

EVALUATING THE IMPACT OF AN EVIDENCE-BASED TOOL ON
HEALTHCARE STAFF'S PERCEPTION OF AGGRESSION IN PATIENTS
WITH DEMENTIA

By

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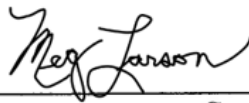
MSN, Pennsylvania Western University, 2024

BSN, Waynesburg University, 2016

A DNP Project Submitted to Pennsylvania Western University
In Partial Fulfillment of the Requirements for the Doctor of Nursing Practice Degree
December, 2025

11/12/2025

Date



Committee Chair

11-12-2025

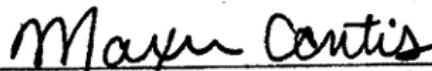
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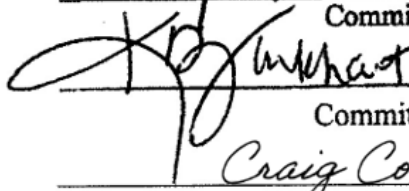
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Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Patients with Dementia

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Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Acknowledgements

First and foremost, I thank God for providing me with the strength, guidance, and perseverance to complete this journey. To my husband Mickey, your unwavering love, patience, and constant encouragement have been my foundation throughout this process. A heartfelt thank you to my sister Kim and brother-in-law Rick Miller for your continual belief in me and your encouraging words. I am also grateful to Mira Headley and Brenda Bowers, who work alongside Kim, for lifting me up in prayer. Your spiritual support has been a source of strength.

I would like to recognize Dr. Amanda Lee Fischer, who served as an instructor during my BSN program. Her belief in my potential and encouragement during challenging times laid the foundation for my academic and professional growth. I am truly thankful for her lasting influence.

My sincere gratitude goes to Dr. Nicole Evanick and Dr. Meg Larson for their academic guidance and mentorship throughout my doctoral project. I am especially grateful to Maxine Cantis, Kristy Burkhart, Ashley Blair, Shayln Danser, and Joshua Morrison. Your expertise, feedback, and unwavering support during the development and implementation of this project were invaluable.

To the dedicated staff of 6 North and all who went above and beyond to support this project, thank you. Your participation, enthusiasm, and commitment to improving patient care made this work possible. To everyone who supported and inspired me along the way, your kindness and generosity will always be remembered.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Stacy Lemley, MSN, RN

Abstract

Aggressive behaviors in dementia care settings significantly impact staff perceptions, patient interactions, and overall safety. This quality improvement project examined whether structured communication training, combined with the Cohen-Mansfield Agitation Inventory (CMAI), influenced healthcare staff's perceptions of aggression in patients with dementia compared with no structured training or tool use. Guided by Jean Watson's Theory of Human Caring and the Transtheoretical Model of Behavior Change, the project emphasized empathetic, patient-centered care and staff behavior change. A quasi-experimental pre-post design was implemented over six weeks in an acute care unit with a high population of dementia patients. Staff completed perception surveys before, during, and after the intervention to measure changes in confidence, recognition of behavioral triggers, and understanding of aggressive behaviors. Post-intervention results showed measurable improvement across all evaluation points. Staff reported increased confidence in managing aggression, greater recognition of behavioral triggers, and improved teamwork. Quantitative data demonstrated steady progress in confidence and perception scores, while qualitative feedback reflected calmer, more intentional communication during episodes of aggression. Conclusions supported all project hypotheses, confirming that integrating structured communication training with a behavioral assessment documentation tool enhanced staff preparedness, compassion, and safety in dementia care. Recommendations included continuing the CMAI and MESSAGE training as part of staff orientation and annual competencies to sustain progress. Expanding implementation to additional units and evaluating long-term sustainability would strengthen system-wide safety, collaboration, and quality improvement in the care of patients with dementia.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Table of Contents

Preliminary Pages

Committee Signature Page.....	ii
Acknowledgements	iii
Abstract	iv
Table of Contents	v
List of Tables	vii
List of Figures	viii

Chapter 1: Introduction to the Study

Introduction	1
Background, Context, and Theoretical Framework	2
Problem Statement	4
Purpose of the Project	5
Research Questions and Hypotheses	5
Rationale, Relevance, and Significance of the Project	7
Nature of the Project	9
Definition of Terms	10
Assumptions, Limitations, and Delimitations	12
Summary and Organization of the Remainder of the Project	15

Chapter 2: Literature Review

Introduction to the Literature Review	17
Theoretical and Conceptual Framework	19
Review of the Literature	20
Quantitative Studies	22
Qualitative Studies	24
Emerging Patterns in Literature.....	25
Study Designs.....	40
Instrumentation	44
Methodology	47
Synthesis of Key Literature for Practice	49
Summary	51

Chapter 3: Methodology

Introduction	54
Research Question(s) or Hypotheses.....	55
Research Methodology.....	57
Research Design	59
Population and Sample Selection.....	63
Instrumentation or Sources of Data	66
Validity	69
Reliability	70
Data Collection and Management	71
Data Analysis Procedures	73

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff’s Perception of Aggression in Dementia Patients

Ethical Considerations	75
Limitations and Delimitations	76
Summary	77

Chapter 4: Data Analysis and Results

Introduction	79
Descriptive Findings	80
Data Analysis Procedures	84
Results	89
Summary	94

Chapter 5: Summary, Conclusions, and Recommendations

Introduction and Summary of Study	96
Summary of Findings and Conclusions	97
Implications	100
Recommendations for Future Research	105

References

.....	108
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Appendices

Appendix A: IRB Approval Letter	121
Appendix B: Permission Letters and Copy of Instruments	122
Appendix C: Informed Consent	131

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff’s Perception of Aggression in Dementia Patients

List of Tables

Table	Page
1. Methodology Summary.....	60

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff’s Perception of Aggression in Dementia Patients

List of Figures

Figure	Page
1. Caption of figure one.....	86
2. Caption of figure two.....	87
3. Caption of figure three.....	88
4. Caption of figure four.....	88
5. Caption of figure five.....	81
6. Caption of figure six.....	92
7. Caption of figure seven.....	92
8. Caption of figure eight.....	93

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Patients with Dementia

CHAPTER ONE: INTRODUCTION

Introduction

Healthcare professionals often face difficulties when supporting individuals with dementia, especially as incidents of aggressive behavior become more common in clinical settings. Such behaviors can put both patients and staff at risk and interfere with the ability to provide safe, high-quality care. Although many institutions offer general training for healthcare staff, these programs often fall short in preparing staff with the specific skills and confidence required to respond effectively to aggression associated with dementia. As a result, there is a critical need for targeted training interventions that incorporate standardized assessment tools to promote consistent, evidence-based responses to these complex situations.

This quality improvement project evaluated whether integrating the Cohen-Mansfield Agitation Inventory (CMAI) with structured communication training enhanced healthcare staff's ability to recognize, assess, and respond to aggression in patients with dementia. The intervention was grounded in the Transtheoretical Model of Behavior Change and Jean Watson's Theory of Human Caring. Together, these frameworks supported sustainable practice changes by addressing staff readiness while reinforcing empathetic, patient-centered care. This study followed a quasi-experimental pre- and post-intervention design to evaluate the impact of implementing the CMAI and targeted training on staff perception of aggression in patients with dementia.

This project aimed to improve how healthcare staff perceived, understood, and managed aggression in patients with dementia by focusing on preventive strategies. Researchers have

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

studied communication training and behavioral assessment tools individually, but few have examined how combining these approaches affects staff perceptions and responses to aggressive behavior. The goal was to help staff feel more prepared and confident when facing these situations in clinical settings.

PICO Question: In healthcare staff caring for patients with dementia (P), does communication training combined with the use of the Cohen-Mansfield Agitation Inventory (CMAI) (I), compared to no structured training or tool use (C), affect their perception of aggression in dementia patients (O)?

Background, Context, and Theoretical Framework

Aggressive behaviors among patients with dementia occur more frequently and present serious challenges in healthcare settings. These behaviors place both patients and staff at risk. Existing staff training programs often do not adequately prepare healthcare professionals to manage the specific complexities of dementia-related aggression, resulting in persistent concerns about safety and care quality (Gkioka et al., 2020). The rising incidence of physical aggression toward staff further underscored the need for effective and targeted interventions.

Clinicians widely recognize aggression as some of the most difficult behavioral symptoms to manage in acute care settings (Akrouir et al., 2022). Many current approaches rely on broad strategies that fail to provide staff with the tools necessary for consistent and confident responses. The intervention introduced the Cohen-Mansfield Agitation Inventory (CMAI) as a behavioral assessment tool in conjunction with structured communication training. This combination aimed to improve staff responses and skills, as well as to promote early recognition and management of aggressive behaviors. Patients who exhibited signs of aggression, as

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

identified through staff reports or CMAI documentation, were included in the intervention phase. Implementation followed the unit's existing workflow and staffing patterns to ensure feasibility within routine clinical practice.

An apparent gap remained in both the literature and clinical practice regarding the preparedness of healthcare staff to manage aggression in dementia care (Moody et al., 2024). Informal feedback and unit observations revealed increasing concern about safety and staff confidence in handling such behaviors. This project addressed these concerns by combining structured behavioral assessment with targeted communication training to support safe, consistent, and patient-centered care practices.

Two theoretical frameworks informed both the design and execution of the project intervention. The Transtheoretical Model (TTM) of Behavior Change provided a practical structure for supporting staff as they adopted new approaches over time. The stages of the model (pre-contemplation, contemplation, preparation, action, maintenance, and termination) offered a framework for gradual integration into daily practice (Orsulic-Jeras et al., 2020). Jean Watson's Theory of Human Caring complemented this model by focusing on empathetic and individualized care. Watson's emphasis on compassion and therapeutic relationships helped ensure that staff responses were not only practical but also rooted in dignity and respect for the patient (Riegel et al., 2018).

This project followed a quasi-experimental design with pre- and post-intervention evaluation to examine how the combined use of the CMAI and communication training influenced staff perceptions of aggression in patients with dementia. By integrating evidence-based practices with theoretical foundations, the project aimed to identify solutions to improve

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

safety, support staff development, and elevate the standard of dementia care. The findings contributed to practice improvements by providing a structured approach to managing aggression and enhancing staff confidence in dementia care environments.

Problem Statement

Healthcare staff who care for individuals with dementia frequently encounter aggressive behaviors that compromise safety and hinder quality care. Although most institutions offer general dementia training, these programs often fail to equip staff with the specific skills needed to manage aggression effectively, leaving many feeling underprepared, stressed, and uncertain in care environments (Mellinger et al., 2023). Staff responses to aggression significantly impact patient safety and care quality, yet they often feel overwhelmed, fearful, and discouraged by the frequency of aggressive incidents (Välimäki et al., 2022).

Despite the known risks, limited research has examined how combining structured communication training with the CMAI influences staff perceptions and management of aggression in dementia care. Gaps in current training and assessment tools contributed to rising staff distress and safety concerns in practice settings (Moody et al., 2024). Addressing these gaps was essential to developing effective interventions that equip healthcare staff with the skills and resources needed to manage aggressive behavior safely and confidently.

This project investigated whether integrating structured communication training with the CMAI enhanced staff's ability to recognize and manage aggression in patients with dementia. By addressing shortcomings in current practice and the existing literature, this initiative aimed to introduce a practical, evidence-based strategy to improve staff preparedness and patient safety.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Addressing this gap can inform future training initiatives and support the broader implementation of effective, evidence-based care approaches.

Purpose of the Project

The purpose of this quantitative project was to evaluate the extent to which combining the CMAI with structured communication training influenced healthcare staff's perception and management of aggression in patients with dementia. This quasi-experimental pre- and post-intervention design measured changes in staff competence, confidence, and perception over six weeks. The study aimed to assess whether integrating a standardized behavioral assessment tool with focused communication training enhanced staff preparedness and their ability to respond effectively to aggression.

The project took place in an acute care unit within a 155-bed hospital that provides care for patients with dementia, including those who exhibit aggression. A convenience sample included nurses and clinical assistants who were recruited from the unit and participated in this study. The independent variable was the combined intervention of the CMAI and MESSAGE communication training. The dependent variable was staff perception of aggression, measured using surveys and CMAI data collected before and after the intervention. This project contributed to the advancement of healthcare practice by providing a structured, evidence-based approach to addressing aggression in dementia care. These findings inform future staff training initiatives and support the development of consistent, patient-centered care strategies.

Research Questions and Hypotheses

This project examined the impact of combining a structured communication training program with the use of the CMAI on healthcare staff's perception and management of

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

aggression in patients with dementia. The research questions are directly related to the identified problem of inadequate staff preparation for managing behavioral challenges in dementia care and aligned with the evaluation of the effectiveness of a dual-component intervention. The project aimed to determine whether integrating evidence-based training and standardized assessment would improve clinical outcomes and promote safer care environments. It measured changes in staff perceptions and confidence before and after the intervention.

Healthcare staff in a unit within an acute care hospital regularly encounter patient aggression, which increases workplace stress and contributes to inconsistent care practices. This study employed a quasi-experimental design to evaluate the impact of the intervention on perceptions of aggression and staff preparedness. The variables included the independent variable (implementation of the CMAI and structured communication training) and the dependent variable (staff perception of aggression). The following research questions and hypotheses guided this project:

RQ1: To what extent did the combination of structured communication training and the use of the Cohen-Mansfield Agitation Inventory (CMAI) influence healthcare staff's perception of aggression in patients with dementia?

H10: There was no statistically significant difference in healthcare staff's perception of aggression in patients with dementia before and after the implementation of the CMAI and communication training.

H1a: There was a statistically significant difference in healthcare staff's perception of aggression in patients with dementia before and after the implementation of the CMAI and communication training.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

RQ2: To what extent did the intervention improve healthcare staff's confidence in managing aggressive behaviors in patients with dementia?

H20: There was no statistically significant difference in healthcare staff's confidence in managing aggressive behaviors before and after the intervention.

H2a: There was a statistically significant improvement in the confidence of healthcare staff in managing aggressive behaviors following the intervention.

RQ3: To what extent did the intervention improve healthcare staff's ability to recognize behavioral triggers in patients with dementia?

H30: There was no statistically significant difference in the staff's ability to recognize behavioral triggers in patients with dementia before and after the intervention.

H3a: There was a statistically significant improvement in the staff's ability to recognize behavioral triggers in patients with dementia following the intervention.

Rationale, Relevance, and Significance of the Project

Rationale for the Project

The project used a quantitative, quasi-experimental pre-post design to assess the impact of the CMAI and targeted communication training on healthcare staff's perceptions of aggression in patients with dementia. This design allowed for the measurement of changes before and after the intervention within the same group of participants. This structured approach assessed whether the intervention resulted in measurable improvements in staff perceptions and preparedness (Handley et al., 2018).

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The project used a quasi-experimental design because the clinical setting does not permit random assignments. The design enabled the assessment of the intervention's effect within a real-world clinical environment while maintaining control over key variables (Smith, 2021). This approach offered a practical and ethical method for examining practice changes in healthcare settings.

This methodology aligned with the problem and purpose statements by providing a framework to evaluate whether the selected intervention improved staff understanding and response to aggressive behaviors in dementia care (James et al., 2023). It supported the goal of applying evidence-based tools and educational strategies to enhance care outcomes and strengthen staff confidence. The quantitative approach produced objective, data-driven findings that can inform future practice.

Significance of the Project

Aggressive behaviors from dementia patients are on the rise, affecting the quality of care, staff morale, and workplace safety (Ye et al., 2024). This study focused on utilizing the CMAI and targeted communication training to help healthcare staff more effectively assess and manage aggression. These interventions aimed to enhance safety and quality of care within the unit.

The project contributed to the current body of literature by evaluating a practical, evidence-based solution within an acute care setting. Although previous studies have examined aggression in patients with dementia, few have combined standardized measurement tools with structured communication training implemented in real-time clinical environments. The intervention enhanced staff perception and improved patient care outcomes by generating measurable insights that support the advancement of evidence-based clinical practice.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Healthcare facilities can use the results to develop or refine dementia care protocols, enhance staff training, and implement standardized tools to assess behavioral symptoms. These interventions have the potential to boost staff confidence, reduce workplace incidents, and improve overall care for patients with dementia (Moody et al., 2024). Addressing these concerns helps create a safer and more supportive environment.

Nature of the Project

This project applied a quantitative, quasi-experimental pre-post design to evaluate the impact of combining the CMAI with targeted communication training on healthcare staff perception and response to aggression in patients with dementia. This design supported the measurement of changes within the same group over time and is well-suited for clinical environments where randomization is not possible. It offered a practical and ethical approach to evaluating real-world interventions designed to enhance staff preparedness and patient care. The project took place in an acute care unit within a 155-bed hospital that provides services for patients with dementia, including those who exhibit aggression.

The target population included licensed and unlicensed healthcare staff who provide care for patients with dementia. Participants were selected using a convenience sampling method. The intervention included the use of the CMAI as a behavioral assessment tool, along with structured communication training that incorporated de-escalation techniques. Data were collected through anonymous surveys administered before, during, and after the intervention to evaluate changes in staff confidence, perception, and recognition of aggressive behaviors.

The CMAI served as the primary behavioral assessment instrument integrated into routine documentation to support standardized reporting of aggressive behaviors. A project-specific

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

perception survey supplemented the CMAI to gather staff feedback on confidence, response strategies, and overall impressions of the intervention. Data were collected before implementation, during, and at the conclusion of the six-week project. Pre- and post-intervention responses were compared to evaluate the effectiveness of the approach in enhancing staff competence in managing aggression among patients with dementia.

Definition of Terms

The following terms are defined as they were used within the project context to provide clarity and consistency for the reader. Each definition is grounded in relevant scholarly literature and reflects how the term contributes to the scope and purpose of the project.

Aggressive Behaviors (Conceptual)

Aggressive behaviors involve verbal or physical actions that are disruptive, threatening, or harmful. In dementia care, such behaviors may include hitting, biting, yelling, or resisting care. These responses are often linked to underlying causes such as fear, confusion, discomfort, or difficulty communicating needs (Yu et al., 2019).

Aggression Measurement

Aggression measurement involves the systematic assessment and quantification of aggressive behaviors using validated tools to evaluate their frequency, intensity, and type (Røsvik & Rokstad, 2020). These assessments help identify behavioral patterns and potential triggers, enabling the implementation of targeted interventions to reduce aggressive incidents and enhance safety (Wong et al., 2024).

Cohen-Mansfield Agitation Inventory (CMAI)

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The Cohen-Mansfield Agitation Inventory (CMAI) is an evidence-based, standardized assessment tool designed to evaluate agitation in individuals with dementia. It supports the monitoring of behavioral changes over time and helps identify specific triggers. Findings from the CMAI can inform individualized care planning and guide interventions aimed at reducing agitation (De Mauleon et al., 2021).

Communication Training (Conceptual)

Communication training refers to structured instruction that enhances verbal and non-verbal interaction skills among healthcare staff. When applied in dementia care, this training emphasizes strategies such as empathy, clarity, and de-escalation to enhance patient engagement and foster a safer care environment (Van Manen et al., 2020).

Dementia

Dementia is a progressive neurological disorder characterized by a decline in cognitive function, including memory, judgment, and reasoning (National Institute on Aging, 2022). Conditions such as Alzheimer's disease or vascular impairment most often cause dementia. As dementia progresses, individuals may exhibit behavioral symptoms that require specialized approaches to care (Alzheimer's Association, 2024).

MESSAGE Communication Training

MESSAGE communication training is an evidence-supported dementia care framework developed to enhance staff communication, empathy, and de-escalation skills when interacting with individuals who exhibit behavioral or communication challenges. The acronym “MESSAGE” stands for Maximize attention, Expression and body language, Keep it simple, Support the conversation, Assist with visual aids, Get their message, and Encourage and engage.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

This structured training promotes compassionate, person-centered communication that supports safer, more effective interactions in dementia care settings while helping to reduce aggression and strengthen care relationships (Young, 2021).

Perception of Aggression (Conceptual)

Perception of aggression refers to how healthcare staff interpret, emotionally respond to, and evaluate aggressive behaviors displayed by patients. These perceptions shape the way staff approach care and can influence the effectiveness of their responses in managing challenging behaviors (Krakowiak-Burdzy & Fafara, 2023).

Standard Training

Standard training provides foundational education in clinical procedures, communication practices, and safety protocols. While it ensures a basic level of competency across healthcare roles, it may not sufficiently address the unique demands associated with managing behavioral health challenges in dementia care (Pit et al., 2023).

Targeted Training

Targeted training addresses specific learning needs based on clearly defined clinical challenges. In the context of dementia care, this type of training typically includes content on identifying behavioral triggers, applying de-escalation techniques, and enhancing staff responses to aggression in a manner that supports both patient and staff well-being (Rasmussen et al., 2023).

Assumptions, Limitations, and Delimitations

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

It was assumed that participants engaged in the training content and responded to the surveys truthfully. Because the data were self-reported, the validity of the findings depended on participants' honesty when completing the survey questions. The CMAI was recognized as a valid and reliable tool for assessing aggressive behaviors in individuals with dementia. The tool had been widely used in long-term care settings and was expected to be equally effective in acute care environments.

