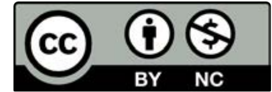

Montessori Elder and Dementia Care, and Trauma-Informed Approaches: A Thematic Analysis Examining Connections Between the Models

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Abstract: According to the World Health Organization, there are currently more than 55 million people living with dementia worldwide, and this figure is expected to triple by 2050. Recent studies suggest that there may be a link between childhood trauma (which refers to exposure to overwhelmingly stressful experiences before the age of 18 years) and the onset of dementia in later life. Therefore, in communities caring for persons living with dementia, some residents may have been exposed to trauma in childhood. Currently, there is an increasing awareness of the negative impact of childhood trauma on later adult health and well-being, and a corresponding recognition of the need for services, including for dementia care, to be trauma-informed. In the last decade, the Montessori Method has become established as a legitimate approach to elder/dementia care. However, it has not yet been examined as a trauma-informed approach. The aim of this paper is to address that gap by (a) highlighting how Maria Montessori took steps to integrate interdisciplinary knowledge of trauma into her Method when she began to understand the potential of childhood trauma to adversely impact adult health and well-being, and (b) outlining how the Montessori Method, when applied to dementia care, incorporates many of the core principles of trauma-informed practice. This paper concludes that the Montessori Method for dementia care has the built-in capacity to be trauma-sensitive and trauma-responsive, but that its ongoing rollout should follow Montessori's lead by specifically integrating knowledge about the neurobiology of trauma into its training programs.

According to the Centers for Disease Control and Prevention, "Dementia is not a specific disease but is rather a general term for the impaired ability to remember, think, or make decisions, that interferes with doing everyday activities" (Centers for Disease Control and Prevention, 2023). Dementia results from a variety of injuries and diseases that affect the brain, including vascular diseases and strokes. The most common form of dementia, accounting for 60-80% of cases, is Alzheimer's disease (Alzheimer's Association, 2023). Although dementia is not a normal part of aging, the prevalence of dementia is increasing year on year (World Health Organization, 2023). This prevalence is occurring for a number of reasons, including increased longevity. Global dementia cases are forecasted to triple by 2050 (GBD 2019 Dementia Forecasting Collaborators, 2022).

Recent studies (Corney et al., 2022; Couzner et al., 2022; Radford et al., 2017; Schickedanz et al., 2022; Tani et al., 2020) suggest that a link exists between exposure to adversity or trauma in childhood and the onset of dementia in later life. *Childhood adversity* includes such stressors as exposure to neglect, abuse, domestic violence, parental substance misuse, parental mental health problems, and parental divorce (Felitti et al., 1998). These types of experiences overlap with what is considered *childhood trauma,* which refers to exposure to stressful experiences that overwhelm children and adolescents under the age of 18 in the absence of a supportive adult (Substance Abuse and Mental Health Services Administration, 2014). The groundbreaking Adverse Childhood Experiences (ACE) Study (Felitti et al., 1998) found that adverse experiences in childhood are common and are found in all socioeconomic groups. Therefore, in communities caring for elders and persons living with dementia, it is likely that some of the residents may have been exposed to adversity or trauma in childhood. Building on the findings of the ACE study, an increasing body of literature highlights the negative impact of childhood trauma on later adult health and well-being (Bellis et al., 2019; Burke Harris, 2019; Shonkoff et al., 2012; van der Kolk, 2014). Chandrasekar and colleagues found that exposure to adversity in childhood predisposes an individual to multimorbidity, i.e., living with two or more chronic conditions such as cardiovascular disease, diabetes, or mental illnesses such as anxiety or depression (Chandrasekar et al., 2023). Their findings showed that "Childhood adversity was associated with a progressively increasing burden of multimorbidity across adulthood into early old age" (p. 2). Accompanying these findings is a corresponding recognition by professionals working with adversity-experienced individuals of the need for human services—including services for dementia care—to be ACE-aware and trauma-informed. Being trauma-informed means being aware of the potentially negative impact of exposure to adversity and trauma on individuals (Cations et al., 2020, 2021; Couzner et al., 2022).

This recognition of the need to make dementia care become trauma-informed has an important bearing on the relatively recent use of the Montessori Method in the care of people living with dementia. Given the possible link between early exposure to trauma and the onset of dementia in later life, it is important that Montessori practitioners for dementia programs are aware of how childhood trauma can impact the progression of dementia and how a trauma-informed approach can result in better care practices. This paper highlights how Montessori understood the potential of unaddressed childhood trauma to adversely impact later adult health and well-being, and in response took steps to integrate interdisciplinary knowledge on trauma into her Method (Montessori, 2013a/1917). It also outlines how the Montessori Method, when applied to dementia care, incorporates (perhaps unconsciously) many of the core principles of trauma-informed practice. This paper concludes that the Montessori Method for dementia care has the in-built capacity to be trauma-sensitive and trauma-responsive, but that its ongoing rollout should follow Montessori's lead by specifically integrating knowledge about trauma and trauma-informed practice into its training programs.

