether & McCance, 2008). These treatment options are emphasized during the progressive and later stages of dementia in order to alleviate the symptoms and focus on keeping the person calm.

Residents

In an article written by Beck & Frank (1998), it was reported that approximately 86% of residents who have dementia exhibit disruptive behaviours. Although these behaviours may be linked to their diagnoses, researchers are trying to examine if there may be underlying causes for such behaviour. According to Beck & Frank (1998), residents who require more assistance from staff with their activities of daily living typically exhibit more problem behaviours. The loss of independence is believed to be a frequent contributor to the occurrence of aggressive or agitated behaviours. Taking measures to ensure the safety and security of the resident, such as taking the time to orient the individual to the situation, may reduce the incidence of these behaviours. As
well, providing the resident with options and choices can lead to an increased sense of autonomy, which may also help decrease any disruptive behaviours.

In fact, a need-driven, dementia-compromised behaviour (NDB) model for intervention focuses on the antecedents to the exhibited behaviours. Antecedent conditions to NDBs include both background factors and proximal factors. Background factors are fairly stable and are comprised of cognitive, neurological, health and psychosocial variables. However, proximal factors are essentially situational issues and events; they include variables within the person, the physical environment and the social environment. Proximal factors are most amenable to intervention and typically precipitate the NDB (Kovach, Noonan, Schlidt & Wells, 2005). Thus, an effective interrogation and assessment of these proximal factors can determine the need states of individuals with dementia-related disorders. Is the resident experiencing an unexpressed emotional state or an unmet physiological need? Does the physical or social environment interfere with functioning? Is the resident frustrated by the difficulty of performing activities of daily living? (Kolanowski & Whall, 2000)

Therefore, attending to the residents’ needs is fundamental to the management of aggressive or agitated behaviours. However, Beck & Frank (1998) also recommend that the needs of family members, staff, and visitors cope with these behaviours as well. Addressing the needs of all individuals who are affected by the disruptive behaviours will allow for better problem-solving and coping skills to be achieved for everyone involved.

Environmental Enrichment

Environmental enrichment refers to the practice of enhancing the physical and social environment (van Praag, Kempermann, & Gage 2000). For instance, Burnside (1979) conducted an observational analysis of a therapeutic environment that was characterized by calm and
functional resident behaviours. As well, Horner (1980) demonstrated that enriched environments play a role in the reduction of maladaptive behaviours in institutionalized children with developmental delays. In fact, Horner recommends that enriching the environment, coupled with differential reinforcement of behaviour, can reduce maladaptive behaviour and increase adaptive behaviour. Accordingly, modifications to the bathing environment that are designed to enrich it (e.g., choice of music or nature sounds, wall decorations, speaking softly) should result in a decrease of aggressive and agitated behaviours in residents with dementia during the bathing experience.

**Bathing and the Elderly**

Unfortunately, bathing is one of the first activities of daily living that people with dementia tend to lose and thus, compromises personal dignity and autonomy. Consequently, this lack of independence may increase levels of frustration and may instigate aggressive and agitated behaviours (Murphy, Gretebeck, & Alexander, 2007). Whall et al., (2008) assert that problem behaviours, such as aggression and agitation, increase when residents are trying to guard and protect themselves. It is possible that aggression during bathing could stem from physical discomfort or rough handling (Whall et al., 1997).

As well, Weitzel et al., (2011) contend that aggressive and agitated behaviours may follow from distress over being nude in the presence of caregivers, unfamiliar surroundings, discomfort, or temperature. The provision of robes, towels or cloths before, during or after the bathing process could help to alleviate this distress.

**Nursing Techniques**

An observational study conducted by Beck and Heacock (1988) noted that argumentative staff behaviours tend to result in increased resistive behaviours from the residents. In fact,
findings from Burgener et al. (1992) indicate that rigid and tense staff behaviours were related to the residents exhibiting similarly difficult behaviours. Additional results from this study demonstrate that relaxed and smiling care providers behaviours were most strongly and consistently related to calm and functional behaviours. Therefore, adopting a positive and attentive approach, through verbal and non-verbal language, can significantly affect behavioural outcomes.

Since problem behaviours can be a means of communicating needs (Keady & Jones, 2010), it is important to address any concerns that the residents may have. Barrick et al. (2008) propose techniques that can be used during the bathing process. These techniques promote self-worth and provide a sense of control for the residents. (In fact, Burgener et al. (1979) had speculated in their study that allowing the resident greater control during the bathing experience may have contributed to calmer and more functional behaviours.) Such techniques can include building a therapeutic alliance, focusing on the resident and not just the task at hand, being prepared, having supplies ready, being patient, and providing choices to the resident (e.g., Should we wash your legs or arms first?) The provision of choice is significant, as choice has been shown to reduce disruptive behaviours.

Barrick et al. (2008) also recommend that care providers use specific techniques in difficult situations. These techniques are to stop the task, figure out the problem, remain calm, be patient and understanding, and ask for suggestions from co-workers as collaboration can improve outcomes. Furthermore, it is equally important to use strategies that promote self-worth and dignity during the bathing experience. To accomplish this, the researchers recommend keeping residents covered (e.g., cover the resident with a towel, robe, or blanket while undressing and cover private areas with a wash cloth), reducing the number of times that the
resident must dress and undress by providing the bath before the resident changes into his/her
day clothes, bathing slowly as rushing may increase anxiety, washing the least personal areas
first (arms, legs, hands, feet) and the private areas last, and being gentle.

**Spa Environments**

The majority of people appreciate the essence and atmosphere of a spa. Spas provide
treatments to increase feelings of relaxation, cleanliness, and specialness. It is possible to create
a similar environment in long-term care bathing environments by keeping items within reach,
dimming the lights, using soft music or nature sounds, warming the room, providing the
residents with comfortable robes, and giving them choices (Paraplegia News, 2006). By using
these specific techniques, spa professionals maintain the dignity of their clients in discrete ways.

It is important to consider the five senses when enriching the bathing environment
(Cheever, 2010). For the sense of sight, the setting does need to be visually appealing. Any art is
to be hung within the sight line of the person seated in the bath tub. Signs are to be removed and
different levels of light can be used. Music can appeal to the sense of hearing; any unnecessary
background noise needs to be eliminated since background noise can increase problem
behaviours. For the sense of touch, modifying surface textures and warming the room can
comfort the bather. Scented candles or oils can be used, if possible, to arouse the sense of smell.
It would be necessary to remove any soiled clothing and linen to eliminate offensive odours.
Snacks or drinks can stimulate the sense of taste. Most importantly, when seeking to modify the
bathing environment in this manner, the Agency’s policies and procedures must be followed.