The intervention incorporated the CMAI tool and structured communication training, both directly related to staff clinical roles and daily care responsibilities. The approach assumed that aggression in dementia care often stems from identifiable triggers, communication barriers, and unmet needs (Wong et al., 2024). When staff recognized these factors, they were able to respond more effectively. The Transtheoretical Model of Behavior Change (TTM) supported this framework by describing the stages individuals follow when adopting new behaviors. Staff could progress through these stages successfully when they received appropriate support, targeted training, and consistent leadership.

Combining the CMAI with structured communication training was expected to reduce incidents of aggression and enhance staff safety (Baby et al., 2018). These improvements depended on staff consistently applying the strategies introduced during the intervention (Goorts et al., 2021). When integrated into daily clinical practice, these techniques can create a safer and more effective care environment.

Several limitations may have influenced the findings of this study. The six-week project duration might have been too short to observe sustained behavior change or the long-term effects of the intervention. Conducting the quality improvement project in a single inpatient unit within

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

one acute care hospital limited the diversity of the participant population. Restricting the project to one location also reduced the generalizability of the results to other units or healthcare environments that may have had different patient demographics, staff compositions, or organizational cultures.

Relying on self-reported data presented a risk of bias, such as participants providing socially acceptable answers or misremembering details. These factors could affect the accuracy of the results, particularly in terms of how participants perceived aggression or reported their level of confidence (Althubaiti, 2016). Additionally, external influences such as patient acuity, staff turnover, or organizational changes could have impacted outcomes during the study period (Bhati et al., 2023). The project team did not fully address these variables, as they remained outside the scope of the study.

The project design intentionally narrowed the focus to a specific population and setting to ensure feasibility and consistency (Willie, 2024). Participation was limited to licensed and unlicensed staff providing direct care in one unit. The project excluded staff from other departments or non-clinical roles. The intervention concentrated specifically on the use of the CMAI and communication training without incorporating broader behavioral or environmental modifications.

Conducting the project within a single unit provided consistency in leadership, staffing models, and patient characteristics. The team intentionally set these boundaries to manage the project scope and conduct a pilot evaluation. The delimitations helped narrow the project's scope to produce specific findings that could guide future implementation in other units or healthcare environments.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Summary and Organization of the Remainder of the Project

Chapter One introduced a significant challenge in healthcare: the increasing prevalence of aggressive behaviors among patients with dementia and the inadequacy of standard training programs in preparing staff to manage these behaviors effectively. These behaviors compromised patient and staff safety, elevated workplace stress, and negatively impacted the quality of care. The project aimed to address this gap by evaluating whether the combined use of the CMAI and structured communication training could improve healthcare staff's ability to assess, recognize, and respond to aggression. The theoretical foundation that guided this project included Jean Watson's Theory of Human Caring and the Transtheoretical Model of Behavior Change. These frameworks supported sustainable practice improvements by emphasizing patient-centered, compassionate care and providing structure for implementing behavioral change.

This project employed a quasi-experimental, pre-post design to evaluate the impact of the intervention within a real-world clinical setting. By measuring changes in staff perception, confidence, and the ability to identify behavioral triggers, the project aimed to determine whether the intervention led to meaningful improvements in dementia care (Chen et al., 2024). The project took place within an acute care hospital unit and involved a convenience sample of licensed and unlicensed healthcare staff. The intervention included communication training focused on de-escalation and empathy, combined with the use of a standardized behavioral assessment tool. The project design reflected the clinical realities of the setting while maintaining the rigor necessary for evaluating intervention effectiveness.

Chapter Two presented a detailed review of the literature related to aggressive behaviors in dementia care, the use of behavioral assessment tools such as the CMAI, and the role of

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

communication training in improving staff response. This chapter also explores theoretical models relevant to behavior change and patient-centered care. It provided evidence of the need for structured interventions and identified gaps in existing research that supported the purpose of the project.

Chapter Three described the research methodology, including the design, setting, population, sampling strategy, data collection procedures, and instruments used. The quasi-experimental approach outlined the process for delivering the intervention and described the methods used to evaluate its impact. The team prioritized ethical considerations, maintained data integrity, and implemented measures to minimize bias throughout the project (Galanakis et al., 2025). The chapter explained how the research questions and hypotheses aligned with the project's overall purpose.

Chapter Four presented the project's results, including descriptive and inferential analyses of pre- and post-intervention data (Fakhri Allahyari et al., 2024). This chapter included tables and figures to illustrate the findings, along with narrative summaries that described trends and statistically significant changes. The team organized the results according to the research questions and used them as the foundation for the interpretation presented in Chapter Five.

The last chapter interpreted the findings in the context of existing research, theory, and clinical practice. The section examined the implications of the results for healthcare staff training and patient safety. It also presented the study's limitations and offered recommendations for future research. These recommendations included replication studies, broader implementation of the intervention, and continued exploration of staff-centered approaches to behavior management in dementia care.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Here was the timeline outlining the necessary steps to ensure the timely completion of the dissertation. The goal was to have approval by the Institutional Review Board (IRB) by early September. The timeline allocated September through October for data collection and October for data analysis. The plan assigned November for final writing, revisions, and formatting. This structure allowed adequate time for each phase while meeting academic expectations.

The subsequent chapters of the dissertation were built upon the foundation presented in Chapter One. Each chapter built a clear understanding of how structured training and behavioral assessment influenced staff readiness and the overall quality of dementia care. This research used a methodical, evidence-informed approach to support the development of improved training strategies and to help create safer, more effective care settings for individuals with dementia.

CHAPTER TWO: LITERATURE REVIEW

Introduction to the Literature Review

Chapter Two reviewed the current literature on aggression in dementia care, with a focus on healthcare staff experiences, communication strategies, and the use of standardized behavioral assessment tools, including the Cohen-Mansfield Agitation Inventory (CMAI). This review established the foundation for the project by summarizing existing evidence, identifying knowledge gaps, and supporting the need for structured, evidence-based interventions (Jawaid et al., 2021). The chapter was organized to first examine aggressive behaviors in dementia, then explore staff preparedness and communication approaches, and conclude by linking these elements to the study's research questions, design, and methodology.

The literature review synthesized peer-reviewed empirical research published between 2020 and 2025, with foundational works included as needed. Articles were identified through

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

systematic searches of CINAHL, PubMed, Google Scholar, Cochrane Library, and Medline using terms such as dementia, aggression measurement, communication training, behavioral interventions, staff perceptions, and aggression reduction. Included studies focused on healthcare staff working in dementia care settings, the use of aggression assessment tools or targeted communication training, and outcomes related to aggression reduction or improved staff safety. Only English-language, peer-reviewed qualitative, quantitative, or mixed-methods studies were considered.

Aggression in individuals with dementia remains a significant challenge, particularly in acute care settings. Verbal outbursts, physical resistance, and agitation often result from pain, cognitive decline, fear, or environmental stressors (Kennedy et al., 2020). High-paced care environments amplify these risks, often leaving staff unprepared to manage aggressive behavior effectively (Kang & Bang, 2024). While patient-centered communication strategies emphasize empathy and nonverbal cues show promise, their consistent application remains limited. Standardized tools like the CMAI provide a reliable method to assess and manage behavioral symptoms and, when combined with structured training, may enhance staff preparedness (Kratzer et al., 2023).

Despite advances, research often examines communication interventions and behavioral assessments in isolation, limiting practical applicability in clinical practice (Reichelt et al., 2023; Shrestha & Shrestha, 2024). Few studies evaluated changes in staff perception and confidence pre- and post-training, particularly in high-demand acute care units (Keuning-Plantinga et al., 2022). These gaps underscore the need for targeted interventions that integrate assessment tools with practical communication strategies to improve staff preparedness and care quality.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

This chapter defined the research problem by synthesizing current evidence on aggression in dementia care, identifying gaps in knowledge, and justifying the intervention and methodological approach for this project. The chapter also introduced the theoretical framework that supported the development of the project's intervention and methodological approach, as well as the rationale for the selected study design, data collection instruments, and intervention strategies.

Theoretical and Conceptual Framework

The Transtheoretical Model (TTM) of behavior change, developed by Prochaska and DiClemente (1983), provides the primary theoretical foundation for this project. TTM outlines five stages of behavioral change: pre-contemplation, contemplation, preparation, action, and maintenance (Lindeza et al., 2020). These stages reflect a flexible, non-linear process that aligns with the complexities of behavior change in healthcare settings (O'Donnell et al., 2022).

In this intervention, healthcare staff may begin at varying stages of readiness to adopt new strategies for managing aggression in dementia care. TTM offers a framework to tailor training components to staff readiness, providing foundational education for those in earlier stages and hands-on application for those further along (Parveen et al., 2021). Interventions aligned with TTM stages have proven effective in promoting sustainable behavior change and fostering long-term adoption of new practices (McKenzie & Brown, 2020). This approach encourages continuous learning and reflection, which is essential in high-stress care environments where staff must regularly adapt to behavioral challenges (Lim et al., 2019).

Jean Watson's Theory of Human Caring complemented TTM by grounding the intervention in empathy, compassion, and holistic care (Pepper & Dennis, 2023). Watson's

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Caritas processes guide caregivers in fostering human connections, promoting loving-kindness, instilling hope, and engaging in meaningful teaching and learning (Riegel et al., 2018). In dementia care, where communication barriers and behavioral challenges are common, compassionate, patient-centered care is essential to reducing agitation and enhancing safety (Carratini et al., 2021).

Integrating Watson's principles into this intervention fosters an environment of mutual respect, which can alleviate patient distress and decrease staff stress (Schnelli et al., 2020). Human caring models have been associated with reduced adverse events, improved patient satisfaction, and increased staff engagement (Riachi & Markwell, 2020). When combined with TTM, Watson's theory enhances the intervention by addressing both the emotional readiness of staff and the interpersonal dynamics necessary for behavior change to take root (Nguyen et al., 2022).

Together, TTM and Watson's Theory of Human Caring create a multidimensional framework that addresses both the practical and emotional aspects of managing aggression in dementia care. TTM offers a structured pathway for behavior change, while Watson's theory ensures these changes are grounded in humanistic values (Castro et al., 2024). This integrated approach informs the selection of study variables, intervention structure, and outcome measures, aligning with the project's focus on enhancing staff competence and patient-centered care (Di Lorito et al., 2019). The following section reviews current empirical studies on aggression in dementia care, focusing on staff perceptions, communication strategies, and the application of behavioral assessment tools.

Review of the Literature

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Introduction

Dementia presented an increasing challenge in managing aggressive behaviors, particularly within acute care settings. As dementia progressed, patients often exhibited agitation, resistance to care, and physical or verbal aggression, which jeopardized safety and contributed to heightened stress among healthcare workers (National Institute on Aging, 2022). Dementia was defined as a group of cognitive disorders marked by progressive impairments in memory, reasoning, and communication abilities. Accurate diagnosis required comprehensive assessments to differentiate dementia from reversible conditions and guide appropriate care planning.

This literature review examined empirical studies on aggression in dementia care, focusing on staff perceptions, communication-centered approaches, and the use of standardized behavioral assessment tools. Among these tools, the Cohen-Mansfield Agitation Inventory (CMAI) remained widely used to systematically assess agitation and aggressive behaviors in older adults with dementia (Kupeli et al., 2018).

By emphasizing evidence-based strategies and validated assessment instruments, this review highlighted approaches aimed at reducing aggression and improving patient outcomes. The synthesis primarily included peer-reviewed studies published between 2020 and 2025 to ensure alignment with current clinical standards and emerging innovations. Foundational works were referenced as necessary to provide context.

This chapter appraised literature relevant to the project's primary variables, evaluated research methodologies, and identified gaps that justified the need for this study. The review was organized into sections on Quantitative Studies, Qualitative Studies, Themes, Methodology, and Instrumentation, ensuring a structured analysis that supported the project's quasi-experimental,

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

mixed-methods design. The following section examined quantitative research that evaluated interventions aimed at reducing aggression in dementia care.

Quantitative Studies

Sahu et al. (2020) conducted a cross-sectional descriptive study in India to examine the relationship between anxiety and physical aggression in 55 individuals with dementia. Researchers used the Hamilton Anxiety Rating Scale and the Cohen-Mansfield Agitation Inventory (CMAI) to assess psychological and behavioral symptoms. Findings revealed that 45.5% of participants exhibited mild-to-moderate anxiety, while 36.38% displayed aggressive behaviors, highlighting a direct link between anxiety and physical aggression (Sahu et al., 2020).

Kupeli et al. (2018) evaluated the psychometric properties of the CMAI in an acute hospital setting involving 230 patients with dementia. The study identified a two-factor structure that categorized behaviors as aggressive or non-aggressive. Results confirmed that the CMAI demonstrated strong reliability and validity, with a significant association between aggressive behaviors and unmanaged pain, supporting its clinical relevance in acute care environments (Kupeli et al., 2018).

A quasi-experimental study by Alruwaili et al. (2024) investigated the impact of a culturally tailored multisensory intervention that included Snoezelen therapy, aromatherapy, and personal belongings for Arab patients with dementia. The intervention significantly reduced agitation and aggression, as measured by the CMAI. Additionally, participants showed improved quality of life based on outcomes from the Neuropsychiatric Inventory (Alruwaili et al., 2024).

Schneider et al. (2020) implemented a hospital-wide dementia-friendly training program at the UNC Health System, aiming to enhance staff competence and patient outcomes. Over

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

1,900 staff members participated in modules focused on communication, behavior management, and person-centered care. Post-training assessments revealed significant improvements in staff knowledge, confidence, and caregiving practices, demonstrating the effectiveness of structured, organization-wide education (Schneider et al., 2020).

Willie (2021) analyzed research methodologies in behavioral studies, emphasizing the importance of clearly defining both the population and target population. The study found that precise definitions enhance sampling accuracy and improve the generalizability of research findings. These methodological considerations are crucial for ensuring the external validity of behavioral intervention studies in dementia care (Willie, 2024).

A randomized controlled trial by Kunik et al. (2020) assessed the effectiveness of aggression prevention training among 228 patients with dementia and their caregivers. While the study did not find a statistically significant overall reduction in aggressive incidents, subgroup analysis indicated improvements in caregivers experiencing depression and strained relationships. These results suggest that addressing emotional and relational factors can enhance the management of aggression in dementia care (Kunik et al., 2020).

These quantitative studies collectively demonstrated the complexities of evaluating and managing aggression in dementia care. Research supported the integration of standardized assessment tools, culturally sensitive interventions, and structured staff training to reduce agitation and enhance care quality. Methodological rigor, including precise population definitions and consideration of caregiver factors, remained essential for ensuring the validity and practical applicability of findings in real-world clinical environments. The following section explored

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

qualitative research that provided deeper insight into healthcare staff experiences and perceptions in managing aggression among patients with dementia.

Qualitative Studies

Kabaya et al. (2024) conducted a qualitative descriptive study to explore how dementia-certified nurses (DCNs) in acute care settings developed expertise in managing patients with dementia. The researchers interviewed 14 nurses and found that clinical decision-making often required balancing patient resistance with professional and ethical responsibilities. Nurses described using reflection, teamwork, and patient-centered strategies to adapt their care approaches. The study emphasized that dementia care knowledge was not static but evolved through clinical experience, collaboration among colleagues, and continuous self-reflection. Kabaya et al. (2024) concluded that all healthcare workers should actively engage in this developmental process to enhance their skills in managing aggressive behaviors.

Dunkle et al. (2022) conducted a qualitative study to understand the experiences of nurses and social workers who cared for individuals with dementia in acute settings. Using the Rigorous and Accelerated Data Reduction (RADaR) method, the researchers identified three primary themes: family participation, system care processes, and system obstacles. Participants described successful care models that were closely tailored to individual patient needs but noted that limited staffing, unclear roles, and lack of organizational support often hindered effective implementation. The study highlighted the importance of fostering stronger interdisciplinary collaboration and establishing clearly defined professional roles to deliver comprehensive care for dementia patients (Dunkle et al., 2022).

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Both studies contributed valuable insights into how frontline healthcare staff perceived and managed the challenges of dementia-related aggression. Kabaya et al. (2024) emphasized the role of reflection and professional growth, while Dunkle et al. (2022) focused on the influence of systemic barriers and interdisciplinary dynamics. Understanding these perspectives was essential for developing practical interventions and training programs that were responsive to the real-world conditions of acute care environments. The following section synthesized key themes identified across the literature, highlighting core factors that influenced the management of aggression in dementia care.

Emerging Patterns in Literature

Patients with dementia often exhibited aggressive behaviors such as screaming, swearing, hitting, or biting (Alzheimer's Association, 2024). These actions were frequently triggered by unmet needs, heightened anxiety, or environmental stressors. In acute hospital environments, unfamiliar surroundings, noise, and inadequate pain management intensified patient distress and agitation (Kupeli et al., 2018). Aggression in dementia is also manifested through refusal or resistance to care, posing significant safety challenges for patients and caregivers alike.

Dementia-associated aggression placed a substantial burden on patients, caregivers, and healthcare systems. Nearly half of individuals with Alzheimer's disease experienced at least one episode of aggression, which correlated with faster cognitive decline and earlier nursing home placement (Alzheimer's Association, 2024). This behavioral disturbance increased stress among healthcare workers and led to caregiver burnout, further complicating care delivery.

Systematic protocols to address physical aggression in dementia care remained limited in many healthcare facilities. Dunkle et al. (2022) found that hospital nurses and social workers

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

struggled to manage aggression due to a lack of coherent care pathways and insufficient training. However, targeted educational initiatives were shown to improve staff confidence and caregiving practices. For instance, participation in dementia-friendly hospital projects significantly enhanced staff engagement and patient care outcomes (Schneider et al., 2020).

Cultural and individual factors heavily influenced how aggression is presented in patients with dementia. Alruwaili et al. (2024) demonstrated that Snoezelen therapy environments incorporating aromatherapy and familiar objects reduced agitation among Arab patients with dementia. These findings underscore the need for culturally responsive interventions that recognized patient identity in care planning.

Aggressive behaviors tended to escalate as dementia progressed, making early identification critical. A review of epidemiological studies emphasized that continuous behavioral monitoring improved intervention effectiveness (Anatchkova et al., 2019). Validated tools such as the Cohen-Mansfield Agitation Inventory (CMAI) and the Neuropsychiatric Inventory (NPI) were frequently used to assess agitation across care settings (Anatchkova et al., 2019).

Nonpharmacological strategies remained essential in managing agitation and aggression. Carrarini et al. (2021) identified communication techniques, environmental modifications, and individualized care plans as first-line interventions that reduced behavioral symptoms without relying on medication. These approaches supported patient-centered outcomes and were applicable in both acute and long-term care environments.

Aggression in dementia followed a fluctuating course, with symptoms evolving over time. De Mauleon et al. (2020) found that flexible, individualized care strategies were necessary

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

to address these changing behaviors effectively. Their findings reinforced the importance of early intervention to reduce caregiver burden and improve patient quality of life.

Misinterpreted sources of discomfort often contributed to agitation in dementia patients. Graham et al. (2022) found that nurses frequently misdiagnosed pain-related agitation as behavioral rather than physical, leading to inadequate pain management. This underscored the importance of training clinicians to recognize somatic causes of agitation and respond appropriately.

Staff misperceptions regarding dementia behaviors negatively affected care quality. Jawaaid et al. (2021) reported that hospital staff often misinterpreted confusion and agitation, stemming from cognitive decline, as intentional disruptive behavior. These misconceptions highlighted the need for staff education focused on empathy and accurate behavioral interpretation.

Crisis situations involving extreme aggression presented unique challenges in dementia care. Kennedy et al. (2020) emphasized that initial responses should have prioritized nonpharmacological strategies such as environmental adjustments and de-escalation techniques. Early and individualized interventions were consistently recommended across the literature as best practice for managing behavioral expressions (Kennedy et al., 2020).

Several studies explored factors contributing to aggressive behaviors in dementia. Krakowiak-Burdy and Fafara (2023) found that verbal aggression was frequently linked to environmental stressors, cognitive impairments, and adverse care conditions. Their findings advocated for communication-based interventions that addressed the underlying causes of aggression.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Anxiety was another critical factor influencing aggressive behavior in dementia patients. Sahu et al. (2020) identified a significant association between elevated anxiety levels and physical aggression, suggesting that early recognition and management of anxiety symptoms could have reduced the occurrence of aggressive incidents. These findings reinforced the importance of timely behavioral assessments and targeted interventions.

Aggression was not limited to institutional care settings; it also presented challenges in home environments. Schnelli et al. (2020) found that communication training, caregiver support, and environmental modifications reduced aggression and improved safety in home-based dementia care. These strategies empowered caregivers to respond more effectively to behavioral challenges.

Large-scale studies consistently reported high prevalence rates of aggression in dementia populations. Yu et al. (2019) conducted a meta-analysis of over 15,000 participants, revealing that approximately 30% of individuals with Alzheimer's disease exhibited aggressive behaviors. Risk factors identified included delusions, caregiver stress, and male gender, underscoring the need for structured intervention programs (Yu et al., 2019).

In summary, aggression in dementia care remained a prevalent and complex issue affecting patients, caregivers, and healthcare systems. Evidence supported the use of culturally appropriate, patient-centered, and nonpharmacological interventions as practical strategies for managing aggressive behaviors. The following section examined the role of communication-based interventions and staff perceptions in addressing these challenges.

Communication-Based Interventions and Staff Perception

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Effective communication was essential for managing aggression in patients with dementia. Poor communication often led to confusion, frustration, and agitation among patients (Kunik et al., 2020). A randomized controlled trial evaluating Aggression Prevention Training (APT) found that while APT did not significantly reduce overall aggression rates, it improved caregiver-patient relationships and reduced depression symptoms, highlighting the value of communication-centered interventions in mitigating associated stressors (Kunik et al., 2020).