Method

This paper examines connections between the Montessori Method for elder and dementia care, and trauma-informed approaches. To conduct this study, Braun and Clarke's (2022) analytical approach to thematic analysis was used. This approach involved six steps. The first step was to become familiarized with the data in the literature listed in Table 1, and to take note of any recurring features and initial thoughts on how to code the data. The second step involved extracting pieces of text and highlighting them with different colors to create initial codes or meaningful labels that could identify recurring ideas in the data set. For example, when reading Montessori's pamphlet about the World War I French and Belgian refugee children (Data Group F), I extracted several pieces of text from which I created the initial codes "war," "trauma," "physical wounds," "psychological wounds," and "human degeneration."

Table 1
List of Resources

Author	Date	Title of Document	Document
Resources on Montessori Methods for dementia			
Camp, C. J.	1999	Montessori-based activities for persons with dementia. Vol. 1	Book
Camp, C. J. et al.	2006	Montessori-based activities for persons with dementia. Vol 2	Book
Camp, C. J.	2012	Hiding the stranger in the mirror: A detective's manual for solving problems associated with Alzheimer's disease and related disorders.	Book
Brenner, T. & Brenner, K.	2020	The Montessori Method for connecting to people with dementia: A creative guide to communication and engagement in dementia care.	Book
Brush, J.	2020	Montessori for elder and dementia care.	Book
Resources on the possibility of a link between childhood trauma and dementia			
Radford et al.	2017	Childhood stress and adversity is associated with late-life dementia in Aboriginal Australians.	Article
Tani et al.	2020	Association between adverse childhood experiences and dementia in older Japanese adults.	Article
Schickedanz et al.	2022	The association between adverse childhood experiences and positive dementia screen in American older adults.	Article
Corney et al.	2022	The relationship between adverse childhood experiences and Alzheimer's disease: A systematic review.	Article
Resources on the need for trauma-informed aged care			
Cations et al.	2020	Trauma-informed care in geriatric inpatient units to improve staff skills and reduce patient distress: a co-deigned study protocol.	Article
Cations et al.	2021	The case for trauma-informed age care.	Article
Couzner et al.	2022	Delivering trauma-informed care in a hospital ward for older adults with dementia: An illustrative case series	Article
Resources on trauma-informed principles			
Fallot, R. & Harris, M.	2009	Creating cultures of trauma-informed care: A self-assessment and planning protocol.	Article
SAMSHA	2014	SAMSHA's concept of trauma and guidance for a trauma-informed approach.	Report
Resources on adverse childhood experiences and trauma			
Felitti et al.	1998	Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study.	Report
Perry, B. D.	1999	Memories of fear: How the brain stores and retrieves traumatic experience.	Book chapter
Resources on Montessori's involvement with trauma-affected children			
Montessori, M.	2013/1917	The white cross	Pamphlet

Table 2
Stages in the Thematic Analysis

Data Group Literature topics	Initial Codes	Emerging Themes
A: Montessori Methods for dementia	Camp's Insight – links between the Montessori Method and interventions for persons with dementia.	The perfect fit: applying the Montessori Method to dementia care
B: Possible links between childhood trauma and dementia	The compelling facts and figures; the limitations in the studies.	Is there a link between adversity in childhood and the onset of dementia in adulthood?
C: The need for trauma-informed aged care	Past history of neglect or abuse, personal care issues.	There is a real need for aged-care staff to be trauma-informed to prevent re-traumatization.
D: Trauma-informed principles	The need for safety, trust, peer support, collaboration, choice, empowerment.	Is the Montessori Method for dementia a trauma-informed approach?
E: Adverse childhood experiences and trauma	Neglect, abuse, caregiver mental instability; household substance abuse; domestic violence; incarceration of family member; death of caregiver; separation from caregiver.	The impact of childhood adversity on later physical and mental health.
F: Montessori's involvement with trauma-affected children	War/trauma/physical wounds/psychological wounds.	Montessori's involvement with trauma-affected children.
		Montessori's concerns for trauma-affected children's exposure to criminality.
		Montessori's concerns for trauma-affected children's mental and physical health.
		Montessori's concerns for trauma-affected children's later adult health.
G: Montessori's core principles	Human need for work (meaningful activity, independence, respect, self-worth, contribution, intergenerational living, belonging, sense of community.	How the Montessori Method when applied to aged and dementia care can promote these core principles.

These initial codes and references to the data sources that support them are listed in Table 2. The third step involved identifying potential or emerging themes. In this respect, I took a deductive approach in that my choice of themes was influenced by my existing knowledge. This step also involved grouping some of my codes into broader themes. For example, from the initial codes, I created the following emerging themes: Montessori's involvement with trauma-affected children; Montessori's concerns for trauma-affected children's exposure to criminality; Montessori's concerns for trauma-affected children's mental and physical health; Montessori's concerns for trauma-affected children's later adult health. Emerging themes from the data groups are listed in Table 2. The fourth step involved reviewing the potential themes against the data to establish relevance, usefulness, and that they were distinct enough from other emerging themes to stand alone. The fifth step involved naming the themes such that they would be engaging and of interest to a potential reader. The sixth step involved the write up of the article using the themes as the structure.