**Environmental Modifications**

Environmental modifications are the most critical aspect of this project. Research has
shown that when making modifications to the environment, the key is to incorporate all of the
five senses for stimulation. There are some general guidelines to keep in mind. When modifying the bathing environment, it is important to keep things simple. This rule applies to removing all items from the room that are not necessary. To store supplies, use cabinets instead of counter tops. Eliminate any visual clutter. To change the appearance of the environment, add art that is visible from a seated position in the bath tub. Relocate signage of policies and procedures to an area outside of the residents’ sight line when bathing. Auditory elements, such as music or nature sounds, can be added to the environment. The music or nature sounds can provide a distraction from the bathing experience, and the music can also allow the resident and care giver to sing together. Ensure that the temperature of the room is warm; this can be simply achieved by adding a towel warmer. Tactile stimulation can be provided with a cloth or sponge during the resident’s bath. That stimulation can also make the resident feel as though he or she is contributing to and in control of his or her care. Consideration of both environmental and psychological variables is important when establishing the factors that may increase an individual’s adaptive behaviours and decrease an individual’s maladaptive behaviours (Keady & Jones, 2010). This approach does not attempt to discern the cause of those behaviours; instead, the focus is to promote the individual’s well-being while attempting to decrease the problem behaviours.

According to Barrick et al. (2008), an environment is experienced primarily through our senses. For this reason, these authors note that it is important to address which areas in the environment are arousing to the senses. This can be accomplished by looking at what is in the bathing environment and how the senses may be affected. For example, are the surfaces hard or soft, or are the walls appealing or plain? These are some of the questions that will need to be taken into consideration when modifying the bathing environment. It would be beneficial to attempt to arouse as many senses as possible in order to make the environment stimulating for
the residents. When enriching the bathing environment, Barrick et al. (2008) also believe that the greatest emphasis needs to be on the person being bathed and how he or she is experiencing the setting. How the bathing environment can support the caregiver is a secondary consideration to the experience of the resident. That is, while the bathing environment does need to be functional and safe for the care providers, the most important factor is still the residents and how the bathing environment will benefit them.

Rationale for Modifying Bathing Environments in Long-term Care

A poor bathing environment can significantly impact upon individuals with dementia-related diagnoses in numerous ways. Most obviously, a poor environment can cause an increase in problem behaviours such as aggression and agitation in residents. Issues of autonomy and privacy are exacerbated, and the safety of both the care providers and the residents can be compromised. With 500,000 people living with dementia-related disorders, a significant portion of the population requires additional assistance in this matter (Wilkinson, 2009). Thus, it is vital to consider how this disease affects their behaviours, and to create a positive and supportive environment for them. Moreover, with the additional emphasis of symptom management for individuals with dementia, environmental modification can play a crucial role in this regard. Modifying the bathing environment can reduce aggressive and agitated behaviours in residents with dementia while simultaneously promoting their comfort and well-being.

In fact, the modifications to the bathing environment in this thesis project constitute some of the recommendations made by a consensus conference about techniques to reduce disruptive behaviours during bathing of persons with dementia (Sloane, Rader, Barrick, Hoeffer, Dwyer, McKenzie, Lavelle, Buckwalter, Arrington & Pruitt, 1995). The recommended environmental characteristics for bathing areas are: 1) the room should feel private and personal; 2) the
environment should be designed to keep the resident warm (including warm towels); 3) use music for residents who find it relaxing; 4) adjust lighting to be soft; 5) minimize glare; 6) reduce noise; 7) use home-like furnishings (including pictures on the wall); 8) use aromas to evoke memories, set mood, and make bath pleasant; and 8) bathing equipment should be comfortable and functional.

Research on Behavioural Interventions on Patients with Dementia

The literature suggests that behavioural interventions, employing a variety of modalities and approaches, have been studied: 1) sensory stimulation, 2) changes in the physical environment, 3) psychosocial measures, and 4) multimodal strategies. Results from these studies are mixed. Some research findings report non-significant reductions, no change or increased behavioural symptoms. However, many of these behavioural intervention studies investigated different modalities and approaches (such as pet therapy, etc.) that were not specific to the bathing environment (Beck, Vogelpohl, Rasin, Uriri, O'Sullivan, Walls, Phillips, & Baldwin, 2002).

Nevertheless, a handful of studies have been conducted specifically for the bathing environment. Generally, these investigations have indicated that the intervention(s) resulted in a significant decrease in targeted behaviours. A critical factor identified in these problem behaviours is the physical environment itself. For example, an observational study conducted by Namazi & Johnson (1996) noted that the mechanical and operational components of the bath tub did contribute, in part, to the disruptive behaviours exhibited during the bathing experience. The researchers concluded that the physical environment does impact upon the bathing behaviours of the residents and the responses by staff members.
Dunn, Thiru-Chelvam, & Beck (2002) also came to a similar conclusion about the role physical discomfort can play in problem behaviours. Dunn et al. (2002) investigated two different bathing methods – the conventional bath tub versus the ‘thermal’ bath (a modification of the bed bath). Significantly, 14 of the 15 residents in the study displayed less agitation with the thermal bath. A collateral conclusion was made that the frequency of agitated behaviours was dependent upon the bathing technique. In fact, Dunn’s findings were similarly replicated in another study investigating the towel bath (Sloane, Hoeffer, Mitchell, McKenzie, Barrick, Rader, Stewart, Talerico, Rasin, Zink & Koch, 2004). Sloane et al. (2004) discussed the implications of decreased discomfort with the towel bath, as evidenced by the large decrease in behavioural symptoms. Once again, the physical environment (i.e., the comfort and ease of the conventional bath tub versus that of the thermal bath) factored into the level of agitated behaviours exhibited by the residents.