Dementia-friendly training programs demonstrated that targeted communication education increased staff confidence and competence. Schneider et al. (2020) found that staff who received communication-focused training reported significant improvements in recognizing and managing dementia-related behaviors. These findings emphasized that structured training enhanced the ability of healthcare providers to prevent and de-escalate aggressive incidents.

Simulation-based models of care also strengthened communication skills and empathy among healthcare professionals. Castro et al. (2024) reported that simulation training improved staff confidence and communication when caring for individuals with dementia. Similarly, Kabaya et al. (2024) observed that dementia-certified nurses who developed personalized communication strategies through reflection and collaboration effectively managed care-resistant behaviors.

Patient-centered communication approaches, including visual and nonverbal techniques, were particularly effective for patients with moderate to severe dementia. Collins et al. (2022) emphasized the importance of tailoring communication to individual needs to reduce agitation. Alruwaili et al. (2024) demonstrated that culturally adapted interventions, such as activity-based therapies using familiar objects, significantly decreased agitation in Arab elders with dementia.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Several reviews advocated nonpharmacological communication methods as first-line interventions for managing aggression. Baby et al. (2018) emphasized the risks of premature pharmacologic treatment and recommended staff training in person-centered communication and environmental adjustments. These approaches aligned with holistic and relationship-centered models of dementia care, promoting safer and more effective management of behavioral symptoms.

Frontline healthcare workers, including nurses and social workers, experienced both challenges and successes when applying communication-based interventions. Dunkle et al. (2022) found that barriers such as inadequate training and staffing shortages hindered effective communication, while structured protocols and interdisciplinary collaboration improved patient and caregiver outcomes. Staff highlighted the need to validate patient emotions and simplify communication to prevent escalation.

Systematic reviews also confirmed the importance of interactive communication training in dementia care. Eggenberger et al. (2013) reported that training formats incorporating role-play, feedback, and performance evaluations significantly improved staff communication behaviors. Gkioka et al. (2020) added that programs integrating emotional engagement produced more sustainable improvements aligned with person-centered care practices.

Research from adjacent healthcare contexts supported the broader applicability of communication-centered models. Lim et al. (2019) demonstrated that recovery-oriented care, which emphasized collaborative communication, effectively reduced agitation in mental health settings. These findings suggested that well-tailored communication strategies were adaptable across various clinical diagnoses and care environments.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Managing patients with dementia and mental health comorbidities also required nuanced communication strategies. McKenzie and Brown (2020) found that providing individualized emotional support reduced behavioral symptoms and strengthened therapeutic relationships. Their study underscored the importance of addressing both cognitive and emotional needs through targeted communication interventions.

Despite growing evidence, substantial gaps remained in caregiver communication education. Nguyen et al. (2022) found that both professional and informal caregivers often lacked adequate communication skills, which contributed to increased caregiver burden and heightened patient aggression. The authors recommended focused training programs to enhance verbal and nonverbal communication abilities among caregivers.

Expert reviews consistently emphasized communication's role in reducing aggression and improving care dynamics. Pepper and Denning (2023) highlighted that personalized training and reflective practices helped staff manage behavioral issues and fostered healthier caregiver-patient relationships. Reichelt et al. (2023) evaluated the Communications and Interaction Training (CAIT) program and found it increased staff confidence in de-escalation and improved working relationships with patients.

Community-based dementia support services also adopted communication-focused interventions to enhance well-being. Riachi and Markwell (2020) reported that bundled approaches involving education, patient engagement, and family involvement positively influenced patient satisfaction and care outcomes. These models demonstrated the potential for extending communication strategies beyond acute care settings.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Validated assessment instruments supported the integration of communication strategies in behavioral monitoring. Sun et al. (2022) confirmed the reliability and validity of the CMAI short form in cross-cultural settings, providing a practical tool for evaluating agitation. Wong et al. (2024) reinforced the importance of proper training in using instruments like the CMAI and NPI to ensure accurate behavioral assessments.

Clinical management studies highlighted the need for early identification and proactive communication strategies. Wharton et al. (2018) found that early delirium screening and appropriate antipsychotic use, combined with effective communication, reduced aggression in hospitalized dementia patients. These findings underscored the necessity of embedding communication-focused interventions into standard clinical care practices.

In summary, communication-based interventions were central to managing aggression in dementia care. Studies consistently showed that combining verbal and nonverbal strategies, structured training, and culturally responsive practices led to better outcomes for patients and caregivers. The following section examined how interdisciplinary collaboration and standardized instruments further supported effective aggression management in dementia care.

Interdisciplinary Care Approaches

Effectively managing aggression in dementia care requires collaboration across healthcare disciplines. Akroun et al. (2022) highlighted that shared decision-making and coordinated teamwork enhanced patient care quality by facilitating early recognition of behavioral symptoms and consistent response strategies. This team-based approach supported person-centered care by ensuring all professionals contributed to managing aggression with a unified plan.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The DICE model (describe, investigate, create, evaluate) offered a structured multidisciplinary strategy for addressing behavioral complications in dementia. James et al. (2023) explained that this model guided team members in identifying behaviors, investigating underlying causes, creating individualized interventions, and evaluating their effectiveness. Nurses often led these efforts by monitoring behavior changes and coordinating communication among team members (James et al., 2023).

Pain management was a critical trigger point for aggressive behaviors in dementia and required interdisciplinary collaboration. Kupeli et al. (2018) found that healthcare workers who effectively interpreted nonverbal cues and communicated across disciplines could adjust care plans promptly, improving pain control and reducing agitation. This collaborative approach enhanced patient outcomes by addressing behavioral symptoms at their source.

Multidisciplinary teams also ensured that culturally sensitive interventions were implemented effectively. Alruwaili et al. (2024) demonstrated that interventions such as Snoezelen therapy, when adapted to a patient's cultural background with input from occupational therapists, nurses, and family members, significantly reduced agitation. Incorporating familiar sensory cues into the care environment aligned care strategies with the individual's identity and needs.

Interdisciplinary teamwork fostered staff development and enhanced confidence in managing dementia-related behaviors. Bhati et al. (2023) concluded that continuous learning environments and reflective dialogue among team members improved caregivers' competence and promoted safe, effective care. These professional development initiatives encouraged a shift toward person-centered thinking and effective interdisciplinary communication.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Nonpharmacological interventions were most effective when delivered through a coordinated, team-based approach. James et al. (2023) found that interventions emphasizing personalized care, environmental modifications, and collaborative communication produced the best behavioral outcomes. Multidisciplinary strategies not only improved care quality but also aligned with best-practice standards in dementia care.

Comprehensive interventions combining staff education, communication training, and environmental adjustments were essential in reducing agitation. Moody et al. (2024) reviewed 33 studies and found that these multidimensional approaches significantly enhanced patient outcomes in hospital settings. The findings highlighted the importance of tailoring team-based interventions to specific clinical environments for maximum effectiveness.

Collaboration in home-care settings was equally vital for managing aggression. O'Donnell et al. (2022) reported that personalized communication strategies and structured activities involving multidisciplinary teams helped reduce agitation in home-based dementia care. These approaches built trust, lowered anxiety, and fostered predictable interactions between patients and caregivers.

Despite these benefits, hospitals often faced fragmented care processes and insufficient communication protocols. Røsvik and Rokstad (2020) identified that unmet educational and systemic needs hindered consistent dementia-care delivery in acute hospitals. These findings underscored the necessity for broader, transdisciplinary initiatives to overcome institutional barriers.

Interdisciplinary education was essential to bridge gaps in aggression recognition and management. Välimäki et al. (2022) found that nurses interpreted aggression differently based on

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

their education level and professional role, which affected care responses. Structured educational programs helped harmonize understanding across disciplines and improved patient outcomes.

Incorporating patient-centered values into interdisciplinary care facilitated treatment plans aligned with individual preferences. Alruwaili et al. (2024) demonstrated that when providers considered a patient's history, cultural identity, and sensory preferences, patients exhibited reduced agitation and greater comfort. These tailored approaches enhanced the effectiveness of behavior-management strategies.

Sensory interventions, such as sensory carts and Snoezelen environments, provided nonpharmacological options to create calming settings. Alruwaili et al. (2024) reported that familiar aromatherapy, music, and culturally meaningful items effectively reduced agitation when personalized to patient preferences. These interventions minimized medication use while promoting emotional well-being and motivation.

Empathy, compassion, and relational presence were foundational to team-based dementia care. Riegel et al. (2018) emphasized that Watson's Theory of Human Caring aligned with person-centered practices, fostering positive emotional states and therapeutic relationships. These principles guided initiatives that prioritized communication, emotional connection, and holistic care delivery.

In summary, interdisciplinary collaboration was essential for managing aggression in dementia care. Coordinated team efforts enhanced care consistency, promoted patient-centered approaches, and addressed systemic challenges that hindered optimal care delivery. The following section examined how caregiver strain, staff stress, and organizational support influenced the effectiveness of these interventions.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Workforce Well-being in Dementia Care: Managing Burden and Enhancing Support Systems

Healthcare professionals and caregivers experienced significant emotional, physical, and psychological strain when supporting individuals with dementia who exhibited aggressive behaviors. These challenges stemmed from the complex nature of behavioral and psychological symptoms of dementia, which frequently overwhelmed caregivers (Kunik et al., 2020). Although a randomized controlled trial found no significant reduction in aggression with interventions, caregivers who received structured training demonstrated improved coping skills and relationship quality (Kunik et al., 2020).

The burden placed on caregivers often led to burnout, staff turnover, and diminished care quality. Schneider et al. (2020) observed that caregiver stress and emotional exhaustion directly impacted staff responsiveness to aggressive behaviors, exacerbating patient agitation. Kabaya et al. (2024) reported that dementia-certified nurses frequently experienced emotional conflict between professional responsibilities and the challenges of managing aggression.

A nationwide survey in China revealed that while nurses demonstrated greater knowledge of behavioral symptoms than physicians, overall understanding of behavioral and psychological symptoms of dementia (BPSD) remained moderate (Chen et al., 2024). The study emphasized the importance of experience and dementia-specific training in enhancing caregiver confidence and diagnostic accuracy. These findings highlighted the need for ongoing education to correct misperceptions of aggression and improve care practices (Chen et al., 2024).

Culturally tailored interventions alleviated caregiver strain by creating supportive care environments. Alruwaili et al. (2024) demonstrated that using aromatherapy, familiar personal items, and multisensory stimuli reduced agitation in Arab elderly patients while enhancing

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

caregiver satisfaction. These culturally sensitive approaches promoted a calmer care environment, leading to an improved caregiver experience.

Barriers to caregiver support included limited staffing, insufficient dementia-specific training, and task-oriented facility cultures. Dunkle et al. (2022) found that programs fostering debriefing opportunities, interdisciplinary meetings, and accessible training reduced burnout and promoted caregiver resilience. Kabaya et al. (2024) emphasized that reflective practice within training programs enhanced skill development, aligning with the Transtheoretical Model's framework for incremental behavior change (Prochaska & DiClemente, 1983).

Workplace social support played a critical role in mitigating burnout and job dissatisfaction among caregivers. Duan et al. (2019) found that the perception of organizational support buffered the negative effects of workplace aggression on caregiver well-being. These findings underscored the importance of fostering a strong, supportive team culture in dementia care settings.

Organized training programs reduced caregiver burden and enhanced staff preparedness. Fakhri Allahyari et al. (2024) reported that targeted dementia care education focusing on communication and emotional regulation decreased perceived stress among nurses. Geoffrion et al. (2020) found that although aggression prevention initiatives yielded modest reductions in aggressive incidents, they significantly improved staff knowledge, coping skills, and situational awareness.

Educational deficits persisted among interprofessional teams caring for individuals with dementia. Hawkins et al. (2023) identified that structured dementia education was essential for effective behavior management and reducing caregiver burden in Canadian geriatric programs.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Interdisciplinary team-based learning was necessary to foster collaboration and improve care quality across disciplines.

The demanding workload associated with managing BPSD often led to emotional exhaustion among nursing staff. Kang and Bang (2024) reported that poor staffing levels and insufficient dementia-specific training were major contributors to caregiver burnout. Keuning-Plantinga et al. (2022) highlighted that institutional support and targeted education programs were critical in preparing nurses to manage the complex behavioral challenges associated with dementia care.

Opportunities existed to enhance caregiver efficiency through policy modifications and structured education. Lindeza et al. (2020) found that communication-focused interventions reduced caregiver stress in both professional and family caregiving contexts. Duan et al. (2019) reinforced these findings by emphasizing the role of organizational support in promoting caregiver well-being.

Structured dementia training improved clinical documentation, proactive care planning, and caregiver communication. Mellinger et al. (2023) observed that nurse care managers who received specialized training demonstrated increased attention to risk factors and patient safety. These improvements contributed to better coordination and overall care quality in dementia settings.

Family caregivers also benefited from dyadic assessment instruments that evaluated relationship dynamics and guided tailored interventions. Orsulic-Jeras et al. (2020) found that tools such as the Alzheimer's Disease Knowledge Test and Dyadic Coping Inventory provided

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

valuable insights that informed caregiver strategies along the care trajectory. Implementing these instruments ensured care plans remained sensitive to both patient and caregiver needs.

Culture change within care organizations was essential for sustaining improvements in dementia care practices. Schneider et al. (2020) reported that integrating dementia-friendly education into daily workflows enhanced staff confidence, improved communication, and supported long-term cultural transformation. Expanding educational initiatives offered organizations new opportunities to strengthen staff resilience and elevate care delivery standards.

Structural and organizational barriers, including inadequate leadership support, rigid training formats, and lack of clinical relevance, impeded the broad implementation of dementia education. Surr et al. (2020) emphasized the need to address these challenges to successfully integrate evidence-based training into practice. Yaghmour (2022) noted that cultural variations in caregiver perceptions necessitated educational programs that emphasized cultural competence to ensure effective and respectful care.

Hospital nurses faced multiple systemic challenges in delivering optimal dementia care. Ye et al. (2024) identified coordination gaps, staffing shortages, and inadequate leadership as primary obstacles in acute care settings. Addressing these issues required comprehensive leadership development and robust clinical training to prepare staff for the complexities of dementia care.

Caregiver burden directly influenced how caregivers responded to aggressive behaviors in dementia patients. Staff education, emotional support, and organizational investment in caregiver support programs were essential for delivering high-quality, person-centered care.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Sustained institutional support was crucial for maintaining safe and effective care environments for individuals with dementia.

In summary, caregiver well-being was integral to managing aggression in dementia care. High levels of caregiver stress, limited training opportunities, and insufficient organizational support contributed to burnout and compromised care quality. Evidence underscored the importance of structured education, reflective practice, and culturally responsive interventions to enhance staff resilience and improve patient outcomes. The following section presented the methodology and design used to evaluate the impact of communication training and an evidence-based tool on staff perceptions of aggression in dementia care.

Study Designs

Studies on aggression in dementia care employed various methodological designs to evaluate intervention effectiveness, staff experiences, and patient outcomes. Both quantitative and qualitative methods provided critical insights while accounting for the complexities and potential biases inherent in real-world clinical environments (Althubaiti, 2016). These diverse approaches strengthened the evaluation process by addressing different aspects of care delivery and outcome measurement.

Quasi-experimental designs were frequently utilized to navigate the ethical and logistical challenges of randomizing vulnerable dementia populations. These designs allowed comparisons between intervention and control groups while preserving flexibility in clinical settings (Alruwaili et al., 2024). For example, a quasi-experimental study assessing a culturally tailored intervention, including Snoezelen therapy and aromatherapy, demonstrated significant

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

improvements in agitation and quality of life through pre- and post-intervention assessments (Alruwaili et al., 2024).

Although less common, randomized controlled trials (RCTs) offered robust internal validity when applied effectively in dementia care. Kunik et al. (2020) conducted an RCT evaluating aggression prevention training that taught caregivers to recognize early signs of aggression and implement communication techniques for de-escalation. Using standardized tools like the Cohen-Mansfield Agitation Inventory (CMAI), the study revealed reductions in aggression frequency, caregiver stress, and improvements in caregiver-patient relationships (Kunik et al., 2020).

The intervention group in Kunik et al.'s (2020) study exhibited a statistically significant decrease in aggressive behaviors compared to the control group ($p < .05$). Caregivers also reported enhanced coping abilities and stress management, demonstrating that communication-based aggression prevention training could yield meaningful outcomes within a relatively short period (Kunik et al., 2020).

Qualitative research added depth to quantitative findings by exploring the lived experiences of healthcare providers. Kabaya et al. (2023) found that dementia-certified nurses developed expertise in managing aggression through reflective practice and ethical decision-making. Similarly, Dunkle et al. (2022) utilized the Rigorous and Accelerated Data Reduction (RADaR) method to identify key themes such as family involvement, care strategies, and systemic barriers faced by nurses and social workers in dementia care.

Technological advancements introduced innovative methods for detecting aggression in dementia care settings. Galanakis et al. (2025) developed an artificial intelligence model utilizing

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

audio cues and meta-classifiers to predict aggression with high accuracy. Although clinical implementation was pending, such technology had the potential to complement behavioral tools like the CMAI by enabling real-time monitoring (Galanakis et al., 2025).

Implementation research further explored strategies to improve adherence to best practices in dementia care. Goorts et al. (2021) found that interventions such as audit and feedback systems, reminder protocols, and engaging opinion leaders enhanced guideline adherence among allied health professionals. These findings underscored the importance of structured educational and feedback mechanisms in promoting consistent care delivery.

When randomized trials were impractical, quasi-experimental designs served as a viable alternative for maintaining research rigor. Handley et al. (2018) provided methodological recommendations to enhance the internal and external validity of quasi-experimental studies, ensuring their applicability in real-world dementia care settings. These strategies supported the use of flexible research designs without compromising scientific rigor.

Educational interventions remained central to improving caregiver preparedness and confidence. Parveen et al. (2021) demonstrated that targeted dementia-specific training significantly enhanced knowledge and self-efficacy among health and social care staff. Rasmussen et al. (2023) further emphasized that training programs focusing on person-centered communication effectively reduced staff stress and improved care outcomes.

Despite these advancements, inconsistencies in international training standards persisted. Pit et al. (2023) highlighted the need for standardized, competency-based frameworks to ensure quality and consistency across diverse dementia care settings. Addressing these gaps was critical to fostering uniformity in staff education and practice.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Contextual barriers also hindered the provision of effective dementia care. Shrestha and Shrestha (2024) identified workforce shortages, limited educational opportunities, and restricted access to resources as major challenges in Ontario's dementia care landscape. Van Manen et al. (2020) proposed structured communication models emphasizing emotional attunement and patient-centered approaches to enhance nurse-patient interactions and navigate these systemic barriers.

Ethical considerations remained paramount in dementia research. Willie (2024) stressed the importance of clearly defining inclusion criteria and maintaining transparent sampling methods to ensure fair representation and uphold research integrity. These ethical safeguards enhanced the generalizability and credibility of research findings across care environments.

Combining quasi-experimental, randomized controlled, qualitative, and implementation-focused designs enriched the knowledge base surrounding aggression management in dementia care. This multifaceted approach provided robust evidence on clinical effectiveness, educational needs, system-level improvements, and ethical research practices. Employing a quasi-experimental pre-post design aligned with these best practices, facilitating a comprehensive evaluation of interventions within a real-world clinical context.

The reviewed studies collectively affirmed the importance of methodologically sound research designs in evaluating dementia care interventions. Quasi-experimental and qualitative methodologies offered practical advantages for assessing interventions in everyday care environments, where rigid control groups were not feasible. These findings informed the selection of assessment tools and reinforced the need for balanced, adaptable research designs to capture both quantitative outcomes and qualitative experiences in dementia care. The following

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

section detailed the instruments selected for this project, emphasizing their reliability, validity, and relevance to assessing behavioral outcomes in dementia care.

Instrumentation and Justification

This project employed the Cohen-Mansfield Agitation Inventory (CMAI) as the primary instrument to measure agitation in older adults with dementia. The CMAI consisted of 29 items assessing the frequency of specific agitated behaviors using a seven-point scale (Kupeli et al., 2018). Its widespread use in both clinical and research settings reflected its strong reliability, sensitivity to behavioral change, and practical application in dementia care populations (Kupeli et al., 2018).

The CMAI demonstrated robust psychometric properties, making it suitable for diverse care environments. A validation study involving 230 hospitalized older adults in the United Kingdom confirmed its interrater reliability and internal consistency in acute hospital settings (Kupeli et al., 2018). The tool's two-factor structure distinguished between aggressive and non-aggressive behaviors, enhancing its clinical utility in categorizing agitation types (Kupeli et al., 2018).

The CMAI's flexibility was demonstrated across various care settings, including hospitals, residential facilities, and community-based environments. Its reliability in detecting and measuring agitation ensured accurate assessments even in busy clinical settings (Kupeli et al., 2018). This made the CMAI an effective tool for monitoring behavioral changes during intervention studies.

Recent research supported the CMAI's use in assessing behavioral intervention outcomes. Kunik et al. (2020) used the CMAI in a randomized controlled trial to evaluate the

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

impact of aggression prevention training, effectively capturing pre- and post-intervention changes in agitation. Alruwaili et al. (2024) also utilized the CMAI in a quasi-experimental study, demonstrating its sensitivity in detecting reductions in agitation following a culturally tailored intervention incorporating Snoezelen therapy and aromatherapy.