Theoretical Framework

This study is based on the pioneering research of Cameron Camp, through which he discovered the potential of the Montessori Method to help persons living with dementia to live meaningful and fulfilling lives despite their particular challenges (Camp, 1999, 2010, 2012; Camp et al., 2006; Camp & Shelton, 2023). It is also anchored on the groundbreaking ACE study (Felitti et al., 1998) and the concept of trauma and trauma-

informed practice as adopted by established authorities on trauma, including the Substance Abuse and Mental Health Services Administration (SAMHSA; 2014). Additionally, this study is centered on Montessori's writings on the dangers of unaddressed childhood trauma to the health and well-being of present and future generations as specifically expressed in the publication she circulated during World War I (Montessori, 2013a/1917).

Results

Three major themes emerged from the analysis (with a number of sub-themes in the third theme). These were: (a) the possible link between ACEs and dementia; (b) Montessori's insights into the risks posed by childhood trauma to later physical and mental health; and (c) The Montessori Method for aged care and people living with dementia.

The Possible Link between ACEs and Dementia

The first theme that emerged from the analysis relates to the possible link between exposure to ACEs and the onset of dementia in late adulthood. The ACE study showed that exposure to ACEs (e.g., neglect, abuse, domestic violence, issues with caregivers such as mental illness, substance misuse, death, divorce, or incarceration) before the age of 18 can lead to the onset of negative conditions in later life (Felitti et al., 1998). These conditions include mental health issues such as anxiety and depression, which can lead to a lifestyle marked by isolation, poor diet, lack of exercise, or the adoption of health risk behaviors. These behaviors include misuse of alcohol or drugs and premature or risky sexual practices, all of which are the lead causes of chronic disease and even early death in adulthood (Felitti et al., 1998). It is worth noting that these factors also negatively impact overall brain health (Tani et al., 2020). The ACE study used a straightforward scoring method which became known as the ACE Score (a measure of reported exposure to 10 different types of adversity in childhood) to determine the extent of each of the study participant's exposure to childhood adversity. The major findings of the ACE study were that ACEs are (a) common, (of the 17,337 predominantly white, educated, middle-class participants surveyed, almost two thirds reported exposure to at least one ACE), (b) interrelated (e.g., exposure to caregiver substance abuse often also involves exposure to physical abuse), and (c) a common pathway toward negative behaviors, which can lead to disease, disability, social problems, and even premature death. While the ACE study's groundbreaking research explained the link between ACEs and many common illnesses (including heart disease, cancer, diabetes, asthma, anxiety, and depression), it did not refer specifically to the possibility of a link between ACEs and the onset of dementia in late adulthood. However, it is arguable (although Felitti et al. did not specifically state this) that habits such as smoking, high alcohol consumption, poor diet, lack of physical activity, low levels of cognitive stimulation—all of which have been found to be risk factors for the onset of dementia—may, in some cases, have their origins in early life exposure to adversity or trauma.

To date, few studies have focused on the possible link between exposure to ACEs in childhood and the onset of dementia in later years. However, studies on this topic are beginning to emerge. In 2017, the work of Radford and colleagues provided compelling evidence that childhood stress and adversity are associated with late-life dementia in aboriginal Australians (Radford et al., 2017). The obvious limitation of the study was that it only included data relating to a relatively rural population of Aboriginal elders. In 2020, Tani and colleagues conducted a research project that they claimed was the first study to examine the association between adverse childhood experiences and dementia incidents using a large-scale cohort study of "older Japanese people" (Tani et al., 2020, p. 8). The findings of their large-scale study (17,412 persons) revealed that "having three or more adverse childhood experiences was associated with increased dementia risk among older Japanese adults" (p. 1). The association was weaker after adjusting for social relationships. This suggests that social connection may be a factor that can influence the link between adverse experiences in childhood and the onset of dementia in later life. The findings in this study are important because they suggest that preventing or reducing ACEs in the first place or helping the victims of these experiences to heal may provide a pathway toward preventing or delaying the onset of dementia in later life. However, the study had limitations in that it used retrospective surveys, which are vulnerable to recall bias, and the findings may not be generalizable to other cultures.

