Assessment 2

# Title

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| **IMPACT OF ORAL HEALTH ON WELLBEING OF KELLYVILLE DEMENTIA RESIDENTS: AN OBSERVATIONAL COHORT STUDY** |

# **Introduction**

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| Oral health is a crucial yet often overlooked factor in the wellbeing of elderly individuals in aged care, where over half of residents have dementia. Those with dementia remain in aged care five times longer (AIHW; 2023). Oral health issues, such as tooth decay, gum disease, and tooth loss, can significantly impact not only physical health but also emotional and social wellbeing. Poor oral health in the elderly has been linked to a range of systemic health problems, including cardiovascular diseases, respiratory infections, and diabetes (AIHW; 2023). The direct impact of oral health on elderly wellbeing in institutional settings remains underexplored (WHO, 2023). Moreover, oral health issues can lead to pain, difficulty in eating, and diminished self-esteem, all of which can negatively impact the overall wellbeing of elderly individuals (Janto et al., 2022). However, while these connections are well-documented, gaps exist in improving access to dental services and fostering collaboration. Additionally, there is insufficient focus on elderly individuals' specific needs, such as reduced mobility and cognitive decline, which can worsen oral health issues and affect overall health (Jockusch et al., 2021).Research also indicates that elderly individuals in aged care centres often experience significant barriers to maintaining good oral health, including limited access to dental care, lack of regular dental check-ups, and insufficient oral hygiene practices due to physical or cognitive impairments (Patterson Norrie et al., 2019). These challenges highlight the need for research on oral health and its broader implications for the wellbeing of dementia patients in Kellyville, as current literature lacks specific studies on this direct impact on aged care settings. |

# **Research question**

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| How does oral health influence the overall wellbeing of elderly individuals with dementia residing in aged care centres in Kellyville? |

# **Aims**

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| * To assess oral health and its impact on wellbeing of elderly residents with dementia in aged care centres.
* Identify potential interventions that could improve oral health and, overall quality of life. (Foltyn, 2015)
* Provide Evidence-based guidelines for improve protocols for healthcare provider.

**BENEFITS:*** The improved oral health status of the population will contribute positively to the general physical and mental health status of the population. (Delwel et al., 2017)
* Early diagnosis and management of the problems may prevent systemic complications and improve health in general. (Delwel et al., 2017)
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# **Design and setting**

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| The current study will adopt an observational design, investigating the association of oral health with general well-being in aged care facility residents with dementia. Data on dental assessment and well-being questionnaires will be collected to observe trends without interference with the natural setting. A random sampling technique will be used to reduce bias and several threats to validity.The investigation will be conducted at dementia care homes in Kellyville, specifically at Moran Aged Care Kellyville. The participants will be recruited from this facility and their data will also be collected here. Materials will be procured from various sources such as dental assessment tools, and sterile disposable kit and survey platforms to reduce bias. |

# **Sampling**

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| The sample will comprise 50-100 dementia patients aged 65+, sampled from Kellyville aged care centres. The inclusion criteria will include those participants who can tolerate an oral health assessment. Exclusion criteria include participants who have had recent dental treatment or have serious medical conditions such as cardiovascular diseases, uncontrolled diabetes or severe respiratory illness. (Delwel et al., 2017) Participants will be recruited through aged care facilities to get a representative sample of all levels of severity of dementia. Retention strategies will be applied, if necessary, along with follow-up assessments. |

# **Measures and materials**

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| * The Oral Health Assessment Chart and Tool (OHAT)is the common standardized tool in assessing participants through the Oral Health Assessment Tool. (Chalmers et al., 2005)
* Dental mirror (visual) and probe(tactile) instruments for detailed oral inspections to assure accurate assessments.
* Plaque assessment is done through disclosing solution, which identifies the oral hygiene habit. (Delwel et al., 2017)
* Dementia Knowledge Assessment Tool: to classify the severity regarding cognitive functioning for the participants. (Tsatali et al., 2023)
* A caregiver survey questionnaire designed to obtain information from the caregivers regarding the oral health status and general health of the participants.
* Digital data entry therefore provides an electronic, secured platform for real-time data capture with the aim of ensuring real-time accuracy and access.
* The portable dental chair provides comfort and on-site oral assessment in the aged care facility.
* A sterilized dental kit for each evaluation, ensuring hygienic standards, and preventing cross-contamination.
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# **Procedures**

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| * Recruitment and Informed Consent: The participant or next of kin will give informed consent before the actual data collection. The caregivers will be informed on their role in supporting participants if need be. (Patterson Norrie et al., 2019)
* A dentist will perform an oral examination on the resident using the Oral Health Assessment Tool-standardized. This might involve a visualization examination, and manual examination using a dental mirror and probe, correspondingly, including plaque assessment if needed. Examinations shall be conducted in the facility utilizing a portable dental chair and dental instruments that are sterilized to ensure hygiene. (Delwel et al., 2017)
* Wellbeing questionnaires from caregiver will provide compensation for communication impairments among dementia cases, and structured questions will cover a range of different dimensions of overall wellbeing in relation to oral health. (Foltyn, 2015)
* Information shall encompass all the assessments related to oral health and well-being; these are to be recorded directly onto a secure digital platform for up-to-the-moment accuracy, supported by effective data management.
* Follow-up assessments will be made at six months into the study to observe changes in oral health and wellness by the participants.
* Retention Strategies: Regular contact with caregivers through the six-month period and reminders on every visit. This will guarantee that data is gathered in a systematic manner, with minimal bias and optimal participant retention.
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# **Data analysis**

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| Descriptive statistics will be used to summarize participant demographics, oral health scores, and wellbeing outcomes. Linear regression and correlation analysis will be conducted to quantify the association between oral health and wellbeing. Subgroup analyses are to be done by the degree of severity of dementia. Besides, multivariate analysis allows for the adjustment of several confounding variables, such as age and cognitive function. |

# **Ethics**

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| * This current study will strictly follow ethical considerations by protecting the welfare and rights of the participants. Written consent will be obtained from each participant or guardian after full information has been given on the purpose of the study, the procedure, and risks involved. (Patterson Norrie et al., 2019)
* This study ensures that information privacy and confidentiality are well protected.
* Assessment of oral health by a qualified professional dentist shall be done to minimize harm. (Delwel et al., 2017)
* Sterile equipment and no invasive procedures will ensure the protection of the participants.
* Any conflict of interest on the part of the researchers with the collaborating aged care facilities will also be fully declared to ensure transparency and integrity during the research process.
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# **References**

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