While the Neuropsychiatric Inventory (NPI) was employed in Alruwaili et al.'s (2024) study to assess broader neuropsychiatric symptoms, the CMAI provided targeted measurement of agitation-related behaviors. This specificity made the CMAI a more appropriate instrument for this project's focus on physical and verbal aggression. Its precision in capturing nuanced behavioral changes aligned with the project's evaluation needs.

Emerging instruments complemented the CMAI by refining the measurement of agitation-related behaviors. De Mauleon et al. (2021) validated additional agitation measures aligned with International Psychogeriatric Association (IPA) criteria, suggesting that combining established and new tools could have enhanced clinical assessments. Future research might have benefited from integrating these complementary instruments to obtain a more comprehensive view of behavioral symptoms.

Theoretical frameworks further justified the selection of the CMAI. The PHYT-in-dementia model, derived from the Transtheoretical Model (TTM) and COM-B framework, emphasized individualized behavior change (Di Lorito et al., 2019). This alignment supported the use of structured instruments like the CMAI to evaluate progress in patient-centered interventions.

The CMAI's adaptability was demonstrated by its successful validation across international contexts. Kratzer et al. (2023) confirmed the reliability and efficiency of the

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

CMAI–Short Form (CMAI-SF) in shared-housing environments in Germany, reducing administrative burdens while retaining measurement integrity. This adaptability made the CMAI practical for real-world care environments where time and resource constraints were prevalent.

Maintaining data consistency was a critical methodological principle in dementia research. Smith (2021) emphasized the importance of standardized tools like the CMAI to mitigate challenges such as confounding variables and selection bias in clinical data collection. Utilizing validated instruments enhanced internal validity and facilitated comparability across diverse care settings.

Ethical research practices necessitated careful selection of measurement tools to ensure representativeness and data integrity. Willie (2024) advocated for clear population definitions and transparent sampling methods to support ethical standards and research credibility. The CMAI's long-standing validation across various populations made it an ethically sound choice for this project.

The CMAI enabled comprehensive classification of agitation behaviors, including physically aggressive, non-aggressive, and verbally aggressive actions (Alruwaili et al., 2024). This categorization supported detailed monitoring of behavior patterns before and after intervention, enhancing the rigor of outcome assessments. The instrument's versatility facilitated consistent data collection across different stages of the intervention.

Complementary measures often accompanied the CMAI to deepen the understanding of agitation's underlying causes. Sahu et al. (2020) combined the CMAI with the Hamilton Anxiety Rating Scale to examine how distress contributed to physical aggression in dementia patients.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Using multiple tools in conjunction provided a more nuanced assessment, informing tailored intervention strategies.

Qualitative methods also supplemented CMAI data by capturing caregivers' experiences and perceptions. Dunkle et al. (2022) employed structured interviews to explore how staff emotionally and cognitively responded to managing aggression, offering valuable context to quantitative findings. This mixed-methods approach enriched the interpretation of CMAI data and supported comprehensive evaluation.

The CMAI's extensive use in dementia research affirmed its validity and relevance across care environments. Its ability to capture specific agitation-related behaviors directly aligned with the focus of this study, ensuring precise measurement of intervention outcomes. Given its strong psychometric foundation and compatibility with person-centered care models, the CMAI was a well-supported and appropriate choice for this project's primary outcome measure. The following section outlined the methodological framework guiding this study, detailing how the chosen design, data collection, and analysis strategies evaluated the intervention's effectiveness.

Methodology

Research on aggression in dementia care had employed various quantitative methodologies to assess the effectiveness of interventions targeting aggression. Randomized controlled trials (RCTs) offered high internal validity by controlling confounding variables and standardizing intervention delivery (Kunik et al., 2020). However, their stringent participant criteria and controlled environments often limited the generalizability of findings to typical care settings.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Quasi-experimental designs presented a practical alternative for evaluating interventions in real-world environments where randomization was not feasible (Alruwaili et al., 2024). These designs allowed researchers to compare pre- and post-intervention outcomes, providing valuable insights into behavioral changes. Psychometric research further validated measurement tools like the Cohen-Mansfield Agitation Inventory (CMAI), confirming its reliability and construct validity in assessing agitation in older adults with dementia (Kupeli et al., 2018).

Qualitative research complemented quantitative studies by capturing the lived experiences of caregivers and healthcare professionals. Researchers often used purposive sampling to recruit participants who had direct experience managing behavioral and psychological symptoms of dementia (Kabaya et al., 2024). Data collected through interviews and thematic analyses revealed consistent patterns in staff coping strategies, knowledge development, and systemic challenges that impacted dementia care delivery (Dunkle et al., 2022).

Despite the strengths of both quantitative and qualitative methods, few studies integrated these approaches into mixed methods designs. This separation limited understanding of how objective behavioral data aligned with staff experiences and environmental factors. Without qualitative feedback, researchers risk overlooking the feasibility, acceptability, and unintended consequences of interventions, while promising practices identified qualitatively remained under-tested empirically.

The lack of mixed-methods research hindered the practical application of findings in clinical settings. To address this gap, the current study employed a quasi-experimental mixed-methods design, combining pre- and post-intervention CMAI assessments with qualitative staff

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

surveys. This design captured both behavioral changes and staff perspectives on aggression management, providing a more comprehensive evaluation of the intervention's impact.

By integrating quantitative and qualitative data, this approach enhanced internal validity while offering a richer understanding of how interventions affected daily care practices. Staff surveys documented attitudes, experiences, and perceived challenges, ensuring the findings reflected real-world complexities. This methodology aligned with best practices for evaluating interventions aimed at improving dementia care outcomes.

The project examined whether combining structured communication training with CMAI use improved healthcare staff's perception and management of aggression in dementia care settings. A mixed-methods design enhanced the relevance and applicability of results by providing both measurable outcomes and contextual insights. The findings contributed to evidence-based strategies that supported staff development and promoted safer, more effective dementia care practices. The following section synthesized key findings from the literature and discussed their practical implications for enhancing aggression management strategies in dementia care.

Synthesis of Key Literature and Implications for Practice

Dementia-related aggression remains a persistent challenge in healthcare, requiring multilevel interventions that were grounded in evidence to benefit patients, caregivers, and the broader system. Emerging literature highlighted that aggression arose from complex interactions among unmet patient needs, environmental triggers, and caregiver responses (Rasmussen et al., 2023). Addressing this complexity required proactive care models that integrated behavioral health strategies into daily clinical practice across diverse care environments.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Organizational readiness and system-level support were critical factors that influenced the success of dementia care interventions. Research showed that leadership engagement, ongoing staff education, and alignment with institutional values significantly increased the likelihood of successful outcomes (Schneider et al., 2020). Embedding training, policy, and evaluation into a unified organizational framework fostered shared responsibility and promoted sustained improvements in care quality.

Culturally responsive care also played a vital role in reducing aggression in dementia settings. Studies emphasized that interventions needed to consider language preferences, spiritual beliefs, and cultural identities to be truly effective (Shrestha & Shrestha, 2024). Involving families and understanding cultural nuances in the expression of distress helped staff accurately interpret behaviors often perceived as aggression.

Sustainability and scalability were essential for the long-term success of dementia interventions. Programs that were resource-intensive or time-consuming might not have been feasible across various care settings, highlighting the need for adaptable and practical solutions (Goorts et al., 2021). Interventions designed with workflow integration, clear outcome measures, and feedback mechanisms were more likely to be adopted and maintained over time.

Technological advancements presented new opportunities for early detection and management of aggression. Studies investigated artificial intelligence models, wearable sensors, and audio-based alert systems capable of identifying pre-agitation cues and alerting caregivers before escalation occurred (Galanakis et al., 2025). While further validation was necessary, these innovations represented a shift toward predictive and preventive care models that complemented personalized, empathetic approaches.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Recent literature advocated for integrating clinical outcome measurements with qualitative feedback from staff and patients. Mixed-methods research, which combined quantitative data with narrative responses, offered a comprehensive evaluation of intervention effectiveness and feasibility (Kabaya et al., 2023). This dual approach enhanced understanding not only of whether an intervention worked but also how and why it succeeded in real-world practice.

This project aligned with these priorities by employing a quasi-experimental pre-post embedded mixed methods design to evaluate a structured, nonpharmacologic intervention for managing aggression in an acute care unit. The Cohen-Mansfield Agitation Inventory (CMAI) was used to quantify behavioral changes due to its proven validity and reliability. Additionally, staff surveys captured qualitative insights into their experiences and the intervention's practicality, enriching the quantitative findings with real-world perspectives.

The synthesis of current literature supported the project's design and reinforced the need for evidence-based, culturally sensitive, and patient-centered approaches. By integrating rigorous measurement with reflective evaluation, the study developed actionable strategies for improving staff preparedness, enhancing patient safety, and elevating the standard of dementia care. These efforts contributed to addressing longstanding challenges in managing aggression within dementia populations. The following section summarized the key themes and evidence from the literature review, highlighting their significance in framing the research problem and justifying the project's intervention approach.

Chapter Two Summary

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Chapter Two reviewed literature on aggressive behavior in dementia care, with a focus on staff perceptions, communication strategies, interdisciplinary interventions, and standardized behavioral assessment tools. Although nonpharmacological and patient-centered interventions had shown positive impacts, healthcare organizations had yet to fully implement effective education and practice programs to address these behaviors (Alzheimer's Association, 2024). A gap remained in understanding how staff perceptions influenced behavioral outcomes, which underscored the need for targeted, evidence-based interventions.

The CMAI had been widely validated as a reliable instrument for assessing various forms of aggression in dementia patients (Kupeli et al., 2018). Its ability to differentiate between types of agitation supported its use in monitoring behavioral changes throughout care interventions. However, while tools like the CMAI effectively quantified behaviors, they often fell short in capturing the nuanced impact of staff communication strategies on patient outcomes (Sun et al., 2022).

Structured communication training had been shown to reduce aggression and increase staff confidence in managing behavioral symptoms (Schneider et al., 2020). Patients benefited when staff received structured education that emphasized empathy and patient-centered care approaches. Despite these findings, there was a lack of studies that integrated quantitative behavioral assessments with qualitative evaluations of staff experiences, which limited a comprehensive understanding of intervention effectiveness.

Most existing research examined aggression interventions using either quantitative or qualitative methods but rarely combined both into a unified study design. This separation restricted the ability to assess how interventions affected clinical practice, particularly regarding

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

staff experiences with aggression management. Researchers often overlooked the emotional and practical challenges faced by staff when implementing these interventions, resulting in an incomplete picture of care dynamics.

The Transtheoretical Model (TTM) offered a theoretical basis for developing training initiatives that encouraged sustainable behavior change. TTM emphasized the importance of readiness and reinforcement in guiding individuals through stages of behavioral adoption (Lindeza et al., 2020). Effective interventions depended not only on the training content but also on staff engagement, perception, and the organizational support provided during implementation.

Given these considerations, a quasi-experimental embedded mixed-methods design was deemed appropriate for this project. The study collected quantitative data using pre- and post-intervention CMAI assessments to measure changes in aggression levels. Additionally, qualitative data from staff surveys captured participant perspectives on the intervention's impact, providing valuable insights into the feasibility and effectiveness of the combined approach.

Healthcare professionals working with dementia patients were the target population for this study because they frequently encountered aggressive behaviors and stood to benefit significantly from enhanced training. By analyzing changes in CMAI scores and staff feedback, the project generated both measurable outcomes and a deeper understanding of the intervention's practical applications. This design ensured a comprehensive evaluation of how communication training, combined with behavioral assessment tools, influenced staff perceptions and management of aggression.

In conclusion, the literature supported the use of communication-focused training and structured behavioral assessments to reduce aggression in dementia care settings. However,

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

further research integrating quantitative and qualitative methods was needed to capture both behavioral outcomes and staff experiences. This project investigated whether combining communication training with the CMAI reduced healthcare staff's perceived prevalence of aggression in dementia patients compared to staff who had not received structured training. The findings guided clinical practice improvements and provided a foundation for the methodological approach detailed in Chapter Three. The following chapter outlined the methodological framework, detailing the study design, sample selection, data collection procedures, and analysis strategies employed to evaluate the intervention's impact on staff perceptions and aggression management in dementia care.

CHAPTER THREE: METHODOLOGY

Introduction

In acute care settings, healthcare staff frequently encountered aggressive behaviors from patients with dementia, disrupting care delivery. Many healthcare organizations provided general training for staff; however, these programs often lacked the depth needed to manage dementia-related aggression effectively. As these behavior patterns became increasingly common, the deficiencies in current training programs highlighted a need for focused, evidence-based interventions that ensured safety, compassion, and patient-centered care.

This project aimed to determine whether structured communication training combined with the Cohen-Mansfield Agitation Inventory (CMAI) improved healthcare workers' ability to recognize, assess, and manage aggression in patients with dementia. The intervention incorporated the Transtheoretical Model of Behavior Change and Jean Watson's Theory of Human Caring to enhance staff readiness and foster an empathetic approach to care delivery. By

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

integrating a validated behavioral assessment tool with targeted communication strategies, the study sought to enhance staff preparedness and ensure consistent responses to behavioral challenges in dementia care.

A mixed-method quasi-experimental design was used to evaluate changes in staff perceptions, confidence, and clinical practice before, during, and after the intervention. This approach enabled the collection of both measurable outcomes and qualitative insights from staff experiences, contributing to the development of future dementia-specific training programs and informing care strategies related to aggression management.

Research Questions and Hypotheses

This project aimed to explore the effect of implementing structured communication training combined with the Cohen-Mansfield Agitation Inventory (CMAI) on healthcare staff's ability to detect, assess, and manage aggressive behavior in patients with dementia. The project employed a quasi-experimental, pre-post, embedded mixed methods design to evaluate changes in staff perceptions, confidence, and care practices before, during, and after the intervention. The research questions and hypotheses aligned with the problem statement and purpose statement. The intervention was grounded in the Transtheoretical Model of Behavior Change (Prochaska & DiClemente, 1983) and Jean Watson's Theory of Human Caring (Riegel et al., 2018).

This study was the first to investigate whether structured communication training, combined with the CMAI, improved healthcare staff's ability to recognize, assess, and manage aggression in patients with dementia. The problem statement and purpose statement are aligned directly with the research questions and hypotheses.

The following research questions and hypotheses guided this investigation:

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Research Question 1 (RQ1): To what extent did the combination of structured communication training and the use of the Cohen-Mansfield Agitation Inventory (CMAI) influence healthcare staff's perception of aggression in patients with dementia?

- **H10:** There was no statistically significant difference in healthcare staff's perception of aggression in patients with dementia before and after the implementation of the CMAI and communication training.
- **H1a:** There was a statistically significant difference in healthcare staff's perception of aggression in patients with dementia before and after the implementation of the CMAI and communication training.

Research Question 2 (RQ2): To what extent did the intervention improve healthcare staff's confidence in managing aggressive behaviors in patients with dementia?

- **H20:** There was no statistically significant difference in healthcare staff's confidence in managing aggressive behaviors before and after the intervention.
- **H2a:** There was a statistically significant improvement in healthcare staff's confidence in managing aggressive behaviors following the intervention.

Research Question 3 (RQ3): To what extent did the intervention improve healthcare staff's ability to recognize behavioral triggers in patients with dementia?

- **H30:** There was no statistically significant difference in staff's ability to recognize behavioral triggers in patients with dementia before and after the intervention.
- **H3a:** There was a statistically significant improvement in staff's ability to recognize behavioral triggers in patients with dementia following the intervention.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The independent variable in this project was the intervention, which included structured communication training and the use of the CMAI. The dependent variables were staff perception of aggression, confidence in managing aggressive behaviors, and ability to identify behavioral triggers (Baby et al., 2018). The CMAI was used to assess the frequency and types of agitation in patients with dementia (Kupeli et al., 2018). Pre-, mid-, and post-intervention staff surveys evaluated changes in staff confidence, perception, and ability to identify behavioral triggers (Reichelt et al., 2023).

An embedded mixed-methods approach facilitated the collection of both quantitative data and qualitative insights from staff who participated in the intervention (Handley et al., 2018). The pre-post design enabled direct comparison of outcomes and staff experiences. This pragmatic design was suitable for clinical environments where randomization was impractical but rigorous evaluation remained essential (Akrouer et al., 2022).

Research Methodology

This project employed a quasi-experimental, embedded mixed methods design to investigate whether structured communication training combined with the CMAI enhanced healthcare staff's ability to recognize and respond to aggressive behaviors in patients with dementia. By integrating quantitative and qualitative data, this design facilitated a comprehensive understanding of aggression management in dementia care settings (Kratzer et al., 2023). The approach allowed for quantifiable outcome measurements while capturing the contextual perspectives of frontline staff to inform conclusions.

A quasi-experimental design was appropriate for this project as it enabled the evaluation of an intervention within a real-world clinical environment without the requirement for

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

randomization. Randomized controlled trials were not feasible in acute care settings due to ethical and logistical constraints that arose when withholding interventions from high-risk patient populations (Handley et al., 2018). This design allowed for comparison of outcomes before and after the intervention while maintaining ethical standards in participant care.

Quantitative data were collected using staff surveys administered at pre-, mid-, and post-intervention intervals. These surveys assessed staff confidence, ability to recognize behavioral triggers, and perception of aggression. CMAI assessments were conducted concurrently to monitor changes in the frequency and severity of agitated behaviors among patients with dementia (Ye et al., 2024). Qualitative data were gathered through open-ended survey responses following the intervention, providing insights into staff experiences and perceptions regarding the training and CMAI application (Moody et al., 2024).

A mixed-methods design offered several advantages for this quality improvement project. The combination of quantitative and qualitative data provided a comprehensive evaluation of the intervention's effectiveness. Relying solely on quantitative data would have overlooked nuanced feedback from staff, while a qualitative-only design would have lacked the capacity for hypothesis testing and statistical measurement of change. The chosen design enabled robust evaluation without the ethical concerns associated with randomized controlled trials, which were not suitable in settings where care could not be withheld (Carrarini et al., 2021).

Previous research demonstrated that communication training and structured assessment tools like the CMAI effectively reduced aggression in patients with dementia. Such interventions had been shown to improve staff preparedness, prevent behavioral escalation, and enhance staff confidence in managing challenging behaviors (Baby et al., 2018; James et al., 2023). Training

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

programs emphasizing empathy and skill development led to quantifiable improvements in both staff competence and patient outcomes.

This quasi-experimental, embedded mixed-methods approach provided a systematic and practical framework for evaluating the impact of educational and behavioral interventions on staff practice. The design aligned with established dementia care guidelines and had the potential to contribute to reduced patient harm and improved workforce well-being. By integrating synchronized quantitative and qualitative datasets, the findings supported actionable recommendations and offered generalizability to similar healthcare settings.

Research Design

This project used a quasi-experimental, pre- and post-intervention embedded mixed methods design to evaluate the impact of structured communication training and the CMAI on healthcare staff's perception of aggression, confidence in managing behaviors, and ability to apply de-escalation strategies. This approach was suitable for acute care dementia units where randomization was often impractical (Handley et al., 2018). The embedded design allowed for quantifiable assessment of staff competencies while capturing contextual insights into the complexities of dementia care, aligning with the project's quality improvement objectives.

Data collection included pre- and post-intervention CMAI scores and structured staff perception surveys for quantitative analysis. Qualitative data was gathered through open-ended survey responses, with thematic analysis providing context to support interpretation of the quantitative findings. The intervention, consisting of structured communication training and CMAI use, served as the independent variable, while the dependent variables were staff perception of aggression, confidence in managing incidents, and the ability to recognize

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

behavioral triggers. The unit of analysis was the healthcare staff who participated in the intervention.

Table 1.

Methodology Summary

Component	Description
Design	Quasi-experimental, pre-post embedded mixed-methods design
Setting	155-bed hospital, acute care unit (6 North)
Participants	Nurses and Clinical Assistants (n=10-15)
Intervention	Structured communication training + CMAI utilization
Tools	CMAI, custom pre-, mid-, post- staff perception surveys, & incident reports
Data Collection Period	6 weeks
Analysis	Descriptive statistics, paired sample t-tests, content analysis of qualitative feedback

Alignment with Methodology and Data Collection

The chosen design supported the applied nature of this quality improvement project, which aimed to evaluate an evidence-based intervention within a real-world clinical setting. The intervention was implemented in practice while adhering to a structured framework for outcome

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

measurement. Data was collected over a six-week period to assess the effectiveness of the intervention and its integration into daily care routines.

Healthcare staff utilized the CMAI to assess patient behaviors. This standardized instrument provided quantitative data regarding the frequency and types of aggressive behavior observed before and after the intervention. Weekly CMAI assessments enabled tracking of changes in aggression patterns over time, facilitating evaluation of the intervention's impact on managing aggressive behaviors.

Staff perception surveys were administered at three intervals: pre-intervention, mid-intervention (week three), and post-intervention (week six). These surveys assessed changes in staff-reported confidence, competence, and knowledge related to recognizing and managing aggressive behaviors in patients with dementia. Each survey included Likert-scale items for quantitative measurement and open-ended questions to capture qualitative feedback, consistent with the project's embedded mixed-methods design.

The project evaluated the intervention's impact through comparative analysis of CMAI scores and survey responses across the three data collection points. Reductions in CMAI scores indicated improvements in patient behavior management, while enhanced survey scores reflected increased staff confidence and skill acquisition. The structured combination of quantitative and qualitative data collection ensured a comprehensive assessment of the intervention's effectiveness in promoting staff readiness and improving dementia care practices.