More recently, Schickedanz and colleagues (2022) claimed that their study is the first to examine the association between ACE scores and "a positive dementia screen" among a national sample of older adults in the United States (p. 2399). They found that a higher number of ACEs was associated with an increased possibility of

screening positively for dementia. They say that their findings were not unexpected given the fact that the ACE study showed the correlation between exposure to adversity and future vulnerability to chronic diseases. They claim that the risk of dementia is affected by "early life stress" as well as sociodemographic and other factors including genetic predisposition (Schickedanz et al., 2022, p. 2401). In an effort to back up this claim, they state that the association between ACEs and the risk for dementia found in their study provides further evidence of the long-lasting and detrimental impact of exposure to adversity and trauma in childhood on early brain development and function. They further claim (referring to Perry & Pollard, 1998) that ACE score-related dementia risk may be an enduring consequence of "adaptive neurodevelopment" (in response to neuroactivation that impacted the formation of certain neural networks) in the formative years, arising directly from exposure to adversity or trauma (Schickedanz et al., 2022, p. 2401). They further point out that ACE scores have been shown to be associated with social isolation and they suggest that there might be "a domino effect" beginning with exposure to childhood adversity, which can lead to attachment problems and difficulties with relationships in adulthood, tending towards an increased risk of "social isolation" and dementia in the later years (Schickedanz et al., 2022, p. 2402). Limitations in the study included the fact that a person's ACE score does not indicate the severity or frequency of the individual's exposure to ACEs, nor does it take into account the age of the person when the exposure occurred. Limitations also include the fact that a person's ACE score does not give information on the presence or absence of resilience factors such as positive relationships with family, friends, or communities. Notwithstanding these limitations, the authors claim that their study is the first U.S. study to actually show the association between ACE scores and dementia risk, and they conclude with the admonition that "childhood adversity and trauma should be considered risk factors for dementia" (Schickedanz et al., 2022, p. 2403) and that a greater exposure to ACEs is associated with a "higher probability" of a positive dementia screen in older adulthood (Schickedanz et al., 2022, p. 2398). Similarly, Corney and colleagues (2022) concluded from their systematic review on the relationship between ACEs and Alzheimer's disease that adverse childhood experiences appear to be associated with "an increased risk of Alzheimer's disease," although they state that further research is needed (p. 1).

The findings from these studies are of importance for all professionals involved in the design of models for elderly and dementia care because if adverse childhood experiences are associated with an increased susceptibility to developing dementia, then it follows that (a) an appropriate evidence-based intervention strategy is needed to identify elders who may not have dementia yet but who are at a high risk of developing it because of exposure to trauma in their childhood, and (b) in communities of people who already have dementia, some are likely to have experienced adversity or trauma in childhood. Therefore, staff working with them will need to be capable of incorporating a trauma-informed lens into their daily caring practices. This will involve understanding the basics of how trauma can impact the mind and the body. It will involve being aware of such things as the workings of the stress response system, the role of adaptive responses, and the problem of trauma triggers. It involves recognizing how triggers (which could take the form of a memory, a color, a smell, a sight or a sound) can have an adverse impact on an individual and learning how to reduce or eliminate them, if possible.

Montessori's Insights into the Risks Posed by Childhood Trauma to Later Physical and Mental Health

The second theme that emerged from the analysis relates to Montessori's insights and concerns in relation to the dangers of unaddressed childhood trauma on later adult health and well-being. Maria Montessori (1870-1952) was one of Italy's first female physicians and a recognized expert in psychiatry (Babini & Lama, 2000; De Stefano, 2022; Gutek & Gutek, 2016; Kramer, 1976; Povell, 2010; Standing, 1957). She had a profound interest in the area of mental health and the study of mental illness (Babini, 2000). In fact, the title of her thesis for her M.D. degree was "Contributo clinico allo studio delle allucinazioni a contenuto antagonistico," or "A clinical contribution to the study of delusions of persecution" (Montessori, 1897), which was published a year after her graduation. The term "antagonistico" referred to what today would be called "paranoid" (Kramer, 1976, p. 48). Over 100 years ago, in a short publication, Montessori expressed her concerns about the long-term effects of childhood trauma on later adult health and well-being (Montessori, 2013a/1917). In this publication, written during the first world war, she stated that trauma-affected children (especially war-torn children) suffer "mental lesions" and "a weakening of the entire nervous system," which poses "a danger to his future life" (Montessori, 2013a/1917, pp. 38-39). Her publication not only anticipated current findings on the

potentially devastating impacts of unaddressed childhood trauma on later adult life (Burke Harris, 2019; Felitti et al., 1998; van der Kolk, 2014), but the vital importance of the timing of the exposure to trauma. Her statement that "the younger the age of the child when this lesion comes, the greater the danger to his future life" (Montessori, 2013a/1917, p. 39) anticipates the findings of several of the world's leading experts in childhood trauma. One such expert, Bruce Perry, states that adverse experiences in early childhood "can alter the organization of developing neural systems in ways that create a lifetime of vulnerability" because "the brain is most plastic (receptive to environmental input) in early childhood" (Perry, 2009, p. 245). Furthermore, Montessori's statement that "when this shock or lesion comes during the prenatal period, it is even more dangerous" (Montessori, 2013a/1917, p. 39), anticipates the findings of leading organizations that deal with child health. For example, a relatively recent publication from the National Scientific Council on the Developing Child (2020) at Harvard University emphasizes the risks posed by pre-natal trauma to life-long health and well-being.

