

Organizational Sensory Practices in Long-Term Care: Quality assessments for a Mixed-Methods Systematic Review



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Background

- The United Nations (2017) projects that the global population of older adults will grow to 2.1 billion by 2050.
- Aging is an inevitable stage of the human existence which may lead to a decline in the acuity of the five senses (i.e. touch, smell, taste, hearing, sight) (Novak, 2013).
- These sensory changes have a direct correlation to the overall quality of life of an older adult as it tends to affect day-to-day activities (Novak, 2013).
- Some studies have investigated methods of modifying the physical environment, while others have focused on human interventions.
- There is little awareness regarding the effects that organizational sensory practices have on the quality of life of older adults.

Objective/Aim

The aim of this project was to quality assess the studies included in a mixed-methods systematic review. The review will summarize the existing literature on organizational sensory practices.

Methodology

The Mixed Methods Appraisal Tool (MMAT) was used to quality assess the articles included in the systematic review. The MMAT enables the appraisal of systematic literature reviews ranging from quantitative, qualitative and mixed methods (Pluye, Robert, Cargo, & Bartlett, 2011).

Each study is scored out of a maximum of 100 points and the results obtained are compared with those generated by a second independent reviewer (Pluye et al., 2011). If there is a disagreement on the quality assessment score of a study, a consensus is reached between the two researchers and the principal investigator.

Methodology

Figure 1: PRISMA flow diagram (Liberati et al., 2009)

