



Holistic Interventions to Address Pain, Anxiety, and Distressing Behaviours in Long-Term Care Residents

RESEARCH

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ABSTRACT

Context: Residents experiencing pain, anxiety, and distressing behaviours, often in conjunction with mental health diagnoses and dementia, can be challenging for staff in long-term care facilities and may result in jeopardising resident and staff safety, quality of life, staff delivery of care, and overuse of psychotropic medications.

Objective: Describe the effects of three holistic interventions (hand portion of the ‘M’ Technique®, aromatherapy, and energy healing) to reduce pain, anxiety, and distressing behaviours in long-term care residents.

Method: Pragmatic secondary analysis of pre- and post-intervention quantitative and qualitative data.

Findings: Staff administered a total of 363 individual sessions using the ‘M’ Technique® for hands, aromatherapy, and/or energy healing to 75 residents who were able to indicate their pain and/or anxiety levels before and after a session. Results indicate significant differences in decreased pain by session, decreased anxiety by session, decreased pain by person, and decreased anxiety by person. Qualitative results, primarily gathered from an additional 1,024 sessions in which residents were unable to use pain and anxiety scales, indicate a decrease in distressing behaviours and overall improvement of milieu.

Limitations: We collected data as part of a quality improvement programme without the intent of being published as a research study. It is difficult to assess the reliability and validity of self-reported quantitative pain and anxiety scales for people with dementia.

Implications: Holistic interventions, including the ‘M’ Technique for hands, aromatherapy, and/or energy healing, show promise in reducing pain, anxiety, and distressing behaviours in residents of long-term care facilities, along with improvements in the facilities’ environment.

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INTRODUCTION

This research focuses on the effects of holistic interventions provided to residents in two skilled nursing facilities (long-term care) in a large metropolitan area in the Midwestern United States. The facilities provide dementia care, advanced dementia care, long-term care, bariatric care, and rehabilitation with an average daily census rate of around 130 per facility. While the majority of residents are elderly, the facilities accept younger residents whose medical complexity necessitates long-term care. Residents have complex medical needs, require a high level of care, and often have mental health comorbidities. This project was made possible through a two-year (2020–2021) Nursing Facility Performance-Based Incentive Payment Program (PIPP) grant from the Minnesota Department of Human Services to address staff struggles in assisting residents with mental health diagnoses and dementia with behaviours. Our objective was to describe the effects of three holistic interventions (hand portion of the ‘M’ technique, aromatherapy, and energy healing; see below for discussion of these) to reduce pain, anxiety, and distressing behaviours in long-term care residents. The work was conducted as part of a quality improvement programme. We completed pragmatic secondary analysis of pre- and post-intervention quantitative and qualitative data. Results of this study may have international relevance for facilities serving residents with similar needs and help staff struggling in assisting residents with complex medical needs, mental health diagnoses, and/or dementia with behaviours.

LITERATURE REVIEW

Residents with mental health diagnoses and/or dementia are often challenging for staff in long-term care facilities and may result in jeopardising patient and staff safety, quality of life, staff delivery of care, and overuse of psychotropic medications (Chenoweth et al., 2018; Masopust et al., 2018; Mitchell et al., 2022). In addition, all of this is happening in the midst of the opioid crisis (Sheikh et al., 2021) and COVID-19 pandemic (Gardner, States & Bagley, 2020; Hado & Friss Feinberg, 2020; Thompson et al., 2020; Wu, 2020). Staff need additional interventions to decrease pain, anxiety, and distressing behaviours (Legere et al., 2018; Scales, Zimmerman & Miller, 2018). Next we review the literature on the three interventions used in this project: hand massage, aromatherapy, and energy healing.