Montessori also recognized that the harm caused to children by exposure to trauma had the capacity to be "passed on to succeeding generations" (Montessori, 2013a, p. 38). In this respect one could argue that she anticipated the relatively new science of epigenetics, (although her understanding of this area of science would necessarily have had to be more intuitive than research-based). Epigenetic changes are modifications to DNA that regulate whether genes are turned on or off. This is interesting in relation to the onset of dementia because, currently, research in the area of epigenetics and dementia suggests that dementia may not be a suddenly occurring disease but rather a gradual change in crucial cellular neural pathways that, through the process of neurodegeneration, change a healthy state into a dysfunctional state. For example, relatively recent research by Maloney and Lahiri (2016) on the epigenetics of dementia explains that as epigenetic changes occur over time in response to our environment, accumulated environmental hits produce latent epigenetic changes in an individual. They claim that "these hits can alter biochemical pathways until a pathological threshold is reached, which appears clinically as the onset of dementia" (p. 1). This theory has relevance for those offering a Montessori approach for aged and dementia care because, as prevention is better than cure, the science of epigenetics may help aged persons who do not already have dementia to deter its onset. Maloney and Lahiri suggest that evidence from epigenetics "could lead to ways to detect, prevent, and reverse such processes before clinical dementia" is diagnosed (p. 1). Montessori's insight, therefore, into the capacity of childhood trauma to negatively impact the future mental health of individuals and even that of future generations is worthy of note. If we heed her advice to take clear and decisive steps to protect the mental health of children, we may find ourselves on the path towards guarding against dementia in some individuals.

It is also clear from Montessori's pamphlet published during the war years that she believed the "psychic wounds" (Montessori, 2013a, p. 39) from childhood trauma, which include a loss of "mental energy and intelligence" (p. 39), may leave children exposed to "great dangers" (p. 39). Some of these dangers include a vulnerability to adopting behaviors that can lead to children becoming "juvenile criminals" at rates "far greater than at other times" (p. 39). She said that it is "well known" that this vulnerability in the individual is evident after a great disaster (p. 39). It is arguable that she anticipated (albeit in a modest way given that she did not conduct any empirical studies on this issue) what Felitti and colleagues were to discover about the link between exposure to adversity and trauma in childhood, and later-life susceptibility to adopting behaviors that can lead to chronic illness and even early death, as outlined in the groundbreaking ACE study (Felitti et al., 1998).

Montessori's response to the problem of childhood trauma was clear and carefully considered. She urged the bringing together of experts in psychiatry, education, medicine, social work, and other related professions to design an interdisciplinary trauma-informed training course to be delivered to professionals involved in the care of trauma-affected children (Montessori, 2013a). If Montessori were here today, it is likely that she would recommend a similar coming together of experts to design a trauma-informed course for persons involved in the Montessori approach to the care of people living with dementia.

The Montessori Method for Aged Care and People Living with Dementia

The third and final theme that emerged from the analysis relates to the Montessori Method for aged care and people living with dementia. This theme has three sub-themes: (a) the goals of the Montessori approach for aged and dementia care; (b) how the key principles

of trauma-informed practice are embodied in the Montessori Method for aged and dementia care; (c) how the Montessori Method, when applied to dementia care, provides a sense of belonging and the strength of community—which are powerful factors in promoting healing from trauma. Before the exploration of these sub-themes, a brief background to the origins of the Montessori Method as applied to aged and dementia care is necessary.

Almost 30 years ago, Cameron Camp, a psychologist conducting applied research in gerontology and dementia, began to examine the materials, method, and environment, associated with Montessori education (Camp, 2010), and began to see "linkages" between Montessori's approach and the translation of "concepts in neuroscience" into practical interventions for persons living with dementia (Camp, 2010, p. 4). In 1996, Vance, Camp, and colleagues published an article in *Montessori Life* in which the concept of using the Montessori Method as an approach to dementia care was discussed. Camp was struck by the potential of Montessori Methods as interventions to relieve "challenging behaviors" in persons living with dementia (2010, p. 2). In 1999, Camp published the first ever manual outlining Montessori-based activities for persons living with dementia, adding another volume a few years later (Camp et al., 2006). As a direct result of Camp's research, the Montessori Method for aged care and people living with dementia has now become established as a legitimate and helpful approach in which Montessori's philosophies and principles are effectively adapted to the needs of persons living with dementia.

The Goals of the Montessori Approach to Aged Care and People Living with Dementia

The first sub-theme relates to the goals of the Montessori approach to aged and dementia care. The Montessori approach to aged and dementia care has several goals, the most important of which is to improve the quality of life of elders and people living with dementia (Camp & Shelton, 2023). This goal is achieved by creating low-stress prepared environments for this plane of life in which respect for human dignity, independence, and meaningful engagement is promoted and supported. It is also vital that all staff understand that these are factors of paramount importance for the human being's physical, social, emotional, psychological, and spiritual well-being. The approach is based on six core principles that form the essence of Montessori's discoveries about the human being. These core principles in aged and dementia care center on the human need for *work* (engagement in meaningful activities); *independence* (being supported to do as much as one can with remaining abilities); *respect for human dignity* (being treated in ways that acknowledge one's dignity, for example, by being offered choice); *self-esteem* (promoted by helping an individual to accomplish tasks and maintain remaining skills); *contribution* (to the family or community one lives in); and *intergenerational living* (promoted where possible by liaising with local schools to allow the elders to help children with their school work). In practice, the Montessori approach to dementia care focuses on supporting the person behind the dementia by identifying their interests, remaining skills, and abilities, and offering a choice of meaningful activities that help to maintain and, in some cases, even build on these skills (Phillips & Phillips, 2015). This is done (with the resident's permission) in collaboration with the resident and their family or friends who can often help to identify the person's strengths.