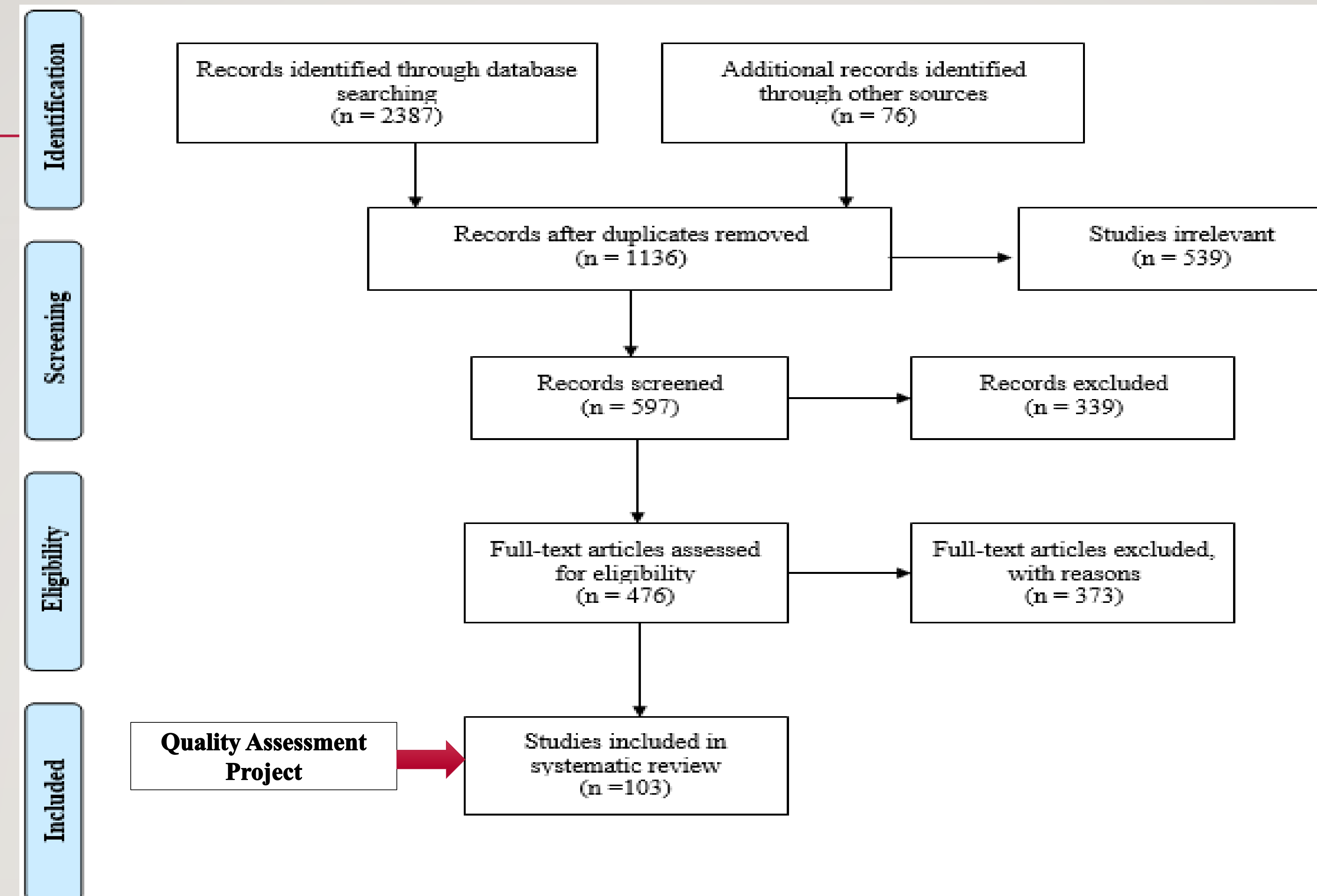


Figure 2: MMAT criteria (Pluye et al., 2011)

Screening questions (for all types)	
	<ul style="list-style-type: none"> • Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)? • Do the collected data allow address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components).
1. Qualitative	1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)? 1.2. Is the process for analyzing qualitative data relevant to address the research question (objective)? 1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected? 1.4. Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?
2. Quantitative randomized controlled (trials)	2.1. Is there a clear description of the randomization (or an appropriate sequence generation)? 2.2. Is there a clear description of the allocation concealment (or blinding when applicable)? 2.3. Are there complete outcome data (80% or above)? 2.4. Is there low withdrawal/drop-out (below 20%)?
3. Quantitative non-randomized	3.1. Are participants (organizations) recruited in a way that minimizes selection bias? 3.2. Are measurements appropriate (clear origin, or validity known, or standard instrument; and absence of contamination between groups when appropriate) regarding the exposure/intervention and outcomes? 3.3. In the groups being compared (exposed vs. non-exposed; with intervention vs. without; cases vs. controls), are the participants comparable, or do researchers take into account (control for) the difference between these groups? 3.4. Are there complete outcome data (80% or above), and, when applicable, an acceptable response rate (60% or above), or an acceptable follow-up rate for cohort studies (depending on the duration of follow-up)?
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed methods question)? 4.2. Is the sample representative of the population under study? 4.3. Are measurements appropriate (clear origin, or validity known, or standard instrument)? 4.4. Is there an acceptable response rate (60% or above)?
5. Mixed methods	5.1. Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives), or the qualitative and quantitative aspects of the mixed methods question (or objective)? 5.2. Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)? 5.3. Is appropriate consideration given to the limitations associated with this integration, e.g., the divergence of qualitative and quantitative data (or results*) in a triangulation design?

Results

- This quality assessment project is preliminary work for the mixed-methods systematic review.
- A total of 103 studies were quality assessed by two independent researchers using the MMAT tool, including 87 quantitative, 4 qualitative and 12 mixed methods studies.
- A consensus on MMAT scores is still in progress for several studies.

Implications

- The result of this project will allow the primary investigator to report on the quality of the studies included in the mixed-methods systematic review.
- Quality assessment of these studies will pinpoint the most effective sensory-related organizational practices which have been shown to increase the quality of life of older adults.
- The results will also be relevant to clinicians, residents in long-term care settings and their families, policy and decision-makers.

References

- Novak, M. (2013). *Aging and society: A Canadian perspective*. Nelson Canada.
- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gotzsche, P.C, Ioannidis, J. P.,... & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *PLoS medicine*, e1000100.
- Pluye, P., Robert, E., Cargo, M., & Bartlett, G. (2011). Proposal: A mixed methods appraisal tool for systematic mixed studies reviews. *Montréal: McGill University*, (Part I), 1–8. <https://doi.org/Archived by WebCite®> <http://www.webcitation.org/5tTRTc9yJ>
- United Nations, Department of Economic and Social Affairs, Population Division (2017). *World Population Prospects: The 2017 Revision, Key Findings and Advance Tables*. Working Paper No. ESA/P/WP/248.

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