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THE IMPACT OF POLYPHARMACY ON THE QUALITY OF LIFE IN OLDER ADULTS: A NARRATIVE REVIEW

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Polypharmacy refers to the use of several medications prevalent among people aged 60 and above due to the presence of chronic diseases. This increases the risk of adverse drug effects, issues with medication adherence, drug interactions, falls, delirium, and toxicity. These complications can result in poor health outcomes, increased hospital admissions, and elevated healthcare expenses. Furthermore, previous research in Sri Lanka has shown polypharmacy in older adults, but few studies have assessed the impact of polypharmacy on the quality of life in older adults. This study aims to explore the impact of polypharmacy on the quality of life in older adults. Existing articles and recent studies from 2020-2025 on the impact of polypharmacy on the quality of life in older adults aged 60 and above were analyzed. According to the SANRA guidelines, eligible peer-reviewed studies were identified through databases like PubMed, Scopus, and Google Scholar. Data were extracted using a standardized form. Results were synthesized narratively and presented in a tabular format to summarize intervention approaches. The findings show a strong association between polypharmacy and decreased health-related quality of life (HRQoL) in older adults. Both physical and mental aspects were impaired, with a greater impact in chronic or cancer-related conditions. Multiple medications were key contributors to poor HRQoL, especially post-discharge. Tools like STOPP/START and the Medication Appropriateness Index indicated limited effectiveness without integration into computerized decision support systems. Moreover, prescribing errors, hyperpolypharmacy, and increased drug burden were linked to lower HRQoL and higher frailty levels, especially among people aged 65 and older living independently. Through the analysis of multiple studies, this review identified a consistent link between polypharmacy and a reduced quality of life in older adults, specifically related to treatment burden, frailty, and physical health. The studies emphasize the immediate need to apply effective medication management strategies, like clinical assessment tools and deprescribing protocols, to mitigate these risks. This underscores the need for actions that facilitate rational prescribing practices to improve health outcomes and promote a holistic approach to geriatric care.

Keywords: polypharmacy, older adults, quality of life

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INTRODUCTION

Polypharmacy refers to the concurrent use of five or more medications which is highly prevalent among older adults due to the presence of chronic diseases. An elderly individual is defined as someone aged60 or above. The population of older adults is growing globally. Individuals aged 60 and above who require daily medications for various chronic issues, face the risk of being overmedicated and encountering complications associated with polypharmacy. The existence of polypharmacy can lead to challenges such as adverse drug reactions, non-adherence, negative health outcomes, increased healthcare service engagement, and higher expenses. In older age, polypharmacy commonly brings about medication-related issues including drug interactions, falls resulting in injury, toxicity, delirium and difficulties in adherence. Polypharmacy induces higher rates of hospitalization and increased healthcare expenses for both individuals and healthcare systems. By effectively recognizing the physical and psychological issues that arise in elderly individuals due to a large number of medications, we can develop a management program that addresses the practical challenges of establishing the necessary framework and support patient well-being. Previous research in Sri Lanka shows polypharmacy in older adults but few studies have assessed the impact of polypharmacy on their quality of life. This review aims to explore the impact of polypharmacy on the quality of life in older adults.

METHODOLOGY

This narrative review was conducted to explorerecent studies on the impact of polypharmacy on the quality of life in older adults from 2020 to 2025. The study focused on older adults aged 60 or above. According to the SANRA guidelines, eligible studies were peer-reviewed articles conducted in the healthcare sector. A systematic search was performed across databases including PubMed, Scopus, Google Scholar using keywords such as “polypharmacy,” “older adults,” “quality of life,” and “medication burden”.

Articles published between January 2020 and June 2025 examining the impact of polypharmacy on the quality of life in older adults were considered.

Inclusion criteria included:

- Studies published within 2020-2025
- Studies that explicitly examine the impact of polypharmacy on quality of life in older adults
- All types of study designs including observational studies, interventional studies, cross-sectional studies, longitudinal studies, systematic reviews, and meta-analyses.

Exclusion criteria included:

- Population younger than 60 years
- Studies published before the selected time window (before 2020)

Data were extracted using a standardized charting form capturing study details and key findings related to polypharmacy and quality of life. A standardized data extraction table was used to collect key information from each study including author, title, study design and setting, and key findings. Results were synthesized narratively and presented in a tabular format to summarize intervention approaches.