Establishing Intervention Impact

This project employed a mixed-methods approach, integrating quantitative and qualitative data to evaluate whether the intervention achieved its intended objectives. By

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

combining measurable outcomes with contextual staff feedback, this approach provided a comprehensive assessment of the intervention's effectiveness and enhanced the credibility of the findings.

Quantitative data analysis involved descriptive comparisons of pre-, mid-, and post-intervention Cohen-Mansfield Agitation Inventory (CMAI) scores and staff survey responses. Measures of central tendency and percentage change were used to compare results across time points and identify improvements in staff perceptions, confidence, and observed patient behaviors. These analyses assessed whether the intervention was associated with measurable improvements in staff preparedness and communication during dementia care.

Qualitative data were derived from open-ended survey responses collected after the intervention. Content analysis was used to examine staff experiences, perceptions of the training, and the perceived utility of the CMAI tool. Thematic categories included perceived advantages, challenges encountered, and suggestions for enhancing future training initiatives. This qualitative feedback provided context to complement the quantitative results, enriching the interpretation of the intervention's overall impact.

To minimize confounding variables, the intervention was applied uniformly to all participants. All staff received the same structured communication training, CMAI instruction, and project materials to ensure consistency in intervention delivery. Standardized data collection procedures further supported the reliability of the findings.

External factors such as staffing levels, patient acuity, and environmental conditions were documented and considered during data analysis to ensure accurate interpretation of the results. This approach aligned with best practices in quality improvement projects, allowing for

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

pragmatic yet rigorous evaluation within the dynamic environment of acute care dementia units.

By incorporating both descriptive measures and contextual insights, the project's findings offered a nuanced understanding of how structured communication training and behavioral assessment tools influenced staff practice and patient outcomes.

Population and Sample Selection

Setting

This project was conducted in an acute care unit within a 155-bed hospital that provided a comprehensive range of medical and behavioral health services. The facility offered specialized care for patients with Alzheimer's disease and other forms of dementia. Patients in this unit frequently exhibited aggressive and agitated behaviors, which contributed to heightened stress and safety concerns among healthcare staff. The selected implementation site experienced a high volume of dementia patients and a corresponding increase in aggressive behavioral episodes, necessitating targeted interventions to enhance staff preparedness and improve patient care outcomes.

General and Target Population

The general population for this project consisted of healthcare workers who provided care to individuals with dementia in acute inpatient settings. The project focused specifically on licensed and unlicensed healthcare staff assigned to the 6 North unit of the hospital. These staff members included nurses and clinical assistants who were responsible for direct patient care.

Staff working on this unit routinely managed patients exhibiting agitation and aggressive behaviors, which presented significant challenges in care delivery. The increasing frequency of aggression among dementia patients in this unit underscored the need for enhanced support and

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

targeted training in behavioral intervention strategies. This project aimed to equip staff with evidence-based tools and communication techniques to improve their ability to recognize, assess, and manage aggressive behaviors effectively.

Sample and Sampling Procedures

This project included a sample of approximately ten to twelve healthcare staff members who provided direct patient care in an acute care unit of a mid-sized hospital. The sample consisted of nurses and clinical assistants who met the established inclusion criteria. Convenience sampling was used to recruit participants who were accessible and met eligibility requirements, which was an appropriate approach for quality improvement projects conducted in clinical environments where randomization was impractical (Willie, 2024).

Eligible participants met the following inclusion criteria: (a) current employment on the dementia care unit, (b) provision of direct patient care, (c) a minimum of three months of employment on the unit, and (d) availability to participate in the structured communication training and complete all phases of the project. Staff members who did not provide hands-on patient care or were unable to engage in the intervention and data collection activities were excluded from participation.

Demographic information, including age, gender, and race/ethnicity, was collected to describe the sample. These variables were not analyzed for individual outcome comparisons but were reported to provide a comprehensive overview of the participant population. Although this project did not involve direct patient participation, it targeted healthcare staff who cared for individuals with dementia, a vulnerable patient population. The perspectives and experiences of

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

these staff members were essential to evaluating the effectiveness of structured communication training and behavioral assessment tools in enhancing dementia care practices.

The sample size, while smaller than that of traditional quantitative studies, was appropriate for the project's quasi-experimental, embedded mixed-methods design. This design supported within-subject comparisons and enabled a thorough evaluation of both quantifiable outcomes and qualitative staff experiences (Collins et al., 2022). Previous research demonstrated that small, focused samples were sufficient for mixed-methods quality improvement projects, particularly when contextual insights were prioritized (Handley et al., 2018).

Site Authorization and Confidentiality

Christine Daniels, Associate Chief Nursing Officer, approved the implementation of this quality improvement project on the 6 North unit at Mon Health Medical Center (MHMC) on January 15, 2025. All project participants were staff members employed at MHMC. Participation in the project was entirely voluntary, and staff were permitted to withdraw from participation at any time without penalty.

Informed consent was obtained from all participants prior to data collection. The project ensured confidentiality by excluding all names and identifying information from reports, presentations, and final results. Data were collected and reported in aggregate form to protect participant anonymity. Informed consent documents outlined these privacy protections and were stored securely in compliance with institutional policies.

The 6 North unit provided an appropriate setting for evaluating the impact of structured communication training and behavioral monitoring tools. Staff members working in this unit frequently manage patients exhibiting agitation and aggressive behaviors that disrupted care

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

delivery. This project aimed to enhance staff understanding, confidence, and response strategies through the implementation of evidence-based interventions that addressed the specific challenges associated with dementia care in acute settings (Baby et al., 2018).

Instrumentation

This quality improvement project will utilize structured instruments to assess whether structured communication training and the use of the Cohen-Mansfield Agitation Inventory (CMAI) reduce aggressive behaviors in patients with dementia and improve staff confidence in managing such behaviors. The primary instruments include the CMAI, pre-, mid-, and post-intervention staff perception surveys, and incident reports. Each instrument is described in detail in the following sections.

Cohen-Mansfield Agitation Inventory (CMAI)

The Cohen-Mansfield Agitation Inventory (CMAI) is a validated 29-item instrument designed to measure the frequency of agitated behaviors in patients with dementia. Each item was rated on a 7-point Likert scale, ranging from one (never) to seven (several times per hour), allowing for detailed assessment of both the type and frequency of agitated behaviors observed during patient care (Kratzer et al., 2023). The total CMAI score reflected the cumulative frequency of behavioral symptoms, providing a basis for comparison across multiple time points.

Research established that the CMAI demonstrated strong internal consistency and construct validity in clinical and acute care settings (Kupeli et al., 2018). Staff administered the CMAI at baseline before the intervention and continued weekly assessments for six consecutive weeks. Data collected through the CMAI provided ordinal-level measurements, supporting longitudinal analysis of changes in patient behavior over the course of the intervention.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Reductions in CMAI scores indicated decreases in the frequency or severity of aggressive behaviors, reflecting the effectiveness of the intervention strategies implemented. Written permission to use the CMAI was obtained from Allen at Options for Living, Inc. on November 25, 2024, ensuring appropriate authorization for its inclusion in this project.

Staff Confidence and Competence Survey

A staff perception survey was used to assess healthcare staff's confidence and competence in managing aggressive behaviors exhibited by patients with dementia. The survey measured three core constructs: confidence in recognizing behavioral triggers, ability to apply de-escalation techniques, and preparedness to use patient-centered communication strategies. Each item was rated on a 5-point Likert scale, ranging from one (strongly disagreed) to five (strongly agreed), allowing for structured measurement of staff perceptions across the intervention period.

The survey was developed specifically for this project using recommendations from existing research on dementia care training programs to ensure alignment with evidence-based practices (Gkioka et al., 2020). The survey design prioritized clarity, neutrality, and consistency with the intended constructs to minimize potential response bias. Although the instrument was not pilot tested, it was designed following best practices in survey construction to support internal consistency and validity (Althubaiti, 2016). The survey collected ordinal-level data, enabling comparative analysis of pre-, mid- and post-intervention responses to evaluate changes in staff perceptions and competencies over time.

CMAI Documentation Monitoring and Behavioral Incident Feedback

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

CMAI documentation compliance was monitored throughout the six-week intervention to evaluate staff engagement with the behavioral assessment tool. Staff completed CMAI entries weekly within the Cerner Ad Hoc documentation system for patients with dementia. These entries were reviewed descriptively to confirm consistent use of the CMAI and to identify patterns in staff documentation practices over time. Completion trends served as an indicator of implementation fidelity, reflecting staff adherence to the intervention process.

In addition to CMAI documentation, manager feedback and staff survey responses were used to identify the frequency and nature of aggressive behaviors observed during the project. The nurse manager reported two dementia-related aggression incidents during the final weeks of the intervention, both of which were managed effectively using the MESSAGE communication framework. Although formal incident data extraction from the hospital's RL reporting system was not conducted, qualitative feedback from staff and leadership provided complementary insights into behavioral trends and staff response effectiveness.

This approach supported triangulation of data sources and offered a comprehensive understanding of how consistent CMAI documentation and structured communication training influenced staff practice and patient care outcomes. The combination of weekly CMAI monitoring, staff feedback, and manager observations demonstrated improvements in documentation consistency, communication confidence, and recognition of behavioral triggers across the intervention period.

Staff Qualitative Feedback

Following the intervention, staff completed an open-ended feedback survey to evaluate their experiences with the communication training program and the use of the Cohen-Mansfield

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Agitation Inventory (CMAI) tool. The post-intervention survey invited staff to describe any changes in their confidence when managing aggressive behaviors, identify functional aspects of the training and CMAI implementation, and provide suggestions for improving future training initiatives.

Qualitative responses underwent content analysis to identify common themes, including perceived benefits, challenges encountered, and recommendations for refining the intervention. This analysis supplemented the quantitative findings by providing contextual insights into how staff perceived the relevance, applicability, and feasibility of the training and assessment tools in their daily clinical practice (Castro et al., 2024).

Incorporating staff qualitative feedback supported the embedded mixed methods design by capturing in-depth perspectives on training effectiveness and implementation barriers. These insights informed the evaluation of whether the intervention was both effective and sustainable for long-term practice improvements in dementia care. Staff reflections also highlighted practical considerations for enhancing future iterations of the training program and optimizing the integration of the CMAI within clinical routines.

Validity

This approach employed established instruments to assess changes in staff perception and patient behavior following a structured intervention. The author reviewed each of the instruments to ensure that they fit the intended purpose of the project and that they measured the intended constructs as designed. These steps contributed to the overall credibility of the data and the results.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The CMAI was the only instrument used to measure agitation in patients with dementia. Researchers established the content validity of this measurement tool through rigorous testing in clinical environments (Kupeli et al., 2018). The study employed the full, unaltered CMAI and scoring format, which did not negatively affect the internal validity of this project (Kratzer et al., 2023).

Pre-, mid-, and post-intervention surveys used a 5-point Likert scale to assess behavior recognition, de-escalation strategies, and patient-centered communication, drawing on the dementia care communication literature (Gkioka et al., 2020). Although not externally validated, the survey's structure and alignment with learning goals supported internal consistency (Althubaiti, 2016). Staff also provided open-ended comments after the intervention, reflecting on their experience with the training and the use of the CMAI tool.

Content analysis identified common themes, supporting the exploration of relationships between the qualitative and quantitative findings (Castro et al., 2024). Utilizing this method enhanced the results by incorporating staff perceptions and adding depth to the understanding of how the intervention functioned in the clinical setting.

Reliability

The CMAI demonstrated strong reliability and internal consistency across various care settings, with Cronbach's alpha values ranging from 0.82 to 0.92 (Kupeli et al., 2018). The CMAI showed stability across diverse clinical environments, which supported its consistent performance in varied care contexts (Sun et al., 2022). Maintaining the tool's original structure throughout the six-week intervention ensured reliability and accuracy.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Pre-, mid-, and post-intervention surveys were formatted, worded, and presented on a 5-point Likert scale to ensure consistent and valid responses. All three surveys measured behavioral recognition, de-escalation strategies, and patient-centered communication. Although not externally validated, the survey adhered to best practices for internal consistency and aligned with the existing literature on dementia care communication (Van Manen et al., 2020). Studies indicated that organized questionnaires contributed to greater stability in response rates (Mellinger et al., 2023).

All staff responded to the same open-ended questions, which helped maintain consistency in the data collection process. Patterns of responses were identified through content analysis, thereby ensuring the validity of interpretation (Moody et al., 2024). This dementia care research-based approach lent strength to the evidence and supported the findings by contributing to the integrity of data collection during the intervention (James et al., 2023).

Data Collection and Management

The data collection process began after Pennsylvania Western University's Institutional Review Board (IRB) granted approval on September 2, 2025 (see Appendix A for the IRB approval letter). Before initiating the intervention, the author provided eligible staff with detailed information explaining the project's purpose, ethical considerations, and the voluntary nature of participation. The author distributed informed consent forms, which explained that participation was voluntary, responses were anonymous, and participants could skip questions or withdraw from the project at any time. Staff indicated their consent to participate by signing the informed consent form, adhering to ethical guidelines for quality improvement initiatives.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The author developed staff perception surveys specifically for this project to measure confidence in managing aggression, recognizing behavioral triggers, applying de-escalation strategies, and using the Cohen-Mansfield Agitation Inventory (CMAI). These surveys included identical Likert-scale items and open-ended questions to ensure consistency across pre-intervention, mid-intervention, and post-intervention data collection points. The pre-intervention survey assessed baseline perceptions, the mid-intervention survey captured early shifts, and the post-intervention survey evaluated overall changes following the intervention. Copies of the pre-, mid-, and post-intervention surveys are provided in Appendix B.

During week one, staff members completed the pre-intervention survey to establish a baseline for their perceptions and confidence levels. Staff also completed the CMAI for each dementia patient under their care to document the frequency and severity of agitated behaviors (Kupeli et al., 2018). These baseline assessments provided the foundation for measuring changes throughout the intervention.

The six-week intervention included weekly CMAI assessments for each patient to monitor fluctuations in behavioral symptoms. At the end of week three, the project lead administered the mid-intervention survey to identify early shifts in staff confidence and skills. During week six, staff completed the post-intervention survey, which used the same format as the pre- and mid-intervention surveys to ensure consistent measurement (Van Manen et al., 2020).

The staff surveys employed a 5-point Likert scale for quantitative measurement and maintained identical formatting across all three time points to support internal consistency and minimize response variability. Survey items aligned with best practices in dementia care education and measured changes in staff perceptions and skills related to aggression management

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

(Gkioka et al., 2020). This approach enabled a structured comparison of quantitative outcomes across the intervention period.

In addition to survey data, the data collector monitored staff engagement with the CMAI documentation tool in the Cerner electronic health record. CMAI entries were reviewed descriptively to evaluate completion trends and to identify patterns in behavioral documentation. The author also consulted with the nurse manager to confirm observed changes in staff response behaviors and documentation consistency.

The surveys also included open-ended questions inviting staff to reflect on their experiences with the communication training and the CMAI tool. The author analyzed these qualitative responses to gather narrative feedback on the intervention's usefulness, feasibility, and perceived impact (Moody et al., 2024). A comprehensive content analysis identified patterns and contextualized the quantitative data, providing a fuller understanding of staff perceptions.

The project followed a structured data collection timeline. Week one included informed consent, pre-intervention surveys, and baseline CMAI assessments. Weeks two through six involved ongoing CMAI tracking, a mid-point survey at week three, a post-intervention survey at week six, and qualitative feedback collection.

In accordance with institutional guidelines, the project coordinator retained all collected data for three years following project completion. At the end of this retention period, the author will permanently delete all digital files and shred any remaining paper records. These procedures ensured secure handling of sensitive information and maintained compliance with ethical research protocols (Mellinger et al., 2023).

Data Analysis Procedures

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

This quality improvement project used both quantitative and qualitative data to evaluate the effects of structured communication training and the Cohen-Mansfield Agitation Inventory (CMAI) on staff perception and patient aggression. The analysis followed a quasi-experimental, embedded mixed-methods design, ensuring alignment with the study's research questions and methodology. The researcher analyzed pre-, mid-, and post-intervention survey data, CMAI scores, and qualitative staff responses to determine changes over time.

Quantitative data included ordinal-level responses from the staff perception surveys and weekly CMAI scores. The surveys measured three constructs: recognition of behavioral triggers, use of de-escalation strategies, and confidence in patient-centered communication. Each survey item used a 5-point Likert scale, and the same items appeared on all three versions to ensure consistency across the study. The project calculated descriptive statistics, including means and standard deviations, to summarize responses for each survey construct. The analysis used paired-samples t-tests to compare pre-, mid-, and post-intervention survey scores and evaluate statistically significant changes.

CMAI scores were averaged and examined for trends throughout the intervention. To confirm accuracy and completeness, the evaluator reviewed all surveys and CMAI forms. This process included checking for missing responses and verifying the consistency of data entry. After verification, the responses were coded and scored according to established procedures (Mellinger et al., 2023).

Content analysis guided the interpretation of qualitative data. Staff completed open-ended prompts after the intervention to reflect on the communication training and use of the CMAI tool. The project compared pre-, mid-, and post-intervention survey scores and assessed

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

significant changes. This analysis identified patterns that complemented the quantitative results and strengthened internal validity (James et al., 2023). Consistent coding ensured reliability, and the analysis continued until no new themes emerged (Moody et al., 2024).

The evaluation enhanced the credibility of its findings by using triangulation through the combined use of the CMAI tool, communication training, and structured staff surveys. The scope and quality of data collected were sufficient to answer all research questions and offer insights for improving care for patients with dementia (Castro et al., 2024).

Ethical Considerations

This quality improvement project aimed to equip staff with evidence-based tools and targeted communication training to reduce aggressive behaviors in patients with dementia. The project did not include a comparison group, randomized assignment, or experimental procedures. Staff participants did not collect sensitive or identifiable patient information, and all activities aligned with routine clinical practice improvements. These characteristics qualified the project for exempt status under federal research regulations.

The author submitted documentation to Pennsylvania Western University's Institutional Review Board (IRB) and received a determination of exemption approval on September 2, 2025 (see Appendix A). Although the project did not involve protected health information or experimental risk, the author obtained written informed consent from all participants. The author distributed an informed consent handout via email, which described the project's goals, emphasized the voluntary nature of participation, and confirmed that responses remained separate from job performance evaluations. Staff signed and returned the consent form

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

electronically before completing any surveys or the Cohen-Mansfield Agitation Inventory (CMAI).

The author secured all signed informed consent forms in a password-protected institutional email account, where they were stored in a restricted folder accessible only to the investigator. Survey responses and CMAI data were de-identified prior to analysis and stored electronically in a password-protected file on the author's secure institutional computer. No documents contained names or identifying information. The project ensured that all survey data remained separate from staff performance evaluations to maintain participant anonymity and confidentiality throughout the data collection process. All data was used solely for quality improvement evaluation purposes and were not shared outside the approved academic and clinical oversight channels.

The project upheld the ethical principles of autonomy, beneficence, and justice. Staff participation remained voluntary, respecting their right to choose involvement. The intervention promoted beneficence by introducing no known risks and providing valuable training to enhance dementia care practices. The project ensured fairness and justice by offering all eligible staff the opportunity to participate and share feedback. Institutional oversight through the IRB and strict data privacy measures safeguarded participant confidentiality throughout the project.

Limitations and Delimitations

Because this quality improvement project did not use randomization or include a control group, it limited the ability to attribute observed outcomes directly to the intervention. As participation was voluntary, the sample may not have been representative of the general staff population. Participants who held more positive attitudes toward dementia care or greater

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

confidence in managing aggressive behaviors may have had a disproportionate influence on the results. The possibility of self-selection bias may have reduced generalizability to all healthcare workers in acute care settings.

Limiting the implementation to one unit prevented the inclusion of staff experiences and perceptions from other units or healthcare institutions. The primary sources of data collection were self-report surveys and staff responses to the CMAI, which can be susceptible to response bias. Staff may have overreported improvements due to social desirability or poor recall. The implementation period was limited to six weeks, which may have restricted observation of long-term changes.

The use of validated instruments such as the CMAI enhanced the accuracy and credibility of the data. Communication training, paired with structured surveys and consistent application of the CMAI, helped minimize potential bias in data collection. Although some limitations were present, they were reasonable and did not undermine the significance or applicability of this quality improvement initiative. Future projects may explore how well this approach applies and sustains across other care environments.

Summary

Chapter Three outlined the methodology for a quasi-experimental, embedded mixed-methods quality improvement project conducted in an acute care setting experiencing an increase in aggressive behaviors among patients with dementia. This project used the design to assess the impact of structured communication training and the CMAI on staff ability to recognize and manage aggression in dementia care (Kratzer et al., 2023). Quantitative data were collected

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

through CMAI scores and staff surveys, while qualitative data from open-ended responses provided additional insight into the intervention's influence.

The research questions and hypotheses aligned directly with the project's identified problem and purpose. The intervention aimed to improve staff perception of aggression, increase confidence in managing behaviors, and enhance the ability to recognize behavioral triggers. The project applied the Transtheoretical Model of Behavior Change and Jean Watson's Theory of Human Caring to support both behavioral adaptation and relationship-centered care (Riegel et al., 2018).