The issue of comfort and ease in the bathing environment can also be affected by the presence of music (or nature sounds). In fact, Clark, Lipe, & Bilbrey (1998) did investigate the effects of music upon the occurrences of aggressive behaviour among institutionalized individuals diagnosed with dementia (specifically, AD) during bathing episodes. Clark et al. (1998) reported that 12 of 15 identified aggressive behaviours declined significantly during the music condition. Care providers also observed that the residents experienced improvements in mood, and some individuals appeared calmer and cooperated more with the bathing experience. The limitations of this study were the small sample size and intrasubject-intersubject variability. Interestingly enough, the tasks of data collection and music playback proved to be too cumbersome for the overburdened nursing staff; a third-party observer had to assume these
responsibilities. Nevertheless, this particular study did specifically demonstrate how enrichment to the environment reduced problem behaviours.

Moreover, one particular study explored three different aspects of environmental enrichment that has some parallels with this thesis project. Whall et al. (1997) added natural elements to the nursing care environment during residents’ shower bath. These elements included bird songs or sounds of babbling brooks, pictures of birds, and offerings of food. The results of the study support a significant decline in agitated behaviour in the treatment group as compared to the control group. The researchers concluded that the use of natural elements within the environment (such as bird calls and pictures) in conjunction with other natural elements (such as food) was associated with decreased patient aggression and agitation as well as a more positive affective response during the bathing experience. The limitations of the study were its non-randomized nature and thus, its lack of generalizability. Nonetheless, the study findings indicate a promising approach for further investigations.

Therefore, modifications to the physical environment have been shown to impact greatly upon targeted behaviours. However, as Horner (1980) discussed for children with developmental delays, environmental enrichment must also be coupled with differential reinforcement of behaviour. That is, both the physical environment and the social environment are crucial for successful behavioural interventions. With regards to the bathing experiences of individuals with dementia-related diagnoses, a person-centred approach has been demonstrated to be effective in reducing problem behaviours (Hoeffer, Talerico, Rasin, Mitchell, Stewart, McKenzie, Barrick, Rader, & Sloane, 2006). The two critical components of a person-centred approach are gentleness and verbal support. The criteria for gentleness are: 1) a calm voice, 2) a respectful tone, 3) gentle touches, and 4) slow movements. The criteria for verbal support are: 1)
praise of the resident, 2) expression of concern or interest in the resident 3) direct address to the resident, and 4) preparation of the resident for the bathing task. Use of the person-centred approach during bathing not only decreased the frequency of disruptive behaviours in the residents, it also increased the confidence and ease of the care providers with the bathing process. Although there were limitations in this study (such as error variance), its strengths were a larger sample size and thus, better generalizability over previous research findings.
CHAPTER III: METHOD

NOTE: This study did not take place for reasons provided in the Discussion. However, the
Method section has been written as if it was completed.

Participants

Population, Selection Procedures, and Consent

The participants were 8 residents diagnosed with dementia-related disorders who were 65
years of age or older, and lived on a secure unit in a long-term care facility. The College and
Agency Supervisors as well as the St. Lawrence College Research Ethics Board approved the
Consent Form (Appendix A). Consent to participate was provided by each participant’s Power of
Attorney (POA). More females than males were chosen to accurately reflect the distribution of
females to males on the unit.

Scores on the Blessed-Dementia Scale were used as criteria for inclusion and exclusion.
The Blessed-Dementia Scale is a behavioural scale that assesses the severity of dementia in
individuals. Categories for assessment are changes in performance of everyday activities;
changes in habits, and changes in personality, interests and drive. Scores of low, moderate and
high on the Blessed-Dementia Scale correlate with the degree of severity of dementia symptoms.
That is, a low score indicates mild dementia, a moderate score indicates moderate dementia, and
a high score indicates severe dementia (Erkinjuntti, Hokkanen, Sulkava & Palo, 1988).

Individuals included in the study had a dementia-related diagnosis, scored moderate or
high on the Blessed-Dementia Scale, received baths rather than bed baths or showers, and had
histories of aggression or agitation during bathing. Those excluded from the study took bed baths
or showers rather than baths, scored low on the Blessed-Dementia Scale, and had no history of
aggression or agitation during bathing. The Agency Supervisor and Head Registered Nurse chose
the participants based on the inclusion and exclusion criteria provided.

**Design**

*Design, Independent Variables, Dependent Variables, Visual Analysis, Statistical Analysis, and Operational Definitions*

A multiple baseline across subjects design was used.

The independent variable was a modification to the bathing environment, which included
the addition of a dimmer on the lights, a towel warmer, wall decorations, and the patients’
choices of recorded music or sounds from nature. The dependent variables were aggression and
agitation. The operational definitions for aggression (i.e., disruptive verbalizations, hitting,
kicking and biting) and agitation are:

**Disruptive verbalizations:** shouting, swearing, or threats to harm self or others.

**Hitting:** to deal a blow to the self or others with the hand or hands.

**Kicking:** to strike another with the foot or feet.

**Biting:** to pierce the skin of the self or others with the teeth.

**Agitation:** behaviours causing no harm and consisting of statements or actions which
suggest that the patient is upset or concerned, verbal or physical actions that appear not to
communicate a need, or repetitive expressions of concerns.

The modification of the bathing environment was made by the Agency Supervisor, researcher,
and maintenance staff. Data were collected by the nursing staff providing the baths.

Event recording (i.e., a measurement procedure for obtaining a tally or count of the
number of times a behavior occurs) was used to obtain the frequency of aggressive or agitated
behaviors during the baseline and treatment phases of this study. Inter-observer reliability data
were obtained on 20% of these observations and was collected by the researcher.
Visual analysis: The event recording data were entered into Microsoft Excel and displayed in graphs as multiple baselines across subjects.

Statistical analysis: Means and standard deviations were shown in the table format that follows:

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<th>Patient</th>
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The percentage of non-overlapping data (PND) was also examined to evaluate effect size and compare the data between the baseline and intervention phases (Scruggs & Matropieri, 1998). The PND is calculated with the division of the non-overlapping data points by all data points. A low value for the PND would indicate that the data had considerable overlap whereas a high value for the PND would indicate that the data had little overlap. Optimal results for the study would be a high value for the PND, as the smaller degree of overlap of the data points would indicate that the findings were statistically significant.
Setting/Apparatus

During baseline, the setting for the study was the unit bathing room that remained as it was found. In treatment, modifications to the bathing room included the addition of a dimmer for the overhead fluorescent lights, a towel warmer, wall decorations, and recorded music or nature sounds, from which the residents could choose. Nursing staff attended to the residents during the bathing experience.