How the Montessori Method, When Applied to Aged and Dementia Care, Embodies the Key Principles of Trauma-Informed Practice

The second sub-theme relates to how the Montessori Method embodies the key principles of trauma-informed practice when it is applied to aged and dementia care. The 2014 SAMHSA document states that their concept of a trauma-informed approach is "grounded in a set of four assumptions and six key principles" (Substance Abuse and Mental Health Services Administration, p. 9). The four assumptions—the four Rs—are that a trauma-informed organization *realizes* the widespread impact of trauma; *recognizes* the signs and symptoms of trauma; *responds* by fully integrating knowledge about trauma into policies, procedures, and practices; and actively *resists* re-traumatization of clients. The six key principles listed by SAMHSA are: safety; trustworthiness and transparency; peer support; collaboration and mutuality; empowerment, voice, and choice; cultural, historical, and gender issues. The first five of these principles were identified by Fallot and Harris (2009) in their seminal work on trauma-informed services as being the essential principles of trauma-informed care.

The Four Rs. From the published literature on Montessori Methods for dementia, it is not apparent that the four Rs recommended by SAMHSA for an organization to be trauma-informed are being addressed in the training program manuals for students taking training in Montessori Methods for dementia. However,

since one important aspect of Montessori programs for aged and dementia care is knowing the person, which includes knowing the person's background, previous employment or occupations, interests and hobbies, remaining strengths, and self-regulating habits, it is arguable that the four Rs could be more intentionally incorporated into the Montessori approach to dementia care.

The Six Principles: Safety. The Montessori approach to aiding people living with dementia promotes a sense of physical and psychological safety in an older person by providing a continuous dose of "safety cues" throughout the day in the form of the use of gentle tones of voice, friendly facial expressions, and non-threatening body language. This continuous "trickle" of safety cues can help staff to calm persons (especially new residents) who may feel a sense of fear, resulting in agitated behaviors (Couzner et al., 2022). These safety cues have the effect of calming the amygdala (the fear center in the brain) and dampening the stress response systems (van der Kolk, 2014). People who have been exposed to trauma often see the world as an unsafe place; helping them to feel physically and psychologically safe is a priority (Herman, 1994).

Montessori gave copious instructions and recommendations to her teachers about their self-preparation (Montessori, 1936, 1964/1912, 1967/1949). She wrote, "The teacher should study her own movements, to make them as gentle and graceful as possible" (Montessori, 1967/1949, p. 277). In more recent times, two experts in Montessori Methods for dementia also emphasized the importance of positive body language both for the residents and for the staff (Brenner & Brenner, 2020). They advise us to be aware of things such as the way we greet the people in our care. They remind us that "our smile and a positive attitude can uplift the elders we care for" (p. 20) and that "the simplest exchange can lead to the most profound moment of connection and joy" (p. 20). While positive body language is important for any person with dementia, it is all the more important for persons with dementia who have also been affected by trauma because people who have experienced trauma "tend to have problems accurately reading social cues" (van der Kolk, 2003, p. 299) and, consequently, they often "over-read, (mis-interpret) non-verbal cues" (Perry, 1999, p. 10), and wrongly interpret innocent facial expressions and body language as being threatening. Montessori communities for people living with dementia must consider and address where necessary how their physical and psychological environments promote a sense of safety and calm for both staff and clients.

In a lecture delivered in Kodaikanal, India, Montessori addressed this issue of physical and psychological safety in the context of the design of school buildings for children. She said, "Our idea is to build them so that they are psychologically satisfying, i.e., the building should correspond to the psychological needs of the children" (Montessori, 2013b, p. 11). She said that when we design buildings, we need to think about "the psychological contents" (p. 12) of each element of the buildings. For example, she said "the windows should be 'psychological windows' and not merely aerating windows" (p. 12). Similarly, with regard to the gardens, she said, "The garden must also have certain psychological dimensions," and she said it "should be well-sheltered from any dangers" (p. 17). Currently, photographs of Montessori communities for aged care and dementia show by their layouts that they are providing physical and psychological safety to elders with and without dementia (Brush, 2020).