Hand massage is a safe and easily applied technique that is useful in decreasing pain and anxiety along with providing comfort for long-term care residents (Cino, 2014; Nakano et al., 2019; Schaub et al., 2018; Yücel, Arslan & Bağcı, 2020). The **‘M’ Technique** developed by Jane Buckle is a structured system of gentle touch

with a set pressure, set repetition of strokes, and a set protocol that was developed for the purpose of providing intentional, caring touch for patients (Buckle, 2009; Buckle, 2015; Buckle, 2022). Buckle (2010) studied the potential physiological mechanism and brain changes elicited by the ‘M’ Technique.

Aromatherapy is the use of essential oils distilled from plants to stimulate olfactory (smell) receptors and activate regions in the brain’s limbic region (centre of emotion and memory). Several studies specifically address the use of aromatherapy with dementia, long-term care residents, and/or elders, with results showing some support and recommendations for further study (Her & Cho, 2021; Lakhan, Sheaffer & Tepper, 2016; Leach et al., 2021; Viet, 2018; Watson, Hatcher & Good, 2019). Not all studies find a decrease in agitated behaviour or ‘dementia symptoms’ when using aromatherapy (O’Connor et al., 2013), but Yoshiyama, Arita, and Suzuki (2015) suggest aromatherapy is clinically safe. In a recent systematic review, Ball et al. (2020) found a lack of evidence to support aromatherapy benefiting dementia patients. Her and Cho (2021) note that aromatherapy improves sleep quality and reduces stress, pain, anxiety, depression, and fatigue in working-age adults and elderly people; all those characteristics may underlie distressing behaviours. Watson, Hatcher, and Good (2019) suggest lavender essential oil is more effective in reducing agitation in people with dementia, while lemon balm essential oil is more effective in reducing agitation without dementia.

Energy healing is a holistic modality that supports self-healing as the practitioner works with the subtle energies of the client to balance and mobilise the human energy field (Eden & Feinstein, 2020; Leskowitz, 2020). Common forms of energy healing today are Healing Touch, Therapeutic Touch, and Reiki (Anderson, Anselme & Hart, 2017; Krieger, 1993; Krieger, 2021; Levin, 2011; Quest, 2016; Wardell, Kagel & Anselme, 2014). Substantial research details the benefits of energy healing, including increased relaxation, pain reduction, and overall improved well-being (Gronowicz et al., 2008; Gronowicz et al., 2015; MacIntyre et al., 2008; Post-White et al., 2003; Richeson et al., 2010; Shiah et al., 2021; Swengros et al., 2014; Thomaz de Souza et al., 2017; Yount et al., 2021). Some research directly relates to those living in long-term care and/or living with dementia (Woods et al., 2009; Yücel, Arslan & Bağcı, 2020). Energy healing is considered a nondrug intervention for agitated behaviour associated with dementia and shows effectiveness which may be related to a whole person approach (Cai & Zhang, 2015; Wang & Hermann, 2006). Additional points are relevant for the use of energy healing in long-term care:

- Energy healing is relational by nature (Anderson, Anselme & Hart, 2017; Krieger, 1993; Krieger, 2021; Quest, 2016; Wardell, Kagel & Anselme, 2014) and

congruent with a person-oriented approach called for in the long-term care culture change literature (Duan et al., 2022; Mitchell et al., 2022; Zimmerman, Shier & Saliba, 2014);

- Energy healing requires the practitioner to use meditative practices in order to be present with patients and may serve to address the stress that staff experience (Anderson, Anselme & Hart, 2017; Krieger, 1993; Krieger, 2021; Quest, 2016; Wardell, Kagel & Anselme, 2014); and
- Energy healing can be practiced across the staff hierarchy common in many facilities, providing an equalising effect (Anderson, Anselme & Hart, 2017; Krieger, 1993; Krieger, 2021; Quest, 2016; Wardell, Kagel & Anselme, 2014).