Interviews

Functional Assessment interviews were conducted with Agency staff members for data collection purposes.
CHAPTER IV: RESULTS

Agency Manual

Research/Rationale

Bathing is a task that occurs from birth to the end of life. It is accomplished alone or with the assistance of others. Bathing practices are highly understudied and bathing environments in long-term care facilities may inadvertently lead some people with dementia-related diagnoses to experience aggression and agitation. Simple changes to the bathing environment may reduce their distress.

Van Praag, Kempermann, and Gage (2000) have shown that enriched environments combining inanimate and social stimulation create desirable changes in behaviour. Their findings indicate that a combination of changes, and not a singular change, made to enrich the environment leads to desirable behaviours. Accordingly, a combination of changes made to enrich the bathing environment should be beneficial to the older population, specifically those with dementia-related diagnoses residing in long-term care facilities.

Many people living with dementia-related disorders will experience aggression and agitation during bathing; this places both patients and care providers at risk. With the incurable forms of dementia, the role of symptom management increases. If enrichment of the bathing environment reduces aggression and agitation, then it is possible that this technique can be applied to other aspects of their lives.

Agency Manual

NOTE: The remainder of this section is the actual document manual that was provided to the Agency.
MODIFYING THE BATHING ENVIRONMENT FOR RESIDENTS WITH DEMENTIA

Agency Manual

The bathing process for residents with dementia often causes distress and can result in disruptive behaviours such as aggression and agitation. The cause of these behavioural symptoms appears to be the interaction between unmet needs, cognitive dysfunction and environmental stress. The precipitating factors are primarily environmental and thus, can be modified. The following recommendations have been shown to reduce aggressive or agitated behaviours during bathing.

I. A Person-Centred Approach

- Care must be individualized and care providers must be flexible. It is essential for care providers to know and care about the resident as an individual. View the resident as a whole person, know the bathing history and learn the resident’s preferences. When, how, how much, and by whom he resident is bathed can be individualized. A flexible approach should be the norm.

- The care provider should focus on the resident more than the task. Concentrate on the resident’s feelings and reactions during the bath. Watch for verbal and non-verbal messages about how the resident is responding to the bath. Again, a flexible approach should be the norm.

- The reference point of care should be the home. If you are unsure of what to do, ask yourself “what would I do if this was my home and the resident is a relative?” Putting the bathing process in an everyday context respects the resident’s dignity and modesty. If possible, use bath products present in the home.

- The resident’s perceptions are always valid. Be respectful of the resident’s perceptions during bathing. Respond accordingly to what the resident is saying. For eg., if the resident is in pain, validate what the resident is saying and consider if anything in the environment may be causing discomfort.

- Use persuasion, not coercion. Make the resident feel in control of the situation and heed any (reasonable) requests. People with dementia often accept guidance but do not respond well to pressure. Gently encourage the resident.

- Perfect solutions rarely exist to severe bathing problems. Do not expect all negative behaviours to be eliminated. No solution works all the time; what does not work today may work tomorrow. Most importantly, do not consider yourself a failure because you could not make bathing a pleasant experience. A simple reduction in problem behaviours is itself a positive achievement!

- The administration should be supportive and flexible. A person-centred, individualized bathing program must be supported by the administration. Care planning should discuss bathing preferences. Staff members need flexibility when responding to problems. New approaches should be encouraged.
II. Communication Techniques

<table>
<thead>
<tr>
<th>Technique</th>
<th>Explanations / Illustrations</th>
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<tbody>
<tr>
<td>Use a calm, personal, gentle manner</td>
<td>Don’t rush</td>
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<td></td>
<td>If the resident begins to get agitated, stop or slow down</td>
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<td></td>
<td>Cover all parts of the body you are not working with</td>
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<td>Always explain what you are going to do (unless the explanation causes more agitation)</td>
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<td>Distraction</td>
<td>Converse with the resident about a topic of interest to him or her</td>
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<td>Persuasion</td>
<td>Use patience to successfully encourage a reluctant resident to bathe</td>
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<td>Have one person (instead of several) approach the resident</td>
<td>This is less threatening to the resident and allows you to focus on the resident</td>
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<tr>
<td>Provide a reason for bath</td>
<td>Eg., “Your hair is dirty. Let’s wash it.”</td>
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<tr>
<td>Provide information</td>
<td>Eg., “I’m going to soap your face now. I’ll be careful.”</td>
</tr>
<tr>
<td>Address the resident in familiar terms, preferably ones used by family members</td>
<td>Eg., “Come on, papa …”</td>
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<tr>
<td>Use past memories to convince or reassure the resident</td>
<td>Eg., “You can’t wear these clothes to church.” (To a resident who doesn’t want to disrobe)</td>
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<tr>
<td>Offer rewards</td>
<td>Eg., “As soon as you get cleaned up, we’ll go upstairs to visit your husband.”</td>
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<tr>
<td>Give positive feedback for cooperating</td>
<td>Eg., “That’s great. You’re going to smell so good.”</td>
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<tr>
<td>Give the resident a choice</td>
<td>Eg., “Would you like to unbutton your shirt or should I?”</td>
</tr>
<tr>
<td>Come back later when the resident’s mood is better</td>
<td>Begin bath when the resident is more cooperative</td>
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<tr>
<td>Use the care provider who is most likely to be successful</td>
<td>Find out which care provider is most trusted</td>
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<td></td>
<td>Use same-sex care provider (in most cases)</td>
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<td></td>
<td>Have a family member bathe the resident</td>
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III. Management of Specific Problems

- **When the resident does not want to go to the bathing area.** Often, this is because prior bathing experiences were unpleasant. Use persuasion. Provide a reason for going to the bathing area. Consider if pain or mode of transport is a problem. Keep the resident warm and covered during transport, especially if it is early in the morning. Consider a bed or towel bath.

- **When the resident does not want to undress.** Ensure resident is comfortable and the room is warm and private before undressing. Give the resident a reason to undress, such as
reward (“you can eat breakfast”) or subterfuge (“it’s laundry day”). Offer a choice to the resident. Be slow and gentle when helping the resident undress.