Data collection involved standardized instruments, including the CMAI and staff perception surveys. The CMAI measured the frequency and type of agitated behaviors in patients with dementia (Kupeli et al., 2018). Pre-, mid-, and post-intervention surveys assessed staff confidence, perceptions, and use of communication techniques (Gkioka et al., 2020). Open-ended survey items captured qualitative feedback to complement the quantitative results and evaluate the intervention's relevance from the staff perspective.

The sample included ten to fifteen licensed and unlicensed staff who provided direct care on the 6 North unit. Convenience sampling supported feasibility in the fast-paced clinical environment and aligned with quality improvement methods in healthcare (Handley et al., 2018). The IRB approved the project on September 2, 2025, following exempt review (see Appendix A). Staff received project information and provided informed consent prior to participation.

The analysis plan included descriptive statistics and paired-samples t-tests to evaluate differences in survey scores and CMAI data before and after the intervention. These analyses identified whether the training improved staff awareness, use of de-escalation strategies, and

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

confidence in communication. Qualitative data underwent content analysis to support interpretation of staff experiences and perceptions of the training.

This project's limitations included the absence of a control group, potential response bias, and limited generalizability. Despite these challenges, the use of validated instruments and structured communication strategies strengthened the credibility and reliability of the findings. These methods supported accurate interpretation of staff responses and reinforced confidence in the overall results.

Chapter Three demonstrated full alignment with the Ten Strategic Points, connecting the problem, purpose, research questions, methodology, design, instrumentation, and analysis approach. The structured and ethical implementation laid the groundwork for improving dementia care and informed the development of future interventions in similar clinical settings. Chapter Four presents the data and explores the results, offering a detailed view of the intervention's impact on unit-level outcomes.

CHAPTER 4: DATA ANALYSIS AND RESULTS

Introduction

The purpose of this quality improvement project was to evaluate the impact of implementing the Cohen-Mansfield Agitation Inventory (CMAI) and targeted MESSAGE communication training on healthcare staff's perceptions of aggression in patients with dementia. Aggressive behaviors among individuals with dementia were increasing and often led to increased stress and decreased quality of care. The goal of this project was to determine whether introducing a structured aggression assessment tool and communication framework together

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

could enhance staff confidence, competence, and documentation practices related to aggression management in dementia care.

The project utilized a quasi-experimental pre-, mid-, and post-design to measure changes in staff perceptions following the implementation of the Cohen-Mansfield Agitation Inventory (CMAI) and the MESSAGE communication training. Qualitative data was gathered from open-ended survey questions and manager responses describing weekly staff engagement, observed behaviors, and CMAI utilization. The research question that guided this project was: Does implementing the Cohen-Mansfield Agitation Inventory (CMAI) and targeted communication training improve healthcare staff's perception of aggression in dementia patients compared to standard training?

This chapter presented an analysis of data collected during the six-week project and summarized the descriptive findings. The results were organized by pre-, mid-, and post-intervention data to illustrate changes in staff perceptions and practices over time. Both quantitative and qualitative findings were synthesized to capture the overall effect of the intervention on staff perceptions, confidence, competence, and documentation of aggressive behaviors. The following section describes these findings in detail and highlights patterns that emerged throughout the intervention period.

Descriptive Findings

Data was collected during the six-week quality improvement project from staff members on the 6 North acute care unit. Staff members voluntarily provided informed consent electronically before participating in the implementation of the Cohen-Mansfield Agitation Inventory (CMAI) and the MESSAGE communication training. A total of twelve participants (n

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

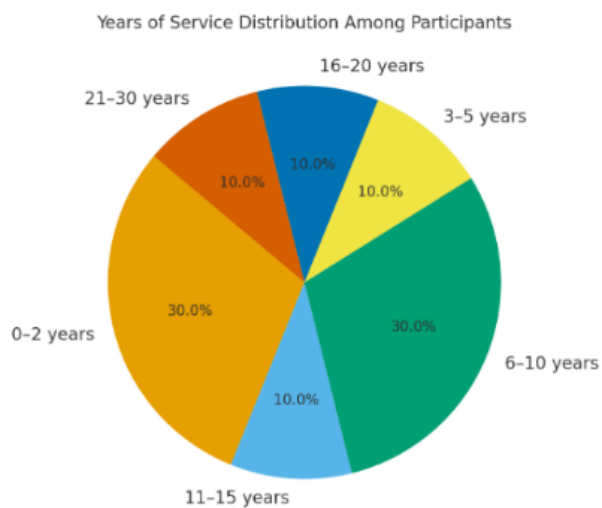
= 12) completed the pre-intervention survey, seven (n = 7) completed the mid-intervention survey, and ten (n = 10) completed the post-intervention survey. Because this project used a quality-improvement design within a single acute-care unit, the project team did not conduct an *a priori* sample-size calculation. The sample consisted of nurses and clinical assistants who agreed to take part and were present during the data collection period. The quantitative portion of the project drew from six Likert-scale survey items that examined staff confidence, competence, recognition of triggers, comfort with documentation, and the level of support perceived when managing challenging behaviors. Qualitative data were drawn from open-ended survey questions and managerial feedback describing staff engagement and observed changes in clinical behavior during the intervention period.

The demographic item of years of service offered additional context for interpreting the results. Participants brought a wide range of professional experience, from newly hired staff to those with more than fifteen years of experience. Most staff had between five and ten years of service. At baseline, staff with longer tenure generally reported greater confidence in recognizing triggers and documenting behaviors, whereas those with less than five years of experience reported lower initial confidence. As the project progressed, the differences in experience levels decreased. In the post survey, nearly all participants, regardless of tenure, reported comparable levels of confidence. This data suggests that combining the MESSAGE communication training along with the CMAI tool provided a structured framework that supported staff in managing aggression effectively, regardless of tenure.

Figure 5

Years of Service Distribution Among Staff

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients



Note. Figure illustrates the distribution of staff experience levels ($n = 10$). The majority of staff reported between 6 and 10 years of professional experience, followed by 0–2 years and 11–15 years.

The data revealed a steady improvement from the beginning to the end of the project. Staff members reported greater confidence in managing aggressive behaviors after completing the MESSAGE communication training and using the CMAI documentation tool. At week one, results revealed that only a few individuals felt comfortable recognizing early signs of aggression or applying de-escalation techniques. By the midpoint of the project, about half reported increased confidence. By week six, most reported feeling capable of recognizing early signs of aggression and applying de-escalation techniques. Staff also expressed growing comfort with documenting behaviors through the CMAI, suggesting that the tool had become familiar in daily use.

Staff described clear improvements in their understanding of the factors that triggered aggression and, in their ability to anticipate patient needs. Many staff members noted that the

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

MESSAGE training encouraged them to slow interactions, maintain a calm tone, and use consistent phrasing when communicating with patients who showed early signs of aggression (Young, 2021). Together, these strategies appeared to make it easier to de-escalate situations and maintain a safer environment. The use of the CMAI added structure to documentation and made patterns of aggression easier to identify, which increased staff accountability and situational awareness.

Qualitative comments supported these quantitative trends. Prior to the intervention, staff frequently reported frustration and uncertainty when faced with aggressive behavior and difficulty predicting when it might occur. Midway through the project, staff noted that they were becoming more aware of early warning signs and working together more effectively when responding to aggression. Several described the CMAI as "helpful," "easy to use," and "a good reminder to document consistently." Others said the MESSAGE video provided clear examples that reinforced the influence of tone and pacing on patient responses.

The nurse manager's feedback aligned with the project's overall results. On the post-intervention survey, the nurse manager agreed or strongly agreed that staff confidence had improved, that recognition of early behavioral triggers had increased, and that the MESSAGE communication training strengthened teamwork. The nurse manager also reported that staff used the CMAI tool regularly and appeared calmer and more at ease when caring for patients who displayed aggression.

In the open-ended section of the survey, the nurse manager noted that the unit's patient census was lower than usual during the project period, which reduced the number of aggressive incidents. Even with fewer encounters, staff were more aware of subtle behavioral changes and

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

responded sooner to early signs of aggression. Verbal aggression remained the most common behavior observed. The nurse manager described staff as calmer, clearer in their communication, and more confident when using de-escalation techniques.

The nurse manager identified one minor workflow issue. Locating the CMAI form within the Ad Hoc section of Cerner occasionally made documentation less efficient, particularly during high patient activity. However, as the project continued, staff became more familiar with the tool and documented it more efficiently. Overall, the nurse manager's observations suggested that the project improved staff preparedness, communication, and patient care, even during a period of lower census.

Project results showed steady improvement in how staff handled aggressive behavior in patients with dementia after using the CMAI tool and MESSAGE training. Staff became more confident, recognized triggers sooner, and documented behavior more consistently. The inclusion of years of service data showed that the intervention benefited all staff, regardless of tenure, reducing differences in confidence and responses. According to feedback from the nurse manager, teamwork improved, communication felt calmer, and staff applied de-escalation skills more often. All these outcomes suggest that using a structured documentation system, along with dementia-specific communication training, fostered a more proactive, collaborative approach to patient care, ultimately supporting patient safety and staff well-being.

Data Analysis Procedures

The project team analyzed the data using a mixed-methods descriptive approach to assess how using the Cohen-Mansfield Agitation Inventory (CMAI) and MESSAGE communication training together influenced staff perceptions of aggression in patients with dementia. The project

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

team collected and analyzed both quantitative and qualitative data to evaluate whether staff confidence, competence, and recognition of behavioral triggers improved during the six-week project. The team based the data analysis process on the project's three hypotheses, which examined changes in staff perceptions, confidence, and recognition of triggers following the intervention. Participation varied slightly across data-collection points (n = 12 pre-intervention, n = 7 mid-intervention, and n = 10 post-intervention) due to staff scheduling and availability during the six-week project.

Quantitative Data Analysis

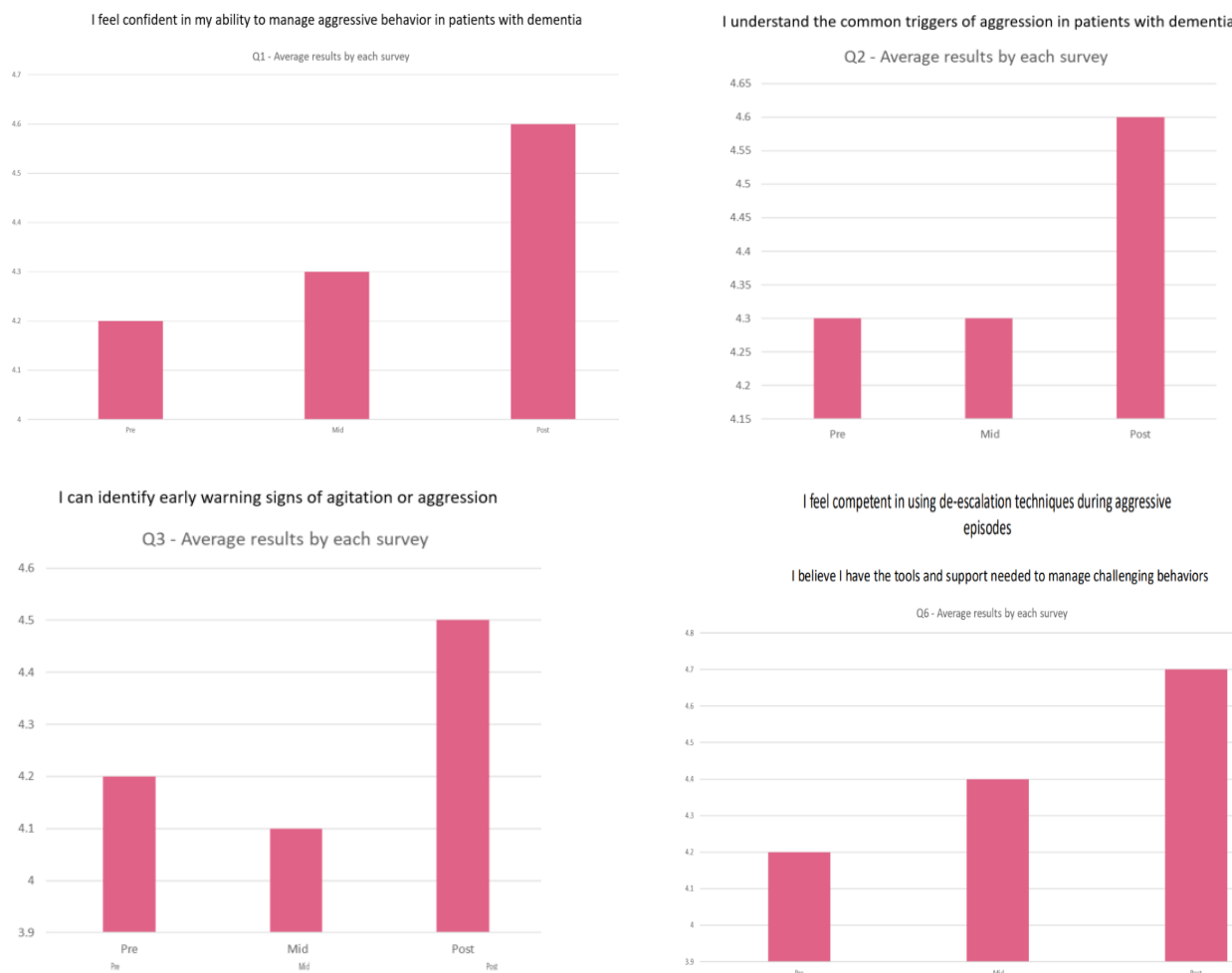
Participating staff received six-item Likert-scale surveys administered prior to, midway through, and following the project, which provided the quantitative data for analysis. Each measured key aspects of staff perception, confidence in managing aggressive behaviors, competence in recognizing early warning signs, and awareness of patient triggers. The data from all three time points were entered into a secure spreadsheet and verified for accuracy and completeness before analysis.

Descriptive statistical methods summarized participant responses. Frequencies, percentages, and mean scores identified changes across the pre-, mid-, and post-intervention phases. The analysis included figures that displayed these patterns and allowed straightforward comparison of data trends over time. The descriptive analysis focused on identifying changes that reflected improvement in staff perceptions and the management of patient behaviors. Due to the small sample size and the project's quality-improvement design, inferential testing was not performed. The analysis focused on identifying observable trends rather than determining statistical significance.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Figure 1

Staff Confidence in Managing Aggressive Behaviors (Pre-, Mid-, and Post-Intervention)



Note. Results derived from a six-item Likert-scale staff survey (n = 12 pre, n = 7 mid, n = 10 post).

Qualitative Data Analysis

The project team gathered qualitative data from open-ended survey questions and from narrative feedback provided by the nurse manager at the end of the project. The team reviewed

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

staff responses several times to identify recurring themes and patterns reflecting their experiences with aggression management and the use of the CMAI tool. Through thematic analysis, the team coded statements and identified common themes, including improved recognition of patient triggers, more effective communication, increased ease with de-escalation, and stronger teamwork in managing aggressive behaviors.

Figure 2

Staff Reflections on Managing Aggression Before the Intervention

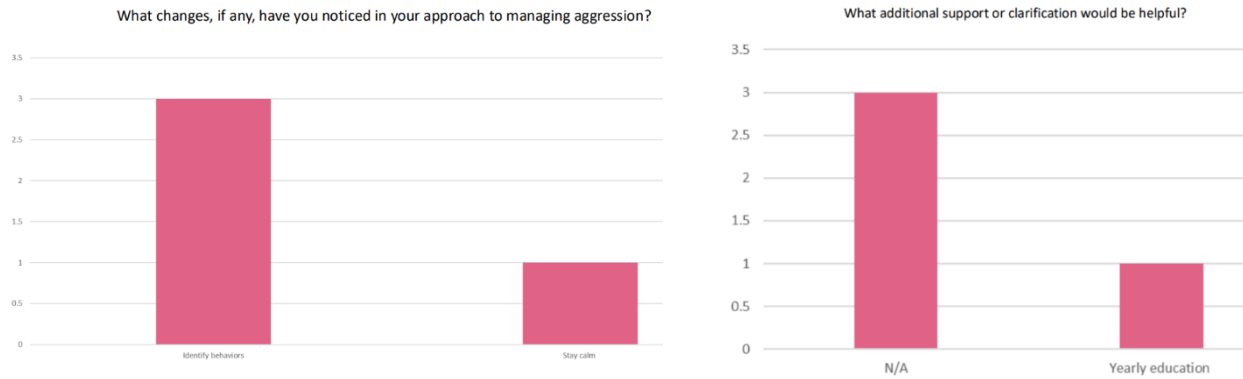


Note. Qualitative data was obtained from open-ended survey responses collected before the implementation of the CMAI and MESSAGE communication training. Responses reflect staff perceptions of challenges and emotional reactions to aggressive patient behaviors prior to the intervention.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Figure 3

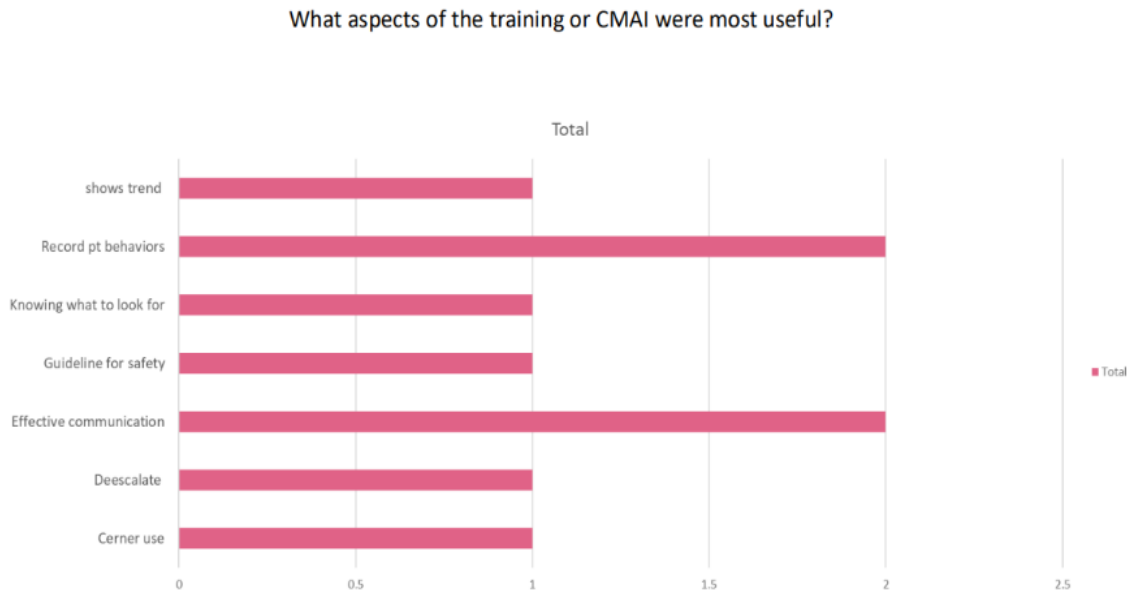
Staff Responses to Mid-Intervention Open-Ended Questions



Note. Figure displays the frequency of staff comments from mid-intervention open-ended survey questions ($n = 7$). Responses were categorized by recurring themes: identifying behaviors, staying calm, and suggested needs for additional support or yearly education.

Figure 4

Staff Reflections on Post-Intervention Open-Ended Questions



Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Note. Figure displays the frequency of staff comments from post-intervention open-ended survey questions (n = 10). Responses were categorized by common themes including effective communication, recording patient behaviors, identifying safety guidelines, de-escalation, and recognizing behavioral trends.

The nurse manager's feedback was included in the qualitative review to give additional perspective on the staff survey findings. The feedback described how staff became more consistent in documenting behaviors with the CMAI and talked more often about patient triggers during shift handoffs. Project data also showed a gradual decline in reported aggression incidents over the weeks. These observations helped explain the quantitative results and illustrated how the intervention strengthened staff awareness, confidence, and steadiness when responding to aggressive behaviors.

Integration of Quantitative and Qualitative Data

Integrating the quantitative and qualitative results provided a fuller picture of how the project affected staff perceptions and practice. The quantitative findings showed measurable improvement in how staff recognized and managed aggression, while the qualitative feedback added practical insight into what those changes looked like in daily care. Taken together, the results supported the project's purpose and the alternative hypotheses, showing that the use of the CMAI and MESSAGE training had a positive impact on staff awareness and management of aggression in dementia care.

Results

This section presents the results of the six-week quality improvement project that examined whether implementing the Cohen-Mansfield Agitation Inventory (CMAI) together

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

with MESSAGE communication training improved healthcare staff perceptions of aggression in patients with dementia. The analysis organizes the results according to the three hypotheses that guided the study: (1) staff perceptions of aggression, (2) staff confidence in managing aggressive behaviors, and (3) staff recognition of behavioral triggers. Quantitative and qualitative findings together provide a comprehensive view of the project outcomes.

Hypothesis 1: Staff Perception of Aggression

The first hypothesis proposed that staff perceptions of aggression would improve after implementing the CMAI and MESSAGE communication training. Survey results supported this expectation. Staff reported a steady increase in understanding and comfort when managing patients who displayed aggressive behaviors. Before the intervention, responses reflected uncertainty and uneven recognition of how severe aggression could become. By the midpoint of the project, staff showed moderate improvement in both awareness and understanding of these behaviors. By the end of the intervention, most staff reported increased ability to identify aggression early, recognize contributing factors, and apply appropriate de-escalation strategies.

