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Assessment of Patient Awareness, Medication-Related Risks and Optimisation Strategies in Polypharmacy: A Cross-Sectional Questionnaire-Based Study

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Abstract

Background: The global burden of chronic diseases has increased substantially over the past few decades, making them major causes of morbidity, disability, and mortality worldwide. According to the World Health Organization (WHO), non-communicable diseases (NCDs), including hypertension, diabetes mellitus, cardiovascular diseases, chronic respiratory disorders, and chronic kidney disease, account for nearly three-quarters of global deaths. Advances in medical science and improved healthcare access have increased life expectancy, but have also resulted in more individuals living with multiple chronic conditions requiring long-term pharmacological treatment.

Management of chronic diseases often requires the concurrent use of multiple medications to control disease progression, prevent complications, and improve quality of life. Guidelines for conditions such as hypertension, diabetes, heart failure, and dyslipidaemia frequently recommend combination therapy. Consequently, particularly among older adults, patients may receive multiple medications from one or more healthcare providers over prolonged periods. Although such treatment may be clinically appropriate, increasingly

complex medication regimens raise concerns regarding medication safety, adherence, and quality of care.

The growing prevalence of chronic diseases has therefore made effective medication management an essential component of healthcare delivery. Healthcare professionals must balance therapeutic benefits with the potential risks associated with multiple medication use. This has increased the importance of medication optimisation, patient-centred care, and regular medication reviews as key strategies for improving treatment outcomes while ensuring patient safety.

Polypharmacy, commonly defined as the concurrent use of multiple medications, is an increasing public health concern due to the rising prevalence of chronic diseases, multimorbidity, and an ageing population. While appropriate polypharmacy may be clinically necessary, inappropriate polypharmacy increases the risk of adverse drug reactions, drug–drug interactions, medication non-adherence, hospitalisation, and reduced quality of life. The World Health Organization has therefore identified medication safety in polypharmacy as a global priority, emphasising regular medication reviews, patient-centred care, and multidisciplinary approaches to optimise medication use.[1]

The present study aimed to assess patient awareness regarding polypharmacy, identify medication-related risks associated with the concurrent use of multiple medications, and evaluate patient perspectives on medication optimisation. A questionnaire-based cross-sectional observational study was conducted using a structured Google Forms survey among 50 participants receiving prescription medications. Data were analysed using descriptive statistics and presented as frequencies and percentages.

The findings showed that most participants were middle-aged and older adults receiving long-term pharmacotherapy. Although most respondents reported taking one to four medications under the supervision of general physicians, awareness of drug–drug interactions and the potential health risks of polypharmacy was generally low. Many participants were uncertain about medication-related side effects and routine medication reviews. While medication adherence was generally satisfactory, some participants reported occasionally missing doses. Medication simplification, regular medication reviews, patient education, and improved communication with healthcare professionals were identified as important strategies for optimising medication use.

Overall, the study highlights important gaps in patient knowledge regarding medication safety and emphasises the need for enhanced patient education, regular medication reviews, appropriate deprescribing, and multidisciplinary collaboration. Promoting patient awareness and structured medication optimisation strategies may contribute to safer medication use and improved health outcomes among individuals receiving multiple medications.[1]

Keywords: Polypharmacy; Medication Adherence; Drug–Drug Interactions; Adverse Drug Reactions;; Cross-Sectional Study; Patient Awareness.

Introduction

Polypharmacy: Definition and Clinical Significance

Polypharmacy refers to the concurrent use of multiple medications, commonly defined as the routine use of five or more medicines. However, the number of medications alone does not determine whether polypharmacy is appropriate. Appropriate polypharmacy involves evidence-based medications with clear

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therapeutic benefits that outweigh potential risks, whereas inappropriate polypharmacy includes unnecessary, duplicate, or potentially harmful medications whose risks exceed their benefits. Modern approaches therefore focus on the appropriateness and necessity of treatment rather than simply the number of medicines prescribed.

Polypharmacy has become increasingly common due to population ageing, improved survival from chronic diseases, advances in therapeutics, and involvement of multiple healthcare providers. Older adults are particularly vulnerable because of multimorbidity, complex treatment regimens, and age-related changes in drug metabolism and elimination. Consequently, inappropriate polypharmacy can increase medication-related complications, healthcare costs, and risks to patient safety, highlighting the need for regular medication review and strategies promoting safe, rational, and evidence-based medication use.

Risks Associated with Polypharmacy

Although multiple medications may be clinically necessary, polypharmacy is associated with numerous risks that can adversely affect patient health and quality of life. One of the most significant concerns is the increased likelihood of adverse drug reactions (ADRs), which occur when medications produce unintended and harmful effects despite being administered at appropriate doses. The probability of experiencing an ADR increases substantially as the number of prescribed medications rises, particularly among older adults with impaired renal or hepatic function.

Another major concern is the occurrence of drug–drug interactions. When several medications are taken simultaneously, one drug may alter the effectiveness, metabolism or toxicity of another, resulting in either reduced therapeutic benefit or an increased risk of adverse effects. Such interactions may lead to treatment failure, preventable complications and, in severe cases, hospitalisation. Patients receiving medications from multiple healthcare providers may be particularly susceptible if medication histories are not regularly reviewed.

Medication non-adherence is another important consequence of complex treatment regimens. Patients prescribed multiple medications often struggle to remember dosing schedules, understand medication instructions or manage frequent administration times. Factors such as forgetfulness, financial constraints, fear of side effects and inadequate patient education may further contribute to poor adherence. Reduced adherence not only compromises disease control but may also increase healthcare costs through avoidable emergency visits and hospital admissions.

Polypharmacy has also been associated with prescribing cascades, a phenomenon in which adverse effects caused by one medication are misinterpreted as new medical conditions, leading to the prescription of additional medications rather than addressing the original cause. This cycle may unnecessarily increase medication burden and expose patients to further medication-related risks.

In addition to these clinical consequences, inappropriate polypharmacy may negatively affect cognitive function, physical mobility, nutritional status and overall quality of life. These risks highlight the importance of regularly evaluating medication regimens to ensure that every prescribed medicine remains clinically appropriate and beneficial.

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Medication Optimisation

Medication optimisation is a patient-centred approach aimed at ensuring that every medication prescribed provides maximum therapeutic benefit while minimising unnecessary harm. Rather than focusing solely on reducing the number of medications, medication optimisation emphasises selecting the most appropriate medicines, reviewing ongoing therapy and involving patients in shared decision-making regarding their treatment plans.

Several strategies have been proposed to optimise medication use. Regular medication reviews conducted by physicians and pharmacists help identify duplicate therapies, unnecessary medications, inappropriate dosing and potential drug interactions. Deprescribing, defined as the systematic withdrawal of medications that are no longer clinically indicated or whose risks outweigh their benefits, has emerged as an effective strategy for reducing medication burden while maintaining therapeutic effectiveness.

Patient education also plays a crucial role in medication optimisation. Individuals