- **When the resident resists getting into a tub or shower.** Reassure the resident about safety. Work in a calm and unrushed manner. Find the resident’s preferences. Look for strategies to make the task easier. If the resident seems confused, give short, simple directions. If stiffness is a problem, consider reducing or discontinuing psychotropic medications.

- **When the resident is cold.** Acknowledge, validate and respond to the resident’s complaint. Keep the resident warm and reduce the time to undress. Bathe feet first. Wrap parts of the body not being washed in a blanket or towels. Wash hair last and place towel over hair immediately after washing. Pay attention to the physical environment: close windows and doors, keep room warm, place towel on cold floor, and maintain a constant water temperature.

- **When bathing is painful.** Consider pain when problem behaviours occur. Consult physician for appropriate treatment. Acknowledge, validate and respond to the resident’s feelings. Use calming behaviours such as gently patting dry any tender areas.

- **Hollering or screaming.** Stop what you are doing and ask what is the matter. Often, surprises, unpleasant sensations (e.g., cold, pain) or a sense of being assaulted can be the cause. Reduce any stimulation in the environment: minimize noise and glare, work slowly and gently. Calm music, pleasant aroma and a home-like setting may also help.

- **Hitting, punching, or shoving.** Physical violence occurs when residents feel especially threatened. Prevention is key. Notice early signs of agitation and back off temporarily. If the resident seems about to become violent, call his or her name sternly. Sometimes, gentle restraint, such as hand holding, may be necessary. When physical violence occurs, use a firm tone and give immediate verbal feedback (“stop” or “that hurts”). Staff should learn how to safely block a punch.

- **Grabbing objects or people.** Prevent injury by not wearing earrings, watches and eyeglasses. Use distraction. If grabbing occurs during transfer or bathing, hand the resident an object to hold. Grabbing often reflects fear. Give verbal reassurance. Discuss the steps you are taking. Provide physical guidance.

- **Biting.** Use distractors for potential biters. Get the resident to sing or offer gum or snacks. Before bathing, remove dentures. Always know where the resident’s mouth is and keep your distance if agitation occurs. If you are bitten, call the resident by name and give a simple, stern command (“Let go” or “Open your mouth”). If this fails, offer the resident something else to bite or something to eat.

- **Residents who do not like to have their hair washed.** Often, the problem is shampoo or water in the eyes or ears. Use a mildly soapy washcloth. Place cotton in the ears. Tilt the head back. Use non-rinse shampoos. Gently massage the scalp to relax the resident. Adjust room or water temperatures. Wash the resident’s hair in bed with a hair basin.
IV. Bathing Environment Characteristics

- *The room should feel private and personal.* Accommodate only one bath at a time in the bathing area. Have storage space in the bathing area for soaps, oils and shampoos.

- *The environment should be designed to keep the resident warm.* Use bath blankets or large towels warmed in a dryer or blanket warmer. Place heat lamps above the drying and undressing areas. Wrap the resident in a large towel or robe. Turn up the thermostat.

- *Use music for residents who find it relaxing.* Use music that provides a calming background, are favourite songs to listen to, or can allow the resident and care provider to sing along.

- *Adjust lighting to be soft.* Install a dimmer switch.

- *Minimize glare.* Do not wax the floor in the bathing area.

- *Reduce noise.* Avoid noisy fans and equipment. Speak to the resident in soft tones. Maximize sound-absorbent surfaces. Avoid conversations with other staff during bathing.

- *Use home-like furnishings.* Use hooks for clothing. Decorate with plants, pictures on the walls, or curtains. Hang flowered or coloured towels on the towel bar.

- *Use aromas to evoke memories, set mood and make bath pleasant.* Find out favourite bath products used at home. Use scented oils in the bath and after the bath. Bubble bath is pleasant to some residents.

- *Bathing equipment should be comfortable and functional.* Learn the individual preferences of each resident you bathe. Shower chairs should have padded seats and foot rests.

V. **Alternative: Towel Bath**

- *Reason.* A towel bath has been shown to have lower incidents of aggressive or agitated behaviours when compared to baths in a conventional bathtub.

- *Equipment.*
  - 2 bath blankets
  - Large plastic bag containing:
    - 1 large (6'6"x3') lightweight towel, fan folded
    - 1 standard bath towel
    - 2 washcloths
  - 2-quart plastic pitcher filled with bath temperature water with:
    - 1 ounce of no-rinse soap
• Preparing the resident. Explain the bath. Make the room quiet or play soft music. Dim the lights if this calms the resident. Assure privacy. Wash hands. If necessary, work one bath blanket under the resident, to protect the linen and provide warmth. Undress the resident, keeping him/her covered with bed linen or the second bath blanket.

• Preparing the bath. Pour the soapy water into the plastic bag, and work the solution into the towels and washcloths until they are uniformly damp but not soggy. If necessary, wring out excess solution through the open end of the bag into the sink. Twist the top of the bag closed to retain heat. Take the plastic bag containing the warm towels and washcloths to the bedside.

• Bathing the resident. Expose the resident's shoulders and upper chest, and immediately cover the area with the warm, moist large towel. Then gently and gradually uncover the resident while simultaneously unrolling the wet towel to recover the resident. Start washing at whatever part of the body is least distressing to the resident. For example, start at the feet and cleanse the body in an upward direction by massaging gently through the towel. Wash the backs of the legs by bending the person's knee and going underneath. As you move upward, roll the towel upward and cover the person with the bath blanket. After bathing the trunk, use the upper end of the towel to bathe the face, neck and ears. You may also hand one of the washcloths to the resident and encourage independent face washing. Then, turn the resident to one side and place the smaller warm towel from the plastic bag onto the back, washing in a similar manner, while warming the resident's front with the bath blanket. No rinsing or drying is required. Use a washcloth from the plastic bag to provide perineal care. Gloves should be worn when washing the perineal and rectal areas.

• After the bath. If it provides a relaxing break, allow the resident to remain unclothed and covered with the bath blanket and bed linen, dressing at a later time. A dry cotton bath blanket (warmed if possible) placed next to the skin and tucked close provides comfort and warmth. Place used linen back into the plastic bag, tie the bag, and place it in a hamper.

VI. Procedures for Modifying Bathing Environments

To implement this study, approval must first be granted by the administration. This study focuses upon four modifications to the bathing environment: 1) towel warmer, 2) wall art, 3) music player and 4) light dimmer.