By using a trauma-informed lens when trying to help a distressed older person, staff can avoid possible misinterpretations of the source of a person's distress. This involves considering "What happened to you?" rather than "What's wrong with you?" (Perry & Winfrey, 2021). This is particularly relevant to the area of personal care for persons living with dementia. Couzner and colleagues (2022) recount the case of Mrs. G., a 94-year-old woman with Alzheimer's disease who was admitted to the hospital after a fall at home. They wrote that Mrs. G. would become distressed, particularly during personal care, and this distress was accompanied by verbal and physical aggression. They state that the staff could not identify the triggers for this behavior until a family member disclosed that Mrs. G. had experienced sexual abuse in the past. Couzner states that the family and staff then identified that Mrs. G. was triggered by having personal care delivered by male staff and she found it disrespectful.

Trustworthiness and Transparency. The Montessori approach to aiding people living with dementia promotes trustworthiness and transparency by involving the residents in decisions about their daily routines and activities and by involving family members in the care of their relative. Montessori was remarkable in that from the outset of her work with children, she involved family members and specifically arranged for the mothers to talk with the directress, giving her information concerning the home life of the child and receiving

helpful advice from her (Montessori, 1964).

Peer Support. The third principle regards how the Montessori approach to aiding people living with dementia promotes peer support by giving opportunities to residents to work together on everyday tasks such as washing dishes, preparing snacks, and raking leaves in the garden. During these joint activities, residents have natural opportunities (as opposed to formally organized opportunities) to talk with peers and share experiences, both good and bad. It also promotes peer support by giving opportunities to residents to have positive relational interactions with staff members, which may lead to opportunities for a staff member to share experiences with a resident. Most people experience such things as the loss of, or illness in, a loved one, and often it is therapeutic when a staff member (whose familiar experience makes them a peer) shares their story of grief or loss with a resident.

Collaboration and Mutuality. The Montessori approach to aiding people living with dementia promotes collaboration and mutuality by collaborating with the resident and their family to gather information about the person's preferences. Brush writes that staff collaborate with the elder to create a "Meaningful Engagement Plan within two weeks of the individual's move onto the community" (Brush, 2020, p. 9). The plan is used as a guide for care partners to ensure that each person is participating daily in individualized activities and meaningful roles (Brush, 2020). Additionally, by involving all staff members in the elder's "Meaningful Engagement Plan," the care approach, according to Brush, becomes a community-wide effort wherein all staff members, having been educated in the Montessori philosophy, can collaborate to help the elder person to experience well-being. This well-being is most successfully achieved when staff members work together to introduce, support and prompt elders with self-chosen activities and self-chosen roles when needed (Brush, 2020).

Empowerment, Voice, and Choice. The fifth principle regards how the Montessori approach to caring for people living with dementia promotes empowerment, voice, and choice. It is an approach that empowers a person by focusing on their preserved strengths. For example, persons with dementia may have lost the ability to talk but may still have preserved the ability to read. Camp explains that persons with dementia frequently retain some abilities or "pockets of strength," far into the progression of their illness (Camp, 2012, p. 33). He says that an ability "that often remains far into the course of dementia is the ability to read" (p. 33). The Montessori approach also fosters listening to the voice of residents, and it involves them in shared decision-making. Finally, it is an approach that provides choice by laying out materials in a manner that makes them attractive, inviting, and accessible. This exactness in the layout enables a person to choose which materials they wish to work with. Brenner and Brenner (2020) show that the provision of choice allows for a feeling of being in control, which can result in a reduction in anxious or frustrated behavior. They explain that by giving someone a choice, large or small, you are giving them a sense of autonomy, a feeling of dignity and respect.

Cultural, Historical, and Gender Issues. The final of the six principles, the Montessori approach to caring for people living with dementia actively acknowledges and respects cultural, historical and gender issues. Since the Montessori Method is based on respect for each human being, a thoughtful and even reverential approach to diverse cultures and multi-cultural practices has always been a part of the Montessori approach. Throughout her life, Montessori worked in many countries with peoples of diverse cultural and religious traditions, and she embraced them and regarded herself as a citizen of the world. This respect for diverse cultures is replicated in Montessori communities for aged and dementia care through the honoring of the customs, festivals, art, music, and culinary dishes of different cultures. In Camp's beautiful book *Hiding the Stranger in the Mirror*, he tells a very touching story of an Aboriginal lady who was described by staff at her facility as being very "resistive" to taking a shower (Camp, 2012, p. 30). He says, "the staff member then visited the village where her resident had lived and came back with a plan" (p. 30). The plan involved leading the resident outside where she happily sat on a rock with screens around her and with the aid of a garden hose, washed herself in keeping with the customs she had used for years in her former home. Camp states that "there were no more 'problems' regarding the resident keeping clean" (p. 30).

Montessori lived through two world wars and several other conflicts, and she was very much aware of the impact of historical trauma on human beings, especially in their later life (Montessori, 2013a). She devoted much of her adult life to promoting environments that nurture peace between individuals (Moretti, 2021), a legacy that carries on in the Montessori Method for aged care and dementia (Brush, 2020).