Qualitative data supported these quantitative trends. Staff reported feeling more confident when dealing with aggressive patients and were more alert to early behavioral triggers. Many mentioned that the MESSAGE training video gave realistic examples of calm communication and helped them stay steady when addressing patient needs. The nurse manager noticed fewer incidents of escalation and said staff were discussing patient triggers more often during handoffs. Overall, these findings suggested that the training improved staff's understanding and management of aggression, supporting the first alternative hypothesis (H_{1a}).

Hypothesis 2: Staff Confidence in Managing Aggressive Behaviors

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The second hypothesis proposed that staff confidence in managing aggressive behavior would improve after the training. The data supported that expectation. Confidence scores rose at every stage of data collection. At the start, only a few staff members said they felt comfortable managing aggression on their own. By the middle of the project, about half reported feeling more confident when using the new techniques. At the end of six weeks, most staff reported feeling both confident and supported when responding to aggressive patients.

Qualitative responses further validated this improvement. Several staff reported feeling less anxious and more in control when caring for patients with aggressive behaviors. One nurse explained that combining the MESSAGE training with the CMAI form "gave structure to what used to feel chaotic." Others described stronger teamwork and more transparent communication. The nurse manager reported similar observations, noting a calmer environment in which staff appeared more relaxed and steadier throughout their shifts. Collectively, these findings supported the second alternative hypothesis (H_{2a}), indicating that staff confidence improved following the implementation of the CMAI and MESSAGE training.

Hypothesis 3: Recognition of Behavioral Triggers

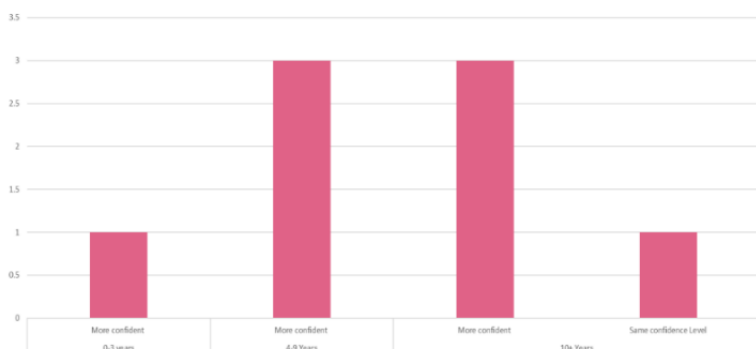
The third hypothesis proposed that staff would become more proficient at recognizing behavioral triggers following the intervention. Quantitative survey results supported this expectation, showing an upward improvement from pre- to post-intervention. Most participants reported being more aware of the factors that could lead to aggression and felt more comfortable documenting those patterns. Staff described paying closer attention to environmental and personal stressors such as noise or certain care activities that tended to provoke aggression.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Figure 6

Staff Confidence in Managing Aggressive Behavior by Years of Experience

How has your confidence changed in managing aggressive behavior since week one? (by Experience)

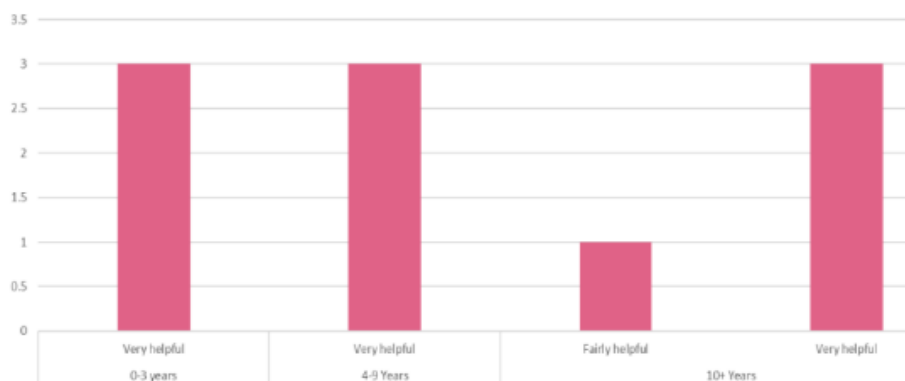


Note. Figure displays staff confidence ratings from the post-intervention survey, grouped by years of experience. Data were derived from Likert-scale survey responses collected at the conclusion of the six-week project (n = 10).

Figure 7

Perceived Helpfulness of the MESSAGE Communication Training by Years of Experience

How helpful was the message communication training video? (by experience)



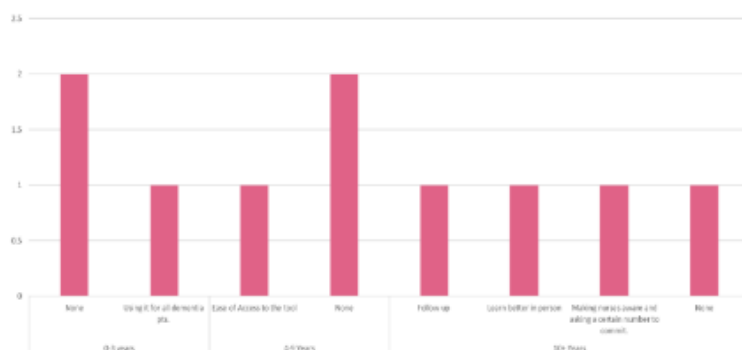
Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Note. Figure displays staff ratings of the MESSAGE communication training video from the post-intervention survey, grouped by years of experience. Data were obtained from Likert-scale responses collected at the conclusion of the six-week project ($n = 10$).

Figure 8

Staff Suggestions for Improving Future Training by Years of Experience

What suggestions do you have for improving future training on this topic? (By experience)



Note. Figure summarizes qualitative feedback from post-intervention open-ended survey questions, categorized by years of experience. Ten participants ($n = 10$) provided comments highlighting needs for ongoing annual education, reinforcement of communication strategies, and opportunities for simulation-based practice.

Qualitative data reinforced these findings. Staff comments supported these results. Staff reported a clearer understanding of how patient-specific factors such as pain, unmet needs, or confusion often contributed to aggressive behavior. The nurse manager noted that staff seemed to identify and communicate these triggers earlier, which helped prevent escalation. This progress showed that staff were not only identifying triggers more consistently but were also taking steps to reduce them. Together, these findings supported the third alternative hypothesis (H_{3a}),

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

confirming that the use of the CMAI and MESSAGE communication training improved staff awareness of behavioral triggers.

Integration of Findings

The combined analysis of quantitative and qualitative data showed that the quality improvement project met its intended goals. Quantitative results demonstrated steady growth in staff perception, confidence, and ability to recognize behavioral triggers. Some of the qualitative comments provided additional context, showing how staff incorporated these skills into their everyday routines. The thematic analysis highlighted more transparent communication, better teamwork, and earlier intervention when patients showed signs of aggression. The nurse manager's observations supported these results, noting a calmer environment and fewer aggressive incidents on the unit.

Overall, the findings supported all three alternative hypotheses (H_{1a}, H_{2a}, H_{3a}). Implementing the CMAI and MESSAGE communication training together improved healthcare staff's perceptions of aggression, enhanced their confidence in managing aggressive behaviors, and strengthened their recognition of behavioral triggers among patients with dementia. These results provided strong evidence that the intervention improved care quality and created a safer, more supportive environment for both patients and staff.

Summary

This chapter summarizes and analyzes data gathered during a six-week quality improvement project that evaluated the impact of implementing the Cohen-Mansfield Agitation Inventory (CMAI) and the MESSAGE communication training on healthcare staff's perceptions of aggression in patients with dementia. Pre-, mid-, and post-intervention surveys, along with

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

additional narrative feedback, provided quantitative and qualitative data. The analysis showed improvement in staff perception of aggression, confidence in managing aggressive behaviors, and recognition of behavioral triggers.

Both the quantitative and qualitative data indicated that integrating the CMAI with the MESSAGE training enhanced staff confidence, competence, and perceptions of their ability to manage aggression in patients with dementia. Descriptive data showed upward trends across survey measures, while qualitative feedback from staff and the nurse manager confirmed fewer aggressive incidents, stronger teamwork, and more transparent communication. Together, these results supported all three alternative hypotheses (H_{1a}, H_{2a}, and H_{3a}) and affirmed that structured assessment tools combined with targeted communication training enhance care quality and safety.

Although the outcomes were positive, the project faced limitations. A small sample size reduced generalizability, and the short duration limited evaluation of long-term sustainability. Some staff also found the CMAI Ad Hoc form in Cerner difficult to access. In addition, because the data were self-reported, some level of response bias may have occurred. The project also took place in a single unit that experienced a lower-than-usual census during the study period, reducing participant availability and data-collection opportunities. Despite these factors, the project showed that structured communication training and standardized behavioral tools can strengthen staff perceptions and performance and improve patient outcomes.

In summary, Chapter Four confirmed that the quality improvement project met the intended goals, supporting all three alternative hypotheses. Chapter Five will present the summary, conclusions, and recommendations drawn from these findings, focusing on their

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

relevance to nursing practice, leadership, and continued quality improvement efforts. This discussion will highlight how the outcomes can guide future initiatives to strengthen staff competency and improve dementia care delivery.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction and Summary of Study

The purpose of this quality improvement project was to evaluate the impact of implementing the Cohen-Mansfield Agitation Inventory (CMAI) and targeted MESSAGE communication training on healthcare staff's perceptions of aggression in patients with dementia. The project examined whether combining a structured aggression-assessment tool along with dementia-specific communication training could enhance staff confidence, competence, perception, and recognition of behavioral triggers. Aggressive behaviors in patients with dementia remain an ever-growing challenge in healthcare, often leading to increased stress, inconsistent responses, and elevated safety concerns. To address these issues, this quality improvement project implemented evidence-based strategies to foster safer, more consistent practices.

This chapter summarizes the project's framework and key findings. Ten strategic points guided the study and shaped its design to address the lack of standardized methods for assessing and managing aggression in dementia care settings. Three hypotheses examined changes in staff perceptions, confidence, and recognition before and after implementation. The project was grounded in two theoretical frameworks: Prochaska and DiClemente's Transtheoretical Model of Behavior Change and Watson's Theory of Human Caring, both of which emphasize behavioral transformation and compassionate, relationship-based care.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

A quasi-experimental mixed-methods design was employed over six weeks on the 6 North acute care unit. Participants included nurses and clinical assistants who voluntarily provided informed consent to participate in the project. Data was collected at three points: pre-, mid-, and post-intervention using Likert-scale surveys and open-ended questions. Descriptive statistics summarized quantitative responses, and thematic analysis identified patterns and themes within qualitative feedback. Quantitative results showed steady improvement in staff perception of aggression, confidence, and recognition of behavioral triggers. At the same time, qualitative data revealed themes of improved teamwork, more transparent communication, and earlier recognition of aggressive patterns. Limitations included a small sample size, a short project duration, a lower-than-usual unit census, and challenges initially locating the CMAI form in Cerner, which affected documentation consistency.

Overall, the project demonstrated that combining the CMAI with MESSAGE training produced positive outcomes. Staff reported greater confidence in managing aggression and improved recognition of behavioral triggers. These outcomes align with the project's purpose and hypotheses, affirming that structured behavioral assessment tools, when paired with targeted communication strategies, can enhance the quality of dementia care and staff readiness. These results not only validate the effectiveness of this intervention within an acute care unit but also underscore the importance of continued investment in evidence-based staff training to sustain a culture of safety and compassion. This chapter will further interpret these findings by presenting the conclusions, implications for nursing practice and leadership, and recommendations for sustaining and expanding these quality improvements across clinical settings.

Summary of Findings and Conclusions

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

This section of Chapter Five presents the project's key findings, grounded in the three hypotheses and the PICO question. Results showed that combining communication training with the CMAI improved healthcare staff's perceptions of aggression in patients with dementia compared with no structured training or tool use. The intervention also strengthened staff confidence, communication, and recognition of behavioral triggers, which supported the overall improvement in perception and management of aggressive behaviors. Quantitative and qualitative data together provided a clear understanding of how the intervention strengthened staff perception.

The description and intent of this project, first introduced in Chapters One through Three, shaped how each stage was planned and carried out. In Chapter One, the project identified the lack of a consistent, structured process for assessing and managing aggression in patients with dementia. This gap contributed to uncertainty among staff and emphasized the need for standardized practices to improve patient and workplace safety. Chapter Two reviewed supporting evidence showing that structured communication techniques and behavioral assessment tools can strengthen staff confidence and improve care quality. Chapter Three detailed the mixed-methods approach that combined numerical data with staff feedback to capture how the intervention influenced confidence, perception, and recognition of behavioral triggers. The findings in this chapter build upon that methodological foundation, demonstrating that structured communication and behavioral documentation practices enhance safety, consistency, and overall quality in dementia care.

The first hypothesis stated that staff perceptions of aggression would improve after the intervention. The results supported this expectation. Over six weeks, staff reported greater awareness and understanding of aggressive behaviors. Their comments described calmer, more

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

thoughtful communication and an improved ability to recognize early signs of agitation. These changes showed that staff gained confidence and worked together more effectively when responding to challenging situations.

The second hypothesis addressed staff confidence in managing aggressive behavior. Quantitative data showed consistent improvement across all phases of the project. At the same time, qualitative feedback reflected reduced anxiety and greater self-confidence among staff who completed the MESSAGE communication training and used the CMAI documentation. The nurse manager confirmed these results, noting that staff remained composed during episodes of patient aggression and communicated proactively about behavioral triggers. These changes reflect Watson's Theory of Human Caring, which connects empathy, awareness, and respectful communication with safe and compassionate care.

The third hypothesis examined recognition of behavioral triggers. Staff identified and documented causes such as pain, noise, and environmental overstimulation more consistently using the CMAI Ad Hoc form. Managerial feedback confirmed that early recognition and timely action reduced escalation and lowered aggression-related incidents.

The findings from this project are consistent with existing research highlighting the value of communication training and behavioral assessment in dementia care. Studies by James et al. (2023) and Moody et al. (2024) demonstrated that structured de-escalation models enhance staff confidence and promote team collaboration when managing behavioral symptoms. Similarly, Castro et al. (2024) reported that implementing standardized assessment tools led to fewer aggressive incidents and improved patient safety outcomes. Consistent with these results, the present project found that integrating structured communication training with the CMAI

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

improved healthcare staff's perception of aggression in patients with dementia. Together, these findings illustrate that standardized documentation and intentional communication strengthen staff teamwork, safety, and confidence.

The conclusions are grounded in the project's theoretical frameworks, including Watson's Theory of Human Caring and the Transtheoretical Model of Behavior Change. Applying these frameworks throughout the project guided staff development, fostered compassionate and intentional communication, and reinforced sustained behavioral improvement. The Transtheoretical Model (Prochaska & DiClemente, 1983) illuminated the progression of staff learning as participants moved from early stages of awareness ("precontemplation" and "contemplation") to the active adoption and maintenance of new communication behaviors. This gradual transformation demonstrates how structured education and reinforcement cultivate enduring behavioral changes among healthcare professionals. The results contribute to nursing knowledge by showing that consistent use of behavioral assessment tools combined with focused communication training supports safer, more compassionate, and higher-quality dementia care.

Chapter Five continues by interpreting these results and discussing implications for nursing practice, leadership, and policy. It also provides recommendations to sustain and expand these quality improvements across the healthcare system. The results of this project advance nursing knowledge by reinforcing the importance of communication and behavioral awareness in dementia care. Consistent use of the CMAI and MESSAGE framework supports the delivery of safer, more compassionate, and higher-quality care. The following section explores these implications in greater depth.

Implications

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The results have significant implications for theory, practice, and further quality improvement projects in dementia care. Using the CMAI alongside MESSAGE communication training helped staff better understand aggressive behavior and manage it more effectively. The triggers were easier to identify. These results are central to nursing practice and underscore the importance of using evidence-based interventions to enhance dementia care. An overview of the design, methodological approach, and theoretical framework provides evidence that these results are both valid and applicable in a real-world acute care setting.

Theoretical Implications

This project reinforced and expanded two key frameworks, Watson's Theory of Human Caring and the Transtheoretical Model (TTM) of Behavior Change, which together shaped the project's conceptual foundation. Watson's theory emphasizes empathy, connection, and authentic communication as central to healing. Staff demonstrated these principles through calmer, more compassionate interactions with patients who exhibited aggression. The MESSAGE training translated these principles into practice by guiding staff to use calm, consistent communication that eased aggression and fostered a therapeutic environment for patients with dementia.

Staff demonstrated the principles of the Transtheoretical Model (TTM) through their gradual progression across the stages of change. Throughout the project, the staff advanced from early awareness of behavioral triggers to consistent application of new communication techniques. As the project progressed, staff gained confidence through steady reinforcement, education, and practice, which supported lasting behavioral change consistent with the Transtheoretical Model. Their experiences showed that communication training and behavioral assessment tools can move theoretical ideas into everyday nursing practice. This approach has

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

combined caring theory and behavioral science to become a model for dementia care in other settings.

Practical Implications

The findings of this project are highly beneficial to nursing leaders and frontline teams struggling to improve both patient safety and staff development. During the intervention, staff reported feeling more self-assured and better able to cope with people who became aggressive. Staff managed each situation with greater composure, which strengthened teamwork across the unit. The nurse manager observed similar results, reporting fewer incidents escalated and a general work atmosphere that had grown more supportive.

Using the CMAI during patient documentation made communication clearer and helped staff follow changes in behavior more consistently. The MESSAGE training also gave them useful, practical tools to prevent and manage aggression, which helped staff recognize triggers earlier and respond in a steady, professional way. Expanding this combined approach to other areas of care could further strengthen a culture of safety and enhance the quality of dementia care across the organization.

From an administrative perspective, the findings highlight the importance of continuous education and reinforcement in maintaining progress. Integrating CMAI and MESSAGE content into onboarding new employees, yearly competencies, and electronic health record (EHR) workflows could help sustain consistency and ensure compliance with quality and safety expectations. This project also showed that even smaller quality improvement efforts can create lasting change when leaders are engaged and staff feel supported. The insights gained from this

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

project can extend beyond inpatient dementia care and apply to other areas where dementia aggression can occur.

Future Implications

This project establishes a basis for continued inquiry into the long-term sustainability and implementation across the system. Repeating the project with a larger and more diverse group of participants would strengthen generalizability. Long-term studies could examine how these interventions affect patient safety events, staff retention, and workplace culture.

Future quality improvement initiatives could examine how MESSAGE communication training can be adapted for other behavioral health populations. Project teams can also integrate CMAI data into electronic health record dashboards to identify early indicators of aggression and guide proactive care planning. Because this project involved a small sample and a short duration, larger, multi-unit initiatives are needed to evaluate the long-term sustainability of these improvements. Additional efforts could determine how this combined approach can be expanded and adapted across the healthcare system. Ongoing evaluation of dementia-focused communication and assessment interventions can strengthen national care standards, inform organizational policy, and enhance both staff safety and patient well-being.

Strengths and Limitations of the Study

The results of this quality improvement project demonstrated strengths with real-world relevance. The mixed-methods approach provided a comprehensive understanding of how using the CMAI allowed the structured MESSAGE communication training to influence staff perception, confidence, and recognition of behavioral triggers. The approach of collecting data at three points—before, midway through, and after intervention helped determine significant

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

progress in staff communication skills and documentation practices. Integrating quantitative measures with qualitative feedback provided better insight into staff experiences. The nurse manager's observations reinforced these results and validated their reliability.

A few limitations influenced how the project team applied the results, even with the project's noted strengths. The small sample size limits the generalizability of these findings to other settings. Variations in participation across survey points may have introduced response bias. The six-week evaluation period also made it difficult to determine how outcomes evolved or sustained after the project ended. Self-reported survey data also had the potential to over- or underestimate confidence and communication skills.

A workflow challenge arose when staff reported difficulty locating the CMAI Ad Hoc form within Cerner, which slowed documentation during week one. The following week, documentation became more consistent, but early variations may have influenced data completion. During this project, the patient census unit was also lower than usual, which contributed to fewer aggressive patient incidents and fewer CMAI documentation opportunities.

The project provided some insight into how a structured behavioral assessment tool, together with relevant communication training, can be beneficial in dementia care. While previous studies have used CMAI or similar documentation tools, combining behavioral assessment with various structured communication frameworks has not been widely explored. This project helped fill that gap by demonstrating that the two strategies together improved staff preparedness, teamwork, and confidence when caring for individuals with dementia. These findings provide a strong foundation for expanding quality improvement initiatives and

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

integrating standardized communication and behavioral assessment strategies into routine nursing practice.

Recommendations

The outcomes of this quality improvement project support several recommendations for nursing practice, leadership, and future research. These recommendations are grounded in the results of the six-week implementation of the CMAI tool and the MESSAGE communication training on the 6 North unit. The findings showed improved staff confidence, competence, and perception of aggression in patients with dementia. These results provide a strong foundation for the continued application of structured communication and behavioral assessment tools in dementia care.

The first recommendation encourages continued use of the CMAI and MESSAGE training as standard practice on 6 North. Using the CMAI Ad Hoc form in Cerner as a standardized documentation tool helps staff more easily identify patterns of aggressive behavior and supports consistent communication among team members. Continued promotion of MESSAGE communications principles will ensure skill retention. Implementing this training into staff competencies and orientation may help standardize care.