Costs. Costs will vary depending upon the chosen source of supplier. However, all items (or alternatives) can be purchased at a reasonable price.

• Towel warmer: Installation of a towel warmer costs $2000. Purchase of a plug-in tower warmer from a department store will range from $100 to $200. A more affordable alternative is to use a blanket warmer on the unit and purchase thermal bags to transport towels from the warmer to the bathing area; thermal bags will cost $10 a piece.
• Wall art: Wall art can be purchased at any local store (e.g., JYSK, Home Depot, etc.) or purchased from on-line catalogues (e.g., www.uppercaseliving.com) and delivered in 2 weeks time. The cost can range from $5 to $20 a piece.

• Music player: Costs for a music player can vary considerably, from $30 to $170. Purchase of music CDs usually ranges from $10 to $20 although music can also be purchased from Itunes for $0.99 a piece.

• Light dimmer: The cost for light dimmers can vary depending upon the type; it can range from $20 to $250.

Benefits. Modifying the bathing environment will benefit residents, care providers and the Agency. For residents, there will be a decrease in disruptive behaviours, an increase in hygiene and personal care, an improvement in the bathing experience, a greater feeling of safety, and positive awareness of the environment. For care providers, they will be able to provide a better quality of care to the resident, improve their relationships with the residents, be able to work in a calm and safer environment and thus, spend less time redirecting. For the Agency, they will be providing a high quality of care to residents while ensuring their safety and well-being, developing an excellent rapport between staff and residents, and providing a positive outlook for families.

Preparing the Room.

i. **Get approval for modifications.** Approval must be granted by the administration and consent must also be provided by the resident’s next of kin.

ii. Follow health and safety protocols when making modifications. Proper materials need to be used and hazards avoided.

iii. Remove unnecessary signage from room. If signage cannot be removed, place out of sight from the residents while in the bathtub.

iv. De-clutter the space (e.g., counters, walls, supplies, tub shelf). Place supplies in cupboard until they need to be used. Remove soiled linen carts. Extra supplies should be removed or stored out of sight.

v. Install towel warmer, if necessary. If it is a wall unit, ensure that the maintenance team installs it. If it is a plug in, ensure that it is not near any water sources. If using thermal bags:
   a. Ensure that staff replaces towels in blanket warmer on the floor when they use them,
   b. Place towels into bag prior to bathing and take to resident’s room,
   c. Wrap resident in towel during changing,
   d. Ensure that the bag is closed during bathing to keep in warmth,
   e. After bath is finished, use warm towel to cover resident.
vi. Place wall art on walls in areas that can be seen from the resident’s position during bathing. Use appropriate pictures and only use removable wall-art. Make sure the wall art can be washed while on the wall.

vii. Ensure that the music player is not near water sources and store in a secure location away from residents’ reach. Since not all residents will find the music soothing or relaxing, ask if the music can be played. It may be less distracting to just have music playing softly in the background. If music is used, ensure that it is quiet and not over powering.

viii. Install a light dimmer. Ensure that the maintenance team installs it.

After Room is Prepared.

1. Ensure that the lift is in accurate position, supplies are ready (including warm towels) and music is set.

2. Bring resident into room and draw their attention to the pictures on the wall. Ask resident for permission to play the music.

3. Begin preparing the resident for their bath. While undressing, cover the resident with a warm towel.

4. Begin the bath. Provide the resident with a washcloth to allow him or her to contribute to the bathing experience.

5. Continue to talk about the pictures on the wall. Sing-a-long with the music. Complete the bath.

6. When transferring the resident from bathtub, cover with a warm towel. Engage the resident in the process as much as possible and as much as they are capable. Use the setting and environment to their benefit and engagement. Most importantly, be gentle and do not rush!

Resources.

- Bathing Without a Battle: Person-Directed Care of Individuals with Dementia.
  - Authors: Anne Louise Barrick, Joanne Rader, Beverly Hoeffer, Philip D. Sloane, & Stacey Biddle
  - Provides research, suggestions for care, and ways to modify bathing environment

  - Overview of an article titled “The Bathing of Older Adults with Dementia”
  - Discusses current practices, the practical approach, and suggestions.

- www.pennercareinc.com
  - A company that “Transforms the Healthcare institutional bathing area into a relaxing spa”
- Provides examples of how the rooms would appear while still upholding all health and safety protocols
- The impact the environment can have on the feeling of a room is illustrated through the pictures of different room styles

CHAPTER V: DISCUSSION

Conclusion

The purpose of this study was to examine the aggressive and agitated behaviours of residents with dementia-related disorders before and after enriching the bathing environment. However, circumstances that could not be anticipated made it impossible to modify the environment. No results were obtained. To benefit the Agency and to progress with this thesis project, I prepared a brief manual for the Agency. The manual explains the potential benefits of modifications to the bathing environment and includes procedures on how to enrich the bathing environment. If the experiment was successful, it would have reduced the residents’ aggressive and agitated behaviours during the bathing experience.

Problems Encountered

A number of obstacles were encountered while trying to implement this study. 1) The administration changed. With this change, permission to proceed with the study was revoked pending further review. 2) Of the eight consent forms that were mailed, only four were returned. 3) The maintenance department was delayed in filling out the requisitions for the work to be completed. 4) When the second administration granted approval, the modifications were delayed until a Health and Safety Committee was consulted on the regulations. 5) The Agency is run by the City of Kingston and therefore, all major services and materials had to be purchased from companies in partnership with the City of Kingston. 6) City contracts inflated costs for services and materials. Consequently, the second administration refused to approve the purchase. 7) Care providers work on a shift rotation basis. Each staff member needed to be apprised of the study and taught how to collect data before the study could begin. This was especially time consuming and was difficult to coordinate.
Strengths

A number of strengths are identified. The work completed, thus far, on this study may serve as an impetus for further research. Generally, bathing practices are understudied and the distress associated with the bathing experience for people with dementia-related disorders warrants further investigations. The difficulties experienced during the bathing experience for residents can result in aggressive or agitated behaviours. The occurrence of these problem behaviours increases the risk for residents and staff alike. In working on this thesis project, awareness has increased for the families of individuals with dementia-related disorders, their care providers, the Agency administration, and the College. The Agency will receive a copy of this thesis project and a brief manual detailing the enrichment of the bathing environment for their residents.