While the 'M' Technique for hands, aromatherapy, and energy healing are discussed in the literature, there are few studies that specifically use these techniques in long-term care to decrease distressing behaviours related to mental health diagnoses and dementia. Therefore, the purpose of this research is to describe the effects of holistic interventions ('M' Technique for hands, aromatherapy, and energy healing) on the reduction of pain, anxiety, and distressing behaviours in long-term care residents.

METHOD

SETTING

The data for this pragmatic secondary analysis of pre- and post-session intervention was collected while implementing a performance improvement grant in two long-term care facilities in the Midwest. The secondary analysis of data was approved by the St. Catherine University Institutional Review Board and Monarch Healthcare Management.

CONVENIENCE SAMPLE

Staff identified residents, with the initial focus on residents who were experiencing pain and/or anxiety and/or exhibiting behaviours that were distressing to themselves and/or others. Later, staff referred additional residents who were experiencing the stress of COVID-19 isolation, increased depression symptoms, loneliness, and/or suicidal ideation. Some of the residents referred their roommates, and other residents self-referred upon observing other residents receiving services. Participants ranged in age from 35 to 101 and had diagnoses of dementia, anxiety disorders, bipolar disorder, schizoaffective disorder, chemical dependencies, and/or additional mental health diagnoses. Some also had a history of homelessness. The interventions were available to the long-term care residents regardless of whether they had mental health or dementia diagnoses.

INTERVENTION

The primary person who administered the interventions is a licensed occupational therapist who works in recreational therapy in both facilities. Her credentials include Certified Dementia Practitioner, Certified Healing Touch Practitioner, advanced practitioner of Chinese Energetic Medicine, Certified Aromatherapist, Certified 'M' Technique Hand Trainer, and Mental Health First Aid Instructor. She has incorporated holistic modalities into occupational therapy sessions and private healing practice sessions for over 24 years. She trained interested staff in how to provide the interventions to residents and how to record the pre- and post-intervention scales in residents' charts. Staff provided verbal and written information about the modalities to the residents or their family/POA/guardian prior to the first session. Residents were excluded if they did not want to receive the interventions or if their family/POA/guardian did not want them to receive the interventions. A resident could refuse a session at any time.

At each session, one, two, or three of the modalities ('M' Technique for hands, aromatherapy, or energy healing) were provided to the resident. Prior to a session, the staff member focused on becoming present and centred. Staff followed hand hygiene procedures (for staff), wore gloves and mask and eye protection, and followed any extra resident-specific precautions (such as wearing a gown). Staff and residents worked together to determine the modalities administered during a session. The options were 'M' Technique for hands only, aromatherapy only, energy healing only, or a combination of any two or three of the modalities. 'Hand massage' ('M' Technique for hands) was more understandable to residents than the other modalities, so that became the focus for most residents.

Aromatherapy was often included with the hand massage. Oils were diffused, inhaled directly, or added to fractionated coconut oil to be massaged into the hands and forearms. Oils used in this protocol mainly included lavender, orange, mandarin, spearmint, lemon, and fir needle for the general purposes of decreasing pain and anxiety and improving alertness (Buckle, 2015). In addition, a 'mentally sharp' blend (basil, lemon, rosemary, peppermint, clove bud, cardamom, and cedarwood) was used via diffuser delivery only. We developed a 'house list' of essential oils with a minimum of contraindications: lavender (*Lavandula angustifolium*), orange (*Citrus sinensis*), mandarin (*Citrus reticulata*), spearmint (*Mentha spicata*), lemon (*Citrus limon*), and fir needle (*Abies alba*). The most frequently used oils for hand massage were lavender or a combination of lavender and mandarin in the carrier oil of fractionated coconut oil. The dilution was five or six drops of essential oil per one ounce of coconut oil.

During the interventions, residents could be seated, lying down, standing, or occasionally walking. However,

staff attempted to be at a similar level and made eye contact a priority during the intervention. Staff followed the cues of the resident and minimised talking when a resident began to quiet, yawn, and/or close their eyes. The practitioner used an eclectic approach for energy healing sessions, with a focus on Healing Touch.