Author(s) And year	Title of the Study	Study design and setting	Key Findings
(Thorell et al., 2020)	Use of potentially inappropriate medication and polypharmacy in older adults: a repeated cross-sectional study	Repeater cross-sectional study National Swedish prescribed drug register	polypharmacy prevalence remained stable, but chronic conditions increased. A combination of quality indicators may improve medication treatment quality in older adults, with a more complex effect on individual outcomes.
(Kurczewska-Michalak et al., 2021)	Polypharmacy management in the older adults: a scoping review of available interventions	Scoping review Literature-based review	Most publications support the use of explicit criteria like STOPP/START, Beers, and the Medication Appropriateness Index (MAI). However, these tools often face limitations due to the extensive lists of potentially inappropriate medications they include. To address this challenge, they are frequently integrated into computerized clinical decision support systems

(Hoel, Giddings Connolly and Takahashi, 2021)	Polypharmacy management in older patients	Review article Outpatient, long-term, and palliative care	The use of five or more medications in older adults is linked to various risks, including drug interactions, toxicity, falls, delirium, and poor medication adherence. The article proposes a structured strategy for reducing polypharmacy in older adults by deprescribing medications, particularly in palliative, long-term, and outpatient care environments, to mitigate risks and costs
Aljeaidi M S, Haaksma ML & Tan ECK 2022	Polypharmacy and trajectories of health-related quality of life in older adults: an Australian cohort study	Longitudinal cohort study Australian longitudinal study of aging	Incident polypharmacy led to clinically meaningful declines in both physical (PCS: −0.86) and mental (MCS: −0.76) quality of life.
Van Wilder L et al. 2022	Polypharmacy and Health-Related Quality of Life/Psychological Distress among Patients with Chronic Disease	Cross–sectional study Belgium National Health Interview survey data	Polypharmacy significantly reduced physical HRQoL; no significant effect on mental health or psychological distress.

Robinson et al., 2024	Health-related quality of life among older adults following acute hospitalization : longitudinal analysis of a randomized controlled trial	Randomized controlled trial Post-acute hospitalization settings (multi-country European cohort	Poly pharmacy, specially higher number of medications were the most significant factor associated with reduced health related quality of life (HRQoL)
(Yue et al., 2024)	The association between Polypharmacy and health related Quality of Life among older adults with prostate cancer	Cross-sectional study Clinical oncology settings, prostate cancer patients	Particularly polypharmacy is strongly associated with clinically meaningful decline in both physical and mental aspects of HRQoL among older adults with prostate cancer.
(Falke et al., 2024)	The association between Medication use and health-related quality of life in multi-morbid older patients with polypharmacy	Observational cohort study European primary care centers across several countries	Hyper polypharmacy, drug burden, and prescribing omissions associated with significantly lower EQ-VAS and EQ-5D-5L scores.

Cemali M et al 2025	Examining the Effect of Polypharmacy on Quality of Life and Frailty in Older Adults	Cross-sectional study Community-based rehabilitation centers in turkey	Older adults with polypharmacy had higher frailty and lower Quality of Life in community-based rehabilitation settings

RESULTS AND DISCUSSION

The results from the analyzed studies reveal a significant connection between polypharmacy and a deterioration in health-related quality of life (HRQoL) in older adults. Several studies including longitudinal cohort studies and cross-sectional research showed that both the physical and mental aspects of HRQoL were negatively impacted by the simultaneous use of multiple medications. Aljeaidi et al. (2022) and Yue et al. (2024) recognized clinically relevant decreases in physical and mental health due to polypharmacy especially among patients with chronic or cancer-related conditions. Robinson et al. (2024) emphasized that a large number of medications was the most important predictor of diminished HRQoL in older adults' post-hospitalization. Many review articles and scoping reviews such as those by Hoel et al. (2021) and Kurczewska-Michalak et al. (2021) highlight the challenges of managing polypharmacy in clinical environments. They specified that tools like STOPP/START, and the Medication Appropriateness Index are commonly applied, but their efficacy is constrained unless combined with computerized decision support systems. These tools often necessitate extensive knowledge and are most effective when applied in organized deprescribing approaches. Research by Falke et al. (2024) and Cemali et al. (2025) noted that hyper-polypharmacy, prescribing errors, and drug burden were linked to significantly lower HRQoL scores and higher frailty levels in community settings. Van Wilder et al. (2022) identified that polypharmacy notably reduced physical HRQoL, but it did not significantly influence psychological distress. This implies that physical health aspects may be the more sensitive indicators in outcomes related to polypharmacy.

CONCLUSION

Through the analysis of multiple studies, this review identified a consistent link between polypharmacy and a reduced quality of life in older adults, specifically related to treatment burden, frailty, and physical health. The studies highlighted the immediate need to implement effective medication management strategies such as clinical assessment tools and deprescribing protocols to mitigate these risks. As the population aged 60 and above continues to grow gloabally, it is important to underscore actions that facilitate rational prescribing practices to improve health outcomes and promote overall well-being in geriatric care.

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