Limitations

The limitations of this study were examined under “Problems Encountered.”

Contributions to the Field

The impact of the environment is a virtual axiom in the field of behavioural psychology. However, behavioural research needs to reach beyond the lab, classrooms, and centres for Intensive Behavioural Intervention (IBI). The majority of people have little understanding of the lives of individuals with dementia-related disorders living in long-term care facilities. If the simple task of enriching the bathing environment can produce meaningful reductions in aggression and agitation, then the potential to improve the lives of the residents in other areas is vast.

Recommendations for Future Research
Once again, it is critical for future researchers to continue to investigate the effects of the environment upon behaviour. Additional research must also be conducted on environmental enrichment and its impact upon other areas beyond the classroom. Although research with this particular population and environment is growing, there is a significant need for more rigorous research designs in future studies. Most importantly, further studies need to be conducted on the effects of environmental enrichment upon individuals with dementia-related diagnoses. The implications of such research could significantly improve the quality of life for this particular demographic.

**Multilevel Challenges**

*Client level challenges.*

*New Population.* Working with a new population that is unfamiliar can present difficulties when learning the specific needs of clients to ensure they receive the appropriate services.

*Communication Barriers.* Some clients are non-verbal or speak a different language which requires directions be given in different ways to ensure that the directions are understood.

*Client Attitudes.* Clients with dementia can become upset or confrontational quickly, and require different approaches to be used to ensure that their safety and security remain intact.

*Program level challenges.*

*Inconsistent Staffing & Inconsistency.* In long-term care facilities, staff members are constantly changing, making it difficult to keep all individuals informed and aware of the behavioural program. Individual differences alter the ways in which the plans were carried out, affecting both clients and staff members.

*Strict Guidelines.* This Agency was run by the city, which made the program difficult to implement as there was little leniency with policies and procedures despite the potential benefit.
Time Constraints. Length of placement made it difficult to obtain consent, as it needed to be obtained through a Power of Attorney (POA) and the Agency would not allow for verbal consent to be obtained.

Organizational level challenges

Miscommunication between Staff. This was a large organization and clients are provided with services from a number of departments; miscommunication can occur, which affects the client’s wellbeing.

Treatment Disagreement. Some staff members did not agree with the treatment recommendations for the client.

Policies and Procedures. Many policies and procedures were in place, which made it difficult to implement any changes.

Involvement. Difficult to coordinate family and staff members to promote treatment benefit.

Societal level challenges

Lack of Knowledge and Education. Dementia is often misunderstood by individuals in society as to how the disease affects patients diagnosed with dementia-related disorders. Many members of the community are not educated about dementia disorders and their implications.

Safety. Individuals with dementia can become confused in their surroundings, and can be lost or disorientated in the community.

Stigma. Individuals in society often believe that people with dementia have “lost their minds”, are aggressive and that no one can help them.
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APPENDICES

Appendix A – Consent Form

Modifying Bathing Environments To Reduce Aggression and Agitation in Residents with Dementia-Related Diagnoses

Student: Danielle Gowdy
dgowdy05@student.sl.on.ca
(613) 372-5852

College Supervisor: Colleen Cairns
ccairns@sl.on.ca
(613) 539-7694

Invitation
I am a student in my 4th year of the Behavioural Psychology Degree program at St. Lawrence College and I am currently on placement at Rideaucrest Homes. As a part of this placement, I am completing a special project called an Applied Thesis and am asking for your assistance to complete this project. The information in this form is intended to help you to understand my project, so that you can decide whether or not you wish your family member to participate. Please read the information below carefully and ask all the questions you might have before deciding whether or not to participate.

What is the purpose of the study?
The purpose of this study is to modify the bathing environment to improve the quality of the residents’ bathing experience. Apprehension and agitation are often present in residents with dementia-related diagnoses during the bathing experience. When residents receive their baths, problematic behaviours are likely to increase. To alleviate their apprehension and agitation, certain aspects of the bathing environment will be modified.

The modifications proposed should make the bathing experience warmer and more welcoming for the residents. The environment will be changed based on recommendations from the nursing and care staff as well as evidence-based practices identified in the literature. The overall objective is to make the bathing experience more enjoyable and relaxing for residents.

What will you need to do if you take part?
To take part in this study, all that is asked of the residents is that they continue to receive their scheduled baths. Modifications include, but are not limited to, dimming the lights, decorating the walls, using a towel warmer, and adding a music player that will contain a selection of each
resident’s favourite music. No additional time or effort is asked of the residents.

**What are the potential benefits to me of taking part?**
The results in this study are not guaranteed. However, if the modifications proposed are successful, the benefit of taking part in this study will be that, the resident may feel more relaxed upon having his or her bath rather than experiencing apprehension and agitation. The changes to the bathing environment may also increase the residents’ safety, if it leads to a reduction in aggressive or agitated behaviours.

**What are the possible disadvantages and risks of taking part?**
Although the risks are minimal, some disadvantages and risks of taking part may be that in the beginning, modifications to the environment may cause the resident to experience some initial confusion. If this occurs, the resident will receive immediate reassurance and encouragement from the care provider. The care provider will assure the resident that he or she is safe and re-familiarize this resident with the environment by softly issuing, and re-issuing statements like, “I am Cathy. I am your nurse today. The bathing area has just been visually altered. We are here for your bath. I will be with you the whole time to help you and keep you safe.” If necessary, further support and encouragement will come from the Registered Nurse or Life Enrichment Coordinator.

The care providers will record when your family member receives a bath and each time any aggressive or agitated behaviours occur. This kind of frequency recording lets us know whether the changes to the bathing décor help to make the bathing experience more (hopefully) or less pleasant for your family member.

It is important that inter-observer reliability data be collected to ensure that the data are being accurately recorded by the care providers. These data are needed to evaluate the efficacy of the intervention. I am asking that if you feel your loved one would be okay with me in the room to observe for the purposes of data collection that you indicate this at the bottom of the Consent form. I understand that you may have concerns about privacy. Please know that any data collected will be kept strictly confidential.