Although it is not widely known, Montessori was an early activist campaigning for women's rights (Babini,

2000; Babini & Lama, 2000). Early in her career, she campaigned for the right of women to vote, to be paid a wage equal to that of their male coworkers, and to have the same educational and professional opportunities as men (De Stefano, 2022; Kramer, 1976; Trabalzini, 2011). Perhaps because of this, the Montessori approach has, from its inception, been an approach that is sensitive to gender issues. Montessori Methods for aged care and people living with dementia carries forward this approach. Respect for gender issues is embedded in the core principles, especially the principle of respect for the equality of men and women.

How the Montessori Method Provides a Sense of Belonging and a Strength of Community—Powerful Factors in Promoting Healing from Trauma

The third sub-theme of theme three relates to how the Montessori Method, when applied to dementia care, provides a sense of belonging and a strength of community, which are powerful factors in promoting healing from trauma. It offers an individual the warmth and sense of community or what Perry and Winfrey call "the power of connectedness," which has been shown to be a powerful factor in bringing healing from trauma (2021, p. 254). Perry and Winfrey write, "the brain is continually scanning the social environment for signals to tell you if you do or don't belong. When a person gets the signals—many of which are subconscious—that they belong, their stress response systems quiet down, telling them they're safe" (p. 263). In this respect, Montessori Methods for dementia have a unique capacity to make a person feel that sense of community, that sense of belonging described by Perry and Winfrey.

Relatively recent research shows that the Montessori approach to dementia care is having a positive effect on residents' emotions and behaviors. Brush and colleagues, describing the implementation of Montessori for dementia care, explain that the program aims to form and maintain a caring community that is attuned to the needs, interests, and abilities of the elders living in it by creating an environment that is carefully prepared to provide opportunities for choice, independence, self-initiated activity, and success. Brush and colleagues say that elder persons' lives are, therefore, enriched through their engagement in routines, roles, and activities, which fosters a sense of belonging and community and that this promotes well-being (Brush et al., 2018a, 2018b). Brush and colleagues also state that "elders reported significantly more positive emotions" (Brush et al., 2018a, p. 42). Brush and Benigas (2019) reported an increase in positive facial expressions in residents. In addition, the research showed that elders reported an increase in "feelings of self-esteem and belonging" (Brush et al., 2018a, p. 4) and that observational research data indicated "increased engagement" in activities and the life of the community (Brush et al., 2018a, p. 42). These are very encouraging results indicating that Montessori Methods for dementia have the capacity to positively impact the lives of persons with dementia.

Discussion

This paper offers an original contribution to Montessori research in that it examines connections between Montessori elder and dementia care and trauma-informed approaches. To my knowledge, this is the first study to do this. Currently, the Montessori Method is recognized as a legitimate and helpful approach to caring for elders and people living with dementia. This paper has shown that this approach naturally incorporates what are now generally recognized as the six key principles of trauma-informed practice. However, what is not clear is to what extent the four Rs emphasized by SAMHSA are incorporated into Montessori for dementia training programs. To be able to *realize* the widespread impact of trauma, to *recognize* the signs and symptoms of trauma, to *respond* by fully integrating knowledge about trauma into policies, procedures, and to actively *resist* re-traumatization requires interdisciplinary knowledge about the neurobiology of trauma, and the impact of trauma on the mind and body. This kind of interdisciplinary knowledge can best be gained through attendance of staff at trauma-informed programs or by integrating modules on trauma and trauma-informed practice into the general training of Montessori for dementia personnel.

While, initially, it might look as if the possible association of childhood trauma with dementia complicates matters, it may well turn out to be the very reverse. If we have an understanding of the neurobiology of trauma, how trauma affects our brain and body, our stress response systems, the role of adaptive responses, the problem of trauma triggers, and most importantly, what caregivers can do to help a person to regulate their mind and body when they become hyper-aroused as the result of a trauma trigger (which could take the form of a memory, a color, a smell, a sound, or a sight), we will be in a better position to understand, empathize with, and help persons with dementia. This is what Montessori

attempted to do when she began to understand the neurobiological impact of trauma on children. She saw the importance of approaching trauma from an interdisciplinary standpoint. This was what impelled her to try to organize groups of experts to come together to share their diverse professional knowledge and devise trauma-informed training for nurses and teachers who would work with traumatized children to help them to heal.

Currently, when we care for persons with dementia who may have been exposed to childhood trauma, we cannot go back in time to give them the help they so desperately needed in the past. However, we may be able to help them now. Trauma does not magically heal with the passing of time, but often stays in the body at a cellular level, triggerable at any time. However, recovery can occur when certain factors, which have proved to be healing, are present. As stated earlier, one of the most important of these factors is the healing power of community, and it is this power that makes the Montessori Method for dementia excel as an approach to dementia care. The combination of helping people to be as independent as possible, treating people with the greatest of respect, offering people meaningful activities, identifying, and supporting people's remaining strengths, allowing people to contribute to the environment they find themselves in, and building and supporting people's sense of self-esteem all combine to make Montessori for dementia communities unique in dementia care. This approach is trauma-responsive and healing by its very nature, but its ongoing roll-out should follow Montessori's lead by specifically integrating knowledge about the neurobiology of trauma and trauma-informed practice into its training programs.

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