The second recommendation is to share the CMAI and MESSAGE training with other units that care for patients with dementia. Bringing these methods to more areas of the organization could help staff communicate more effectively and provide a steadier, more coordinated approach to care. Implementing the project's framework across additional units will enable evaluation of its impact across diverse clinical environments, supporting scalability and sustainability within the organization.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

The third recommendation is for leadership to continue fostering collaboration and support for staff who provide care for patients with dementia. The data demonstrated that team collaboration and communication improved during the intervention. Leaders can build on these successes by providing continued support and follow-up mentoring.

Previous quality-improvement efforts have used CMAI or similar documentation tools to track aggression in patients with dementia. However, very few have combined a standardized behavioral assessment with focused communication training, as in the MESSAGE framework. This project helped close that gap by combining both approaches, improving staff understanding of aggression, increasing confidence, and strengthening communication. These outcomes emphasize the benefits of pairing a structured assessment tool with communication training to support safer, more consistent dementia care. Integrating both approaches can lead to more consistent practice changes and lasting improvements in the care of aggressive patients with dementia.

The final recommendation emphasizes building on this project through continued quality-improvement efforts rather than viewing it as a conclusion. Future projects should include a broad range of staff and extend the time to determine whether improvements in confidence, communication, perception, and documentation continue. Expanding this work to other care areas will help determine how well the approach can be sustained and adapted across different settings. Applying these interventions across multiple disciplines, such as occupational therapy, rehabilitation, and long-term care may further enhance interprofessional collaboration and improve dementia care practices. Multi-unit or system-wide rollouts can assess scalability and consistency across different care environments. Teams should also track patient-centered outcomes such as the frequency of aggressive episodes, safety events, and patient and staff

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

satisfaction to understand the full impact of combining the CMAI with MESSAGE training. This ongoing evaluation will guide leadership decisions about sustaining, adapting, and spreading the intervention across the organization.

In conclusion, this project demonstrated that combining structured communication training with a behavioral assessment tool improved staff confidence, communication, and perceptions when caring for aggressive patients with dementia. The results supported the project's purpose and aligned with the goals of evidence-based, patient-centered care. Continued integration of these approaches into daily practice will help sustain the progress made and further strengthen the quality and safety of dementia care.

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

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Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Appendix A

Pennsylvania Western University Institutional
Review Board
250 University Ave, California, PA 15419
IRB@pennwest.edu

9/2/2025

RE: IRB Approval: Exempt Research Protocol

Application/Protocol Title: *Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients.*

IRB Tracking Number: PWIRB25011SL-EX

Approval Date: 9/2/2025

Approved Study Period: 9/2/2025 to 9/1/2026

Dear Ms. Stacy Lemley,

On behalf of the Institutional Review Board (IRB) at Pennsylvania Western University, I am pleased to inform you that the research proposal noted above has been reviewed and determined to qualify as Exempt Research under 45 CFR 46.104(d)(2).

The PennWest IRB has approved this study for data collection during the dates listed above. Should you wish to expand the study to include additional institutions or extend the data collection timeline, please submit a formal modification request for IRB review and approval prior to implementing those changes.

This research is approved under the oversight of Pennsylvania Western University's Institutional Review Board (IRB00003711), operating under a Federal-wide Assurance (FWA00032724) filed with the U.S. Department of Health & Human Services (IORG0003094). Please retain this letter for grant, publication, or institutional documentation purposes.

You are expected to conduct your study in accordance with the ethical principles of the Belmont Report and all applicable institutional and federal guidelines. If you have any questions or need further assistance, please contact us at IRB@pennwest.edu.

Sincerely,
Nikolas C. Roberts, Ph.D.
Director, Institutional Review Board Pennsylvania
Western University roberts_n@pennwest.edu

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Appendix B

Fw: Potential DNP project for 6 N unit

From: Lemley, Stacy A. <Stacy.Lemley@vandaliahealth.org>

Sent: Tuesday, January 14, 2025 2:58 PM

To: Christine S. Daniels <Christine.Daniels@vandaliahealth.org>; Atkinson, Krystal D. <Krystal.Atkinson@vandaliahealth.org>

Cc: Savage, Alicia M. <Alicia.Savage@vandaliahealth.org>; Danser, Shalyn N. <Shalyn.Danser@vandaliahealth.org>

Subject: Potential DNP project for 6 N unit

Good afternoon,

Since our initial correspondence in May 2024 regarding the start of my DNP journey, I have been collaborating with Max, Alicia, Shalyn, and others to explore a potential DNP project for the 6 North Unit. One proposed initiative involves implementing an evidence-based tool, such as the Cohen-Mansfield Agitation Inventory (CMAI), to measure aggression in dementia patients. This would be complemented by targeted staff training aimed at reducing aggressive behaviors toward staff.

Project Background:

- The clinical site contract, approved by Kristan Rogers, is valid through June 30, 2027.
- A preceptor mentor agreement has been signed between Max, PennWest University, and me.
- Alicia, Shalyn, and the 6N team have expressed support for moving forward with the project.
- Stacy Holmiste, Corporate Director of Care Management at CAMC, has confirmed that no specific dementia screening tool is currently in use.
- Allen from Optima for Living, Inc., the copyright holder of the CMAI tool, has granted permission for its use in this project. If the project is successful and continued use of the tool is desired, a separate licensing agreement (ranging from \$150 to \$600 for three years) can be arranged.
- Tracy Savage has confirmed that the CMAI tool and associated interventions can be integrated into the EHR after completion of the required nursing approval processes.
- Alicia Savage has reviewed the proposal and believes the project has potential, with its continuation post-implementation contingent on its demonstrated impact and benefits to patients.

Initial Project Goals: Obtain preliminary approval from senior nurse leadership for the project and secure Institutional Review Board (IRB) approval from Penn West University.

Long term Project Goals: Address three objectives identified by the 6N staff:

- Enhancing staff skills in managing dementia-related behaviors.
- Providing more educated and patient-centered care.
- Gaining a deeper understanding of the impact of these behaviors on patients, both within the hospital and at home.

This project has received pre-approval from Penn West University, subject to final approval from the committee and chair. The project is expected to begin in late spring or summer 2025.

Request for Consideration:

I kindly ask for your support and consideration of this project as an opportunity to improve care for dementia patients while equipping staff to better anticipate and manage challenging behaviors. Should you have any questions or require additional details, please do not hesitate to contact me. I attached the CMAI short form, a copy of the email approval to utilize the CMAI tool, along with some interventions for your review.

Thank you for your time and consideration.

Stacy



Fw: Potential DNP project for 6 N unit

From: Christine S. Daniels <Christine.Daniels@vandaliahealth.org>

Sent: Wednesday, January 15, 2025 10:39 AM

To: Lemley, Stacy A. <Stacy.Lemley@vandaliahealth.org>

Cc: Savage, Alicia M. <Alicia.Savage@vandaliahealth.org>; Danser, Shalyn N. <Shalyn.Danser@vandaliahealth.org>; Atkinson, Krystal D. <Krystal.Atkinson@vandaliahealth.org>

Subject: RE: Potential DNP project for 6 N unit

Stacy,

I am fine/approve your DNP project (evidence-based tool, such as the Cohen-Mansfield Agitation Inventory (CMAI) on 6N.

Did you research the Confusion Assessment Method (CAM). This tool is primarily based/used in ICU and I introduced it into Med/Surg while I was at WVUM.

Thanks,

Chris



Christine S. Daniels, MBA, MSN, RN, NE-BC
Associate Chief Nursing Officer

christine.daniels@vandaliahealth.org

304-598-7673 | 304-282-4428

1200 JD Anderson Drive, Morgantown, WV 26505

monhealth.com vandaliahealth.org

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

From: Options for Living <optionsfl@gmail.com>
Sent: Monday, November 25, 2024 8:14 PM
To: Lemley, Stacy A. <Stacy.Lemley@vandaliahealth.org>
Subject: Re: [EXTERNAL] Re: Cohen- Mansfield Agitation Inventory (CMAI) short form

Caution: This email originated from outside of Vandalia Health. Please do not click links or open attachments unless you recognize the sender and know the contents are safe. When in doubt, contact the IT Department.

Hi Stacy,

You have my permission to use the CMAI for the academic research you mention as long as 1) you consult the manual in order to use it correctly, 2) you keep the copyright sign (c) Cohen-Mansfield on all forms, 3) you do not sell or provide the questionnaires or their derivatives to anyone, 4) you provide proper attribution for the assessment, 5) If you prepare materials for the use of the assessment (e.g., training materials, modification of the assessment, or software for using it) , you will send me a copy with a permission to use , 6) If you translate the CMAI, you will send me a copy of the translation, with an explanation of the method of translation and permission to use, and 7) if you or anyone you are associated with want to use the questionnaire for other purposes, you will request separate permission from Options for Living, Inc. at optionsfl@gmail.com.

This permission is valid only for the duration of your study. If electronic programming of the CMAI is prepared, it would need to be deleted at the end of your project.

Attached please find the manual with the assessment as well as a list of publications by topic.

I wish you success with your work,

Allen

On Mon, Nov 25, 2024 at 2:52 PM Lemley, Stacy A. <Stacy.Lemley@vandaliahealth.org> wrote:
Hello, Allen.

First, thank you for your prompt response. I did receive communication, as listed below, providing approval to utilize the form.

Here are the answers to your questions, this is for my school project, for my Doctorate in Nursing Practice (DNP). This is not for an independently funded study. Any changes, with adding the CMAI short form to the electronic health record (EHR) system, would be covered by the hospital. This would be a not-for-profit entity.

From: Media [IH] <Media@interiorhealth.ca>
Sent: Friday, November 22, 2024 5:58 PM
To: Lemley, Stacy A. <Stacy.Lemley@vandaliahealth.org>
Subject: [EXTERNAL] RE: Copyright for CMAI short form

Caution: This email originated from outside of Vandalia Health. Please do not click links or open attachments unless you recognize the sender and know the contents are safe. When in doubt, contact the IT Department.

Hi Stacy,

Thank you for reaching out on this. There are no concerns from our end about using this form. Our sole request is that Interior Health receives proper attribution for the form.

Thank you,

Jamie Shinkewski
Communications Consultant
Interior Health
250-258-7346
jamie.shinkewski@interiorhealth.ca
www.interiorhealth.ca

Should you have any additional concerns, questions or if the approval to utilize the form has changed. Please reach out to me.

Thank you.

Stacy



Stacy Lemley, MSN, RN

She/Her/Hers

Ambulatory Educator

Stacy.Lemley@vandaliahealth.org

C 304-288-6625

1200 JD Anderson Drive, Morgantown, WV 26505



From: Options for Living <optionsfl@gmail.com>
Sent: Sunday, November 24, 2024 3:56 PM
To: Lemley, Stacy A. <Stacy.Lemley@vandaliahealth.org>
Subject: [EXTERNAL] Re: Cohen- Mansfield Agitation Inventory (CMAI) short form

Caution: This email originated from outside of Vandalia Health. Please do not click links or open attachments unless you recognize the sender and know the contents are safe. When in doubt, contact the IT Department.

Hi Ms. Lemley,

Please specify who is funding your study and whether it is a for-profit or a not-for-profit entity.

Best,

Allen

On Fri, Nov 22, 2024 at 3:25 PM Lemley, Stacy A. <Stacy.Lemley@vandaliahealth.org> wrote:
Good afternoon,

I originally reached out to CMAI and they stated that Mapi does not license or distribute this scale and provided me with your contact information.

I am preparing to start a DNP project for one of the units at the hospital I work at regarding patients with dementia aggression in early 2025 and wanted to see how to obtain approval to use the Cohen-Mansfield Agitation Inventory (CMAI) tool for the staff. I was reaching out to see what I needed to do in order to start the process. Should you need to speak with me or have any questions, please reach out to me.

Thank you.

Stacy Lemley



Stacy Lemley, MSN, RN

She/Her/Hers

Ambulatory Educator

Stacy.Lemley@vandaliahealth.org

C 304-288-6625

1200 JD Anderson Drive, Morgantown, WV 26505



Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Name _____ Dates: From _____ to _____

Cohen-Mansfield Agitation Inventory (CMAI)¹ – Short

Instructions: For each of the behaviours below, check the rating that indicates the average frequency of occurrence over the last 2 weeks.

	1 - Never	2 - Less than once a week	3 - Once or twice a week	4 - Several times a week	5 - Once or twice a day	6 - Several times a day	7 - Several times an hour
Physical / Aggressive							
1. Hitting (including self)	1	2	3	4	5	6	7
2. Kicking	1	2	3	4	5	6	7
3. Grabbing onto people	1	2	3	4	5	6	7
4. Pushing	1	2	3	4	5	6	7
5. Throwing things	1	2	3	4	5	6	7
6. Biting	1	2	3	4	5	6	7
7. Scratching	1	2	3	4	5	6	7
8. Spitting	1	2	3	4	5	6	7
9. Hurting self or others	1	2	3	4	5	6	7
10. Tearing things or destroying property	1	2	3	4	5	6	7
11. Making physical sexual advances	1	2	3	4	5	6	7
Physical / Non-Aggressive							
12. Pace, aimless wandering	1	2	3	4	5	6	7
13. Inappropriate dress or disrobing	1	2	3	4	5	6	7
14. Trying to get to a different place	1	2	3	4	5	6	7
15. Intentional falling	1	2	3	4	5	6	7
16. Eating / drinking inappropriate substance	1	2	3	4	5	6	7
17. Handling things inappropriately	1	2	3	4	5	6	7
18. Hiding things	1	2	3	4	5	6	7
19. Hoarding things	1	2	3	4	5	6	7
20. Performing repetitive mannerisms	1	2	3	4	5	6	7
21. General restlessness	1	2	3	4	5	6	7

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Verbal / Aggressive

22. Screaming	1	2	3	4	5	6	7
23. Making verbal sexual advances	1	2	3	4	5	6	7
24. Cursing or verbal aggression	1	2	3	4	5	6	7

Verbal / Non-aggressive

25. Repetitive sentences or questions	1	2	3	4	5	6	7
26. Strange noises (weird laughter or crying)	1	2	3	4	5	6	7
27. Complaining	1	2	3	4	5	6	7
28. Negativism	1	2	3	4	5	6	7
29. Constant unwarranted request for attention or help	1	2	3	4	5	6	7

Signature: _____ **Date:** _____

1 The use of this tool is strictly for clinical assessment and educational purposes only and is restricted from use in any for-profit activities. Developed by and shared with permission of Interior Health

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Staff Perception Survey

Likert-Scale Instructions:

Please rate each statement based on how strongly you agree or disagree. Circle the number that best reflects your opinion.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1. I feel confident in my ability to manage aggressive behavior in patients with dementia.	1	2	3	4	5
2. I understand the common triggers of aggression in patients with dementia.	1	2	3	4	5
3. I can identify early warning signs of agitation or aggression.	1	2	3	4	5
4. I feel competent in using de-escalation techniques during aggressive episodes.	1	2	3	4	5
5. I am comfortable documenting aggressive behaviors using the CMAI tool.	1	2	3	4	5
6. I believe I have the tools and support needed to manage challenging behaviors.	1	2	3	4	5

Pre-Intervention Open-Ended Questions

1. What are your current challenges when responding to aggressive behavior in patients with dementia?
2. How confident do you feel in using strategies to de-escalate aggressive behavior?
3. Have you used the CMAI tool before? If so, how comfortable are you with it?

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Staff Perception Survey

Likert-Scale Instructions:

Please rate each statement based on how strongly you agree or disagree. Circle the number that best reflects your opinion.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1. I feel confident in my ability to manage aggressive behavior in patients with dementia.	1	2	3	4	5
2. I understand the common triggers of aggression in patients with dementia.	1	2	3	4	5
3. I can identify early warning signs of agitation or aggression.	1	2	3	4	5
4. I feel competent in using de-escalation techniques during aggressive episodes.	1	2	3	4	5
5. I am comfortable documenting aggressive behaviors using the CMAI tool.	1	2	3	4	5
6. I believe I have the tools and support needed to manage challenging behaviors.	1	2	3	4	5

Mid-Intervention Survey (Week 3)

Open-Ended Questions:

1. What changes, if any, have you noticed in your approach to managing aggression?
2. How helpful has the training been so far?
3. What additional support or clarification would be helpful at this point?

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Staff Perception Survey

Likert-Scale Instructions:

Please rate each statement based on how strongly you agree or disagree. Circle the number that best reflects your opinion.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1. I feel confident in my ability to manage aggressive behavior in patients with dementia.	1	2	3	4	5
2. I understand the common triggers of aggression in patients with dementia.	1	2	3	4	5
3. I can identify early warning signs of agitation or aggression.	1	2	3	4	5
4. I feel competent in using de-escalation techniques during aggressive episodes.	1	2	3	4	5
5. I am comfortable documenting aggressive behaviors using the CMAI tool.	1	2	3	4	5
6. I believe I have the tools and support needed to manage challenging behaviors.	1	2	3	4	5

Post-Intervention Survey (Week 6)

Open-Ended Questions:

How has your confidence changed in managing aggressive behavior since the training?

What aspects of the training or CMAI tool were most useful?

What suggestions do you have for improving future training on this topic?

How many years of service do you have working as an RN, LPN, or CA?

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Manager Post-Intervention Survey – Week 6

Quality Improvement Project: Evaluating the Impact of the Cohen-Mansfield Agitation Inventory (CMAI) and MESSAGE Framework on Staff Perceptions of Aggression in Dementia Care

Instructions: Please rate each statement based on your observations and professional perspective over the 6-week project period.

Part 1: Likert-Scale Items Please circle the number that best reflects your level of agreement.

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
1. I observed improved staff confidence in managing aggression among patients with dementia.	1	2	3	4	5
2. Staff demonstrated better recognition of early signs or triggers of aggression.	1	2	3	4	5
3. The CMAI tool was used consistently and appropriately in patient documentation.	1	2	3	4	5
4. The MESSAGE communication training appeared to enhance staff communication and de-escalation skills.	1	2	3	4	5
5. The overall frequency of aggressive incidents on the unit decreased during the project period.	1	2	3	4	5
6. Staff appeared less stressed or anxious when caring for patients exhibiting aggression.	1	2	3	4	5
7. The combination of CMAI documentation and MESSAGE training supported improved patient outcomes and team communication.	1	2	3	4	5

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Part 2: Open-Ended Questions

1. During this 6-week project, did you observe less, more, or about the same number of patients with dementia exhibiting aggressive behaviors?
2. What types of aggressive behaviors were most common? (e.g., physical, verbal, both, other – please specify)
3. From your perspective as a manager, did implementing the CMAI tool and MESSAGE training improve staff perceptions and confidence in managing aggression in dementia care?
4. What barriers, if any, did staff encounter when using the CMAI tool or applying MESSAGE techniques?
5. What benefits or positive outcomes did you notice during the project?
6. What recommendations would you make for sustaining or expanding this intervention across other units?
7. Additional comments or observations:

Evaluating the Impact of an Evidence-Based Tool on Healthcare Staff's Perception of Aggression in Dementia Patients

Appendix C

INFORMED CONSENT

Title of Study:

EVULUATING THE IMPACT OF AN EVIDENCE-BASED TOOL ON HEALTHCARE STAFF'S PERCEPTION OF AGGRESSION IN DEMENTIA PATIENTS

KEY INFORMATION

You are being asked by Stacy Lemley and Dr. Meg Larson to participate in a quality improvement project. Participation is voluntary, and you may stop anytime.

The goal of this project is to find out if a short training session and a behavior checklist can help healthcare staff feel more confident and better prepared to manage aggressive behavior in patients with dementia.

During this project, you will be asked to attend a training session, complete short surveys before, during, and after the training, and fill out a checklist called the Cohen-Mansfield Agitation Inventory (CMAI) for six weeks. These surveys and checklists will ask about your experience and how often you observe certain behaviors in patients.

It will take about 6 weeks to participate in the project.

The potential risks during the project are none. Remember, you may stop taking the survey at any time. In addition, if you feel the need to talk with someone, you may contact the Penn West Edinboro counseling center at 814-732-2252, or for emergencies, call 814-732-2911.

There are no direct benefits to participants from this project. It will help researchers better understand. This project is part of my Doctor of Nursing Practice (DNP) project to support staff in managing dementia-related behaviors.

SECURITY OF DATA

The online survey is completely anonymous; you will not be asked to give any information that could identify you (e.g., name). The survey is NOT linked to IP addresses. Individual responses will not be presented, just the aggregated data.

Remember, taking part in this project is voluntary. If you feel uncomfortable or no longer want to participate, you may stop at any time.

There are no consequences if you decide to stop participating in this project.

There is no identifiable information collected from you during this project; all other information from this project will be confidential within local, state, and federal laws. The Penn West University Institutional Review Board (IRB) may review the project records. The project results may be shared in aggregate form at a meeting or journal, but there is no identifiable information to be revealed. The records from this project will be maintained for a minimum of three (3) years after the project is complete.

Your information collected in this project will not be used or distributed for future research, even if all your identifiers are removed.

If you have questions about the project, you can contact Dr. Meg Larson at mlarson@pennwest.edu. If you have a question about your rights as a project participant that you need to discuss with someone, you can contact the Penn West University Institutional Review Board at InstReviewBoard@pennwest.edu.

If you would like a copy of this informed consent, please print this screen or contact Dr. Meg Larson at mlarson@pennwest.edu.

By clicking on the "I agree" box, you have acknowledged that you have read the informed consent and are at least 18 years old. Also, you acknowledge that you agree to participate in the project. Finally, you understand your participation is entirely voluntary, and you may quit the study at any time without penalty.

☐

I agree