**What happens if something goes wrong?**
As a student, I am required to report to my college and Agency Supervisor on a regular basis. If something does occur, they will both be made aware of the issue, and actions will be taken to correct the situation. Extra support will be provided to the individuals to ensure that they know no harm will be done to them, and we are there to keep them safe. If a problem does occur, and you wish to withdraw your family member from the project, you can do so without any disruption to his or her care. Please contact either myself, Danielle Gowdy, at dgowdy05@student.sl.on.ca or my college supervisor, Colleen Cairns, at ccairns@sl.on.ca
Will my taking part in this project be kept private?
All aspects of the project will be kept confidential unless required by law. All files will be password protected and encrypted on my portable laptop. The files will then be transferred to a portable memory stick and securely stored at the Agency. These files will be retained for a minimum of 10 years and can only be accessed by the Agency, my college supervisor or me. No names or initials will be used in any reports to ensure the identities remain anonymous. The resident will not be identified by name in any publication, reports, or presentations resulting from this project.

Do you have to take part?
It is up to you to decide whether or not you wish your family member to take part. If you do decide that you would like for your family member to take part, then you will be asked to sign this Consent form on behalf of your family member. If you do decide to allow your family member to take part, you are still free to withdraw at any time, without giving any reason, and without losing any of the other services provided.

Contact for further information.
This study has been approved by the Research Ethics Board for Psychology at St. Lawrence College. It was developed under the supervision of Colleen Cairns, my supervisor from St. Lawrence College. I really appreciate your cooperation. If you have any additional questions or concerns, feel free to ask me, Danielle Gowdy, at dgowdy05@student.sl.on.ca, Colleen Cairns at ccairns@sl.on.ca, or you may also contact the Research Ethics Board at appliedresearch@sl.on.ca.

Consent
If you give permission for your family member to participate in the study, please complete the form that follows and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. An additional copy of your consent will be retained at the Agency and in a secure location with the Behavioural Psychology program at St. Lawrence College.
Consent
By signing this form, I agree that:

- The study has been explained to me.
- All of my questions were answered.
- Possible harm and discomforts as well as possible benefits (if any) of this study have been explained to me.
- I understand that I have the right to decline this invitation for my family member to participate in the study without fear of penalty or disruption in any or all of the other services that are rendered to my family member by the Agency.
- I understand that I have a right to stop my family member’s participation, at any time and for any reason, without fear of penalty or disruption in any or all of the other services that are rendered to my family member by the Agency.
- I am free now, and in the future, to ask any questions about the study.
- I have been told that my family member’s personal information, along with my own, will be kept confidential.
- I understand that no information that would identify me, or my family member, will be released or printed without asking me first.
- I understand that I will receive a signed copy of this consent form.

Please check the appropriate box:

☐ Yes, it is okay for Danielle to collect inter-observer reliability data during my family member’s bathing experience.
☐ No, it is not okay for Danielle to collect inter-observer reliability data during my family member’s bathing experience
☐ No, it is not okay for Danielle to collect inter-observer reliability data during my family member’s bathing experience but it is okay for these data to be collected by a second care provider.

I hereby consent for my family member to participate in this study.

Power of Attorney
Printed Name: ________________________________________________
Signature: ____________________________________________________
Date: ________________________________________________________
Printed Name of Family Member (Resident): ________________________

SLC Student
Printed Name: ____________________________
Signature: ___________________________________________________
Date: ________________________________________________________
Appendix B – Functional Assessment Interview for Staff

1. Does bathing this resident cause an increase in his or her problematic behaviours?
   a) Yes
   b) No

2. What problem behaviours tend to increase during bathing?

3. Which type of problem behaviours are most difficult to manage?
   a) Physical
   b) Verbal

4. How often do problem behaviours occur?
   a) Every time
   b) Occasionally
   c) Other

5. Do you think that making changes to the bathing environment would improve things?
   a) Yes
   b) No

6. If yes, what changes to the bathing environment do you think would make a difference?
   a) 
   b) 
   c) 
   d) 

7. What do you think could be contributing to the occurrence of the problematic behaviour(s)?
### Appendix C – Blessed-Dementia Scale

**Activity**

One point for each, unless otherwise indicated.

**Score**

#### CHANGES IN PERFORMANCE OF EVERYDAY ACTIVITIES

- Inability to perform household tasks
- Inability to cope with small sums of money
- Inability to remember shortlist of items; for example, in shopping list
- Inability to find way about indoors
- Inability to find way about familiar streets
- Inability to interpret surroundings; for example, to recognize whether in hospital or at home; to discriminate between patients, doctors, nurse, relatives, other hospital staff, etc.
- Inability to recall recent events; for example, recent outings, visits of relatives or friends to hospital, etc.
- Tendency to dwell in the past

#### CHANGES IN HABITS

**Eating**

- (0) = cleanly, with proper utensils
- (1) = messily, with spoon only
- (2) = simple solids (for example, biscuits)
- (3) = has to be fed

**Dressing**

- (0) = unaided
- (1) = occasionally misplaced buttons, etc.
- (2) = wrong sequence, commonly forgetting times
- (3) = unable to dress

**Sphincter control**

- (0) = complete control
- (1) = occasional wet bed
- (2) = frequent wet bed
- (3) = doubly incontinent
CHANGES IN PERSONALITY, INTERESTS, DRIVE

- Increased rigidity
- Increased egocentricity
- Impairment of regard of feeling for others
- Coarsening of affect
- Impairment of emotional control
  (for example, increased petulance and irritability)
- Hilarity in inappropriate situations
- Diminished emotional responsiveness
- Sexual misdemeanour (arising de novo in old age)
- Hobbies relinquished
- Diminished initiative or growing apathy
- Purposeless hyperactivity

TOTAL:
Appendix D – Frequency Recording Data Sheets

Frequency Recording – Participant ______

- Behavioural definitions to follow
- Please put a checkmark in each of the boxes for the corresponding behaviours each time the resident exhibits that behaviour

Bath 1

Date: ___________________________________ Time: ______________________________

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<thead>
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<th>Disruptive verbalizations</th>
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<td>Agitation</td>
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Behavioural Definitions

**Disruptive verbalizations**: shouting, swearing, or threats to harm self or others.

**Hitting**: to deal a blow to the self or others with the hand or hands.

**Kicking**: to strike another with the foot or feet.

**Biting**: to pierce the skin of the self or others with the teeth.

**Agitation**: behaviours causing no harm and consisting of statements or actions which suggest that the patient is upset or concerned, verbal or physical actions that appear not to communicate a need, or repetitive expressions of concerns.