INSTRUMENTATION

We used a 10-point Likert verbal pain scale, which was an existing scale in the facility (see Appendix A). The 10-point verbal anxiety Scales are in appendices was developed by the primary researcher (see Appendix B). We recorded pain and/or anxiety at the beginning and end of each intervention session. The person administering the session also recorded observational notes (e.g., patient reported 'I could fall asleep', 'That felt good') and the modalities used in the medical chart.

DATA COLLECTION

Data were collected from March 1, 2020, to December 15, 2021. At the time of the holistic intervention, quantitative pre- and post-pain and anxiety ratings as well as qualitative resident verbal responses were recorded by the person administering the intervention in a narrative progress note in the resident's chart after the session. For the grant review, the primary researcher conducted a chart review to provide the unit name, date of the session, which modalities were administered, pre- and post-session pain and anxiety ratings, verbal responses, and other pertinent observational notes, including comments from staff on handwritten data collection sheets. The primary researcher then provided the handwritten data collection sheets with de-identified data to the research team.

DATA ANALYSIS

Two researchers entered the data from the data collection sheets into an Excel spreadsheet. All researchers spot-checked the data to ensure accuracy.

Quantitative data analysis

We calculated descriptive statistics and t-tests, only including residents who were able to complete the pre- and post-session pain and anxiety ratings. If a resident reported more than one pain rating per session (e.g., pain in their back and pain in their foot), we averaged all of the pre-intervention scores together and all of the post-intervention scores together to obtain one pre-intervention and one post-intervention pain rating for each session. When reporting scores by resident, we averaged all of the pre-intervention and all of the post-intervention scores together for that resident to obtain one pre-intervention score and one post-intervention score, reflecting one average pre-intervention and post-intervention score for the multiple sessions. Some residents only reported pre-post pain or pre-post anxiety,

but not both; therefore the total number of sessions may vary, depending on the analysis.

Qualitative data analysis

We included all residents who received a session, even if they could not respond to the pain and anxiety scales. We conducted content analysis: each researcher independently read the data multiple times and generated initial codes; we met as a group multiple times, shared our initial codes, and checked our collective sense of the data. In the discussions of results below, we report example cases to highlight the qualitatively reported impact of the interventions.

RESULTS/FINDINGS

Staff administered a total of 363 individual sessions to 75 residents who were able to indicate their pain and/or anxiety levels before and after the session. The number of sessions per resident ranged from 1 to 34, with the average number of sessions per resident being 4.77. Sixty-five residents were able to rate their pain, and 51 residents rated their anxiety. In addition, 1,024 sessions were provided to residents who were unable to use a pain and/or anxiety scale. Much of the qualitative data was gathered from those sessions.

In the sessions which included pain and/or anxiety scale reports, energy healing was administered as the *only* modality 77 times. The 'M' Technique for hands was administered as the *only* modality 64 times. Aromatherapy was administered as the *only* modality once. Energy healing and the 'M' Technique for hands were administered together 33 times. The 'M' Technique for hands and aromatherapy were administered in the same session 50 times. All three modalities (energy healing, the 'M' Technique for hands, and aromatherapy) were administered together 77 times. In all, there were 102 sessions that included energy healing, 253 sessions that included the 'M' Technique for hands, and 175 sessions that included aromatherapy.

PAIN

Pre/post-session pain

We used a t-test paired two sample for means with one average pre-session pain score and one average post-session pain score per resident per session to determine changes in pain. There was a significant difference between pre-session pain ($M = 6.63$, $SD = 4.47$) and post-session pain ($M = 3.47$, $SD = 7.11$); $t(321) = 25.16$, $p < 0.001$.

Pre/post-session pain by person

Sixty-five people had a session where they reported at least one pre/post-session pain score. We used a t-test two sample for means to determine changes in pain.

When a person had more than one session, we averaged all of the pre/post-session pain scores so that each person had only one pre-session and one post-session pain score. There was a significant difference between pre-session pain ($M = 6.30$, $SD = 3.87$) and post-session pain ($M = 3.87$, $SD = 4.93$) by person; $t(64) = 11.85$, $p < 0.001$.

Qualitative pain data

Residents often qualitatively reported a decrease in pain after receiving holistic interventions. One resident who had painful and odiferous decubitus wound care received aromatherapy and the 'M' Technique for hands to help manage the pain and odour during dressing changes. At the end of one particularly painful session, the resident reported that her pain decreased 'everywhere'. Staff provided a fabric swatch with essential oils for her to use for wound care sessions. Another resident had a history of pressing staff to increase her opioid use. However, when the resident used self-guided imagery (as a form of energy healing) on her own to get back to sleep, she reported that 'it brings my pain down some'. Finally, another resident who received all three modalities stated, 'That really helps so much. I'm a sceptic, but I correlate my pain getting better and better to doing this. Even my transfers [e.g., moving from a wheelchair to a bed] are getting better.' This resident uses what she learned in sessions to help manage her pain, stress, and narcotic cravings between sessions.

ANXIETY

Pre/post-session anxiety

We used a t-test paired two sample for means with one average pre-session anxiety score and one average post-session anxiety score per resident per session to determine changes in anxiety. There was a significant difference between pre-session anxiety ($M = 6.57$, $SD = 7.37$) and post-session anxiety ($M = 3.17$, $SD = 8.80$); $t(147) = 14.99$, $p < 0.001$.

Pre/post-session anxiety by person

We used a t-test paired two sample for means with one average pre-session anxiety score and one average post-session anxiety score per resident to determine change in anxiety. There was a significant difference between pre-session anxiety levels ($M = 6.59$, $SD = 6.47$) and post-session anxiety levels by person ($M = 3.1$, $SD = 5.95$); $t(50) = 9.79$, $p < 0.001$.

Qualitative anxiety data

Residents' responses to holistic interventions indicated shifts in anxiety, tension, and agitation. Residents stated that 'everything feels more serene', 'peaceful', and 'soothing'. Others said that it 'felt good', 'glorious', and 'wonderful' and it 'calms my nerves'. Some responses

related to presence and mental functioning, such as 'I feel more grounded' and 'I have less mental frustration'. Other residents commented on the vital element of sleep: 'I could fall asleep' or 'I relaxed so I could fall asleep'. Staff also observed a change in residents after holistic interventions, saying residents 'appeared more relaxed', 'were calmer', or 'became less agitated'. Staff noticed a 'change from angry to loving affect'.

QUALITATIVE DISTRESSING BEHAVIOURS DATA AND OTHER BENEFITS

Decreasing distressing behaviours

Pre-session behaviours which can potentially escalate into self-injury or resident-to-resident altercations include fast forward-lean walking, pacing, exit seeking, slamming hands on the table, yelling 'shut up', repetitive calling out, combativeness, repeated requests for coffee or Nicorette gum, repeated attempts to stand while unsteady, attempting to push another resident in their wheelchair, and rummaging in others' belongings. After staff provided holistic interventions, many residents with the above behaviours remained seated, fell asleep, allowed themselves to be helped into bed for sleep, allowed themselves to be escorted to activity programming, or engaged in semi-independent sensory and manipulative activities (such as flower arranging, folding linens, looking at a magazine or book, or sorting baby socks). Frowning individuals sometimes became smiling individuals, sometimes bobbing their head to music and/or demonstrating increased clarity of speech.

The following are more specific examples of the decreased distressing behaviours of residents:

- An unsteady resident with an arm fracture due to a fall was not sleeping in the day or night and was constantly walking; after staff provide holistic interventions, she was able to be assisted in lying down for a short or longer time, sometimes falling asleep.
- Another resident with ongoing agitation and delusions was pacing, repeating, 'Nobody likes me' and 'They're trying to get rid of me'. After the holistic intervention, she stated, 'That felt so good', and she fell asleep.
- A resident on the advanced dementia unit frequently walked the hallways, entered other residents' rooms, manipulated their bed controls, opened their lotions, fingered the curtains, and once knocked a TV to the floor. After the holistic intervention in one visit, the resident remained seated and ran her finger along the writing in a magazine for more than 20 minutes.
- Residents with suicidal ideation were frequently referred for the holistic interventions (some were

interested, and some were not). When asked what was helpful to them, those with suicidal ideation sometimes listed the holistic interventions.

In aromatherapy diffuser trials, the combination of lavender and mandarin was most consistently effective in calming agitated residents. When essential oils were used to support alertness and improved appetite and digestion (such as a combination of lemon, orange, basil, rosemary, peppermint, clove bud, cardamom, and cedarwood), this combination was scheduled to be used in the morning and early afternoon only, in order to avoid interference with relaxing into sleep on the evening shift. The residents on the ‘dementia unit’ appeared to tolerate the ‘alerting’ combination, but the residents on the ‘advanced dementia unit’ had a significant increase in agitated activity with this blend.

Staff also reported the following:

- An overnight nurse on the dementia unit reported he turned on a calming diffuser (with lavender) when three of his residents were wandering during the night. He stated all three residents calmed and sat down.
- A nursing assistant on the advanced dementia unit reported pacing residents sitting down after staff turned on the calming diffuser (lavender and mandarin).
- A trained medication aide said that ‘the residents are less agitated’ after receiving holistic interventions.

Other benefits

Residents and staff cited many benefits from the holistic interventions. Residents reported physical benefits, including ‘easier to breathe, decrease in nausea, decrease in tremors, cold legs/hands were warmer, and better energy; I feel like I’m coming alive from the inside out’ and ‘the pain of my spirit decreased from a 9/10 to a 6/10’.

Staff reported changes in residents as well, including increased ‘smiling’ and ‘alertness’ after sessions. One staff member commented, ‘I like that the unit smells better. I think it makes it homier.’ One of the therapeutic recreation directors stated, ‘I’m all for the [‘M’ Technique hand massages with or without aromatherapy]. You’re affecting the residents in a very positive way and the residents are talking to you. You’re building relationships and something the residents want. I’m getting requests all the time.’ Another dementia unit nurse manager said the atmosphere of the unit was ‘transformed’ by the holistic interventions (combined with the provision of semi-independent sensory and manipulative activities). She said, ‘The aides are able to focus on cares because there are fewer behaviours.’ In one case, a staff member offered a potential solution to a resident whose roommate’s often leaky colostomy bag made his eyes

water from the odour. She offered the resident a mask and a calming aromatic stick. The resident reported, ‘I love using my stick in this way’, because he had more control over his experience in a situation where many things were out of his control.

DISCUSSION/IMPLICATIONS

IMPLEMENTING MULTIPLE HOLISTIC INTERVENTIONS

In this study, it is possible our results were more effective because we used a combination of modalities rather than just one modality. In another study using multiple modalities, Yang et al. (2015) also found that improvements in dementia-associated agitation were noted following aromatherapy or aromatherapy combined with acupuncture. Yang et al. (2015) report the combination of aromatherapy and acupuncture showed better improvement than aromatherapy alone in reducing agitation, inhibiting the sympathetic nervous system, and activating the parasympathetic nervous system. In another study, Smallwood et al. (2001) suggest the combination of aromatherapy and massage was more effective than conversation, aromatherapy, or massage only in reducing dementia behavioural disturbance. As aromatherapy interventions are incorporated into long-term care, there is a need for trained aromatherapists. When staff cover more than one facility, it is difficult to tailor essential oil choices to individual needs. Interventions are likely to be broad and somewhat uniform.

PAIN AND ANXIETY

The impact of pain and anxiety on an individual’s lived experience is profound, prevalent among long-term care residents, and difficult to treat (Dirk, Rachor & Knopp-Sihota, 2019; Helvik et al., 2021; Osmancevic & Bauer, 2022; van Dalen-Kok, 2022). Both qualitative and quantitative data support the holistic interventions used in this study to decrease pain and anxiety for residents in long-term care facilities. These results are congruent with the limited research related to these specific interventions used in long-term care (Cino, 2014; Grace, 2015; Her & Cho, 2021; Yang et al., 2015; Yücel, et al. 2020; Zhang et al., 2022). These results add to the literature that indicates ‘M’ Technique hand massage, aromatherapy, and/or energy healing are effective modalities to reduce pain and anxiety when applied to a range of specific conditions (Buckle, 2015; Buckle, 2022; MacIntyre et al., 2008; Richeson et al., 2010; Post-White et al., 2003; Swengros et al., 2014; Yount et al., 2021). These holistic interventions can be safely utilised and have minimal documented side effects (Anderson, Anselme & Hart, 2017; Buckle, 2015; Buckle, 2022; Cai and Zhang, 2015; Eden & Feinstein, 2020; Krieger, 1993; Krieger,

2021; Quest, 2016; Wardell, Kagel & Anselme, 2014) Practitioners skilled in holistic interventions can develop continuing education for staff across departments for integration throughout a facility. Holistic interventions are an additional tool to provide relief and comfort to residents.

DECREASE IN DISTRESSING BEHAVIOURS

This study documented a decrease in distressing behaviours following holistic interventions. Pain (Brown et al., 2015), anxiety, and other types of discomfort may underlie distressing behaviours. Many residents with dementia are unable to communicate whether they have pain or anxiety, but they show staff something is wrong by their behaviours. Distressing behaviour may be unsafe for the resident (potential fracture due to repeated attempts to stand despite imbalance and fatigue), unsafe for other residents (attempting to transfer them or push their wheelchair), and unsafe for staff and visitors (striking out). Distressing behaviour in one resident may trigger agitation in other residents (Ridder et al., 2013).

Our findings were also consistent with Watson, Hatcher, and Good (2019), who suggest one oil (lavender) is more effective in reducing agitation in people with dementia, while another oil (lemon balm) is more effective in reducing agitation without dementia. Similarly, we found a 'mentally sharp' blend (basil, lemon, rosemary, peppermint, clove bud, cardamom, and cedarwood) worked well on the 'dementia unit' but appeared too stimulating for residents on the 'advanced dementia' unit, who responded well to a mixture of lavender and mandarin oils. Residents with fewer distressing behaviours (such as attempting to move other residents and their belongings or striking out) result in safer environment for themselves, for other residents, and for staff and visitors.

IMPACT ON STAFF AND ENVIRONMENT

Long-term care facilities are facing myriad challenges for both residents and staff given the COVID-19 pandemic, staffing shortages, staff burnout, negative media coverage of long-term care, and costs (Mitchell et al., 2022; Sheikh et al., 2021; Thompson et al., 2020). An overall sense of the facility's environment is an important factor in resident and staff satisfaction (Chaudhury et al., 2018, Uwajeh, Iyendo & Polay, 2019). The long-term care culture change literature emphasises the importance of a person-centred approach, creating a homelike noninstitutional atmosphere, and autonomy and valuing for both residents and staff across the role hierarchy (Duan et al., 2022; Mitchell et al., 2022; Zimmerman, Shier & Saliba, 2014).

Providing holistic interventions is a relational process with one-on-one time between staff and residents (Anderson, Anselme & Hart 2017; Buckle, 2015; Buckle,

2022; Cai & Zhang, 2015, Eden & Feinstein, 2020; Krieger, 1993; Krieger, 2021; Levin, 2011; Quest, 2016; Wardell, Kagel & Anselme, 2014). Practitioners quiet, settle, and become present to offer 'M' Technique hand massage, aromatherapy, and energy healing, essentially shifting the presence of the practitioner to a peaceful state. These interventions are usually provided when the resident is seated or lying down (and occasionally when standing or walking). The interventions are provided at eye level, with eye contact when possible. Holistic interventions serve as an equalising interaction, where the resident and practitioner work together and the practitioner does not treat the resident as an object.

The holistic interventions used in this study are based on a caring model and communicate warmth and positive regard (Anderson, Anselme & Hart, 2017; Buckle, 2015; Buckle, 2022; Cai & Zhang, 2015; Eden & Feinstein, 2020; Krieger, 1993; Krieger, 2021; Levin, 2011; Quest, 2016; Wardell, Kagel & Anselme, 2014). Holistic interventions give staff and residents a sense of agency in a challenging environment.

LIMITATIONS

While this study indicates hopeful outcomes using holistic interventions in long-term care, there were several limitations. First, the data collected in this study was collected as part of a quality improvement project and was not initially intended to be reported as a research project. However, staff were aware of the positive changes that were happening individually for residents and collectively in the environment. When the primary researcher shared her observations with colleagues outside of the health care organisation, they offered to collaborate on the pragmatic post-hoc analysis, with the goal of analysing the impact of the holistic interventions and potentially making them more widely available. We strongly encourage staff in long-term care facilities to conduct research, and we recommend including researchers earlier in the process for future data collection.

Second, the pain and anxiety levels were verbal reports with reliability and validity challenges. In addition, the accuracy of the pain and anxiety scale numbers may have been affected by the relationship with the practitioner and a desire to please her, giving greater improvement numbers, or, conversely, it may have been affected by a fear of the loss of narcotics, resulting in less improvement in the numbers. It was challenging to gather quantitative data from people with dementia, and many of the people who received sessions were unable to respond to the verbal scales and were not included in the quantitative data.

Third, a number of residents did not know what 'anxiety' meant and had difficulty using the rating scale. Anxiety might have been too narrow a category; thus, a

broader category that included emotional and spiritual well-being could be considered for future research projects.

Finally, we did not analyse data by modality. Because this study looked at the impact of holistic interventions used in a variety of combinations, the impact was not studied individually. While we recommend doing this in future studies, we also wonder whether the combination of modalities—and the ability for the resident to choose which ones they preferred along with input from the practitioner—may have contributed to the effectiveness of the interventions.

CONCLUSION

Working with residents in long-term care facilities who are experiencing pain, anxiety, and distressing behaviours, often related to mental health diagnoses and dementia, can be challenging for staff and other residents. Holistic interventions are cost-effective, communicate caring and respect for human dignity, give staff and residents a sense of agency, contribute to a safer environment for all, and have few side effects.

Specifically, individual interventions using ‘M’ Technique for hands, aromatherapy, and energy healing resulted in statistically significant decreases in pain and anxiety and observable decreases in distressing behaviours with an overall improvement in the facility’s environment. Training staff and providing the time and resources to administer these relatively simple modalities decreases pain, anxiety, and distressing behaviours. Hope and medicine for the soul does not come in the form of a pill, but rather from caring, holistic approaches designed to increase human connection and dignity.

APPENDIX A

PAIN SCALE

A 10-point Likert scale for pain was used. Residents were asked whether they had any pain, where the pain was located, and what the number was for each area of pain. They were instructed to rate the pain from 1 to 10, with 0 being no pain at all and 10 being so bad you feel like screaming.

APPENDIX B

ANXIETY SCALE

A 10-point scale for anxiety was developed, with 0 being equal to no anxiety at all and 10 being extreme anxiety. If residents asked what is meant by ‘anxiety’, they were told it was a feeling of nervousness.

FUNDING INFORMATION

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COMPETING INTERESTS

The authors have no competing interests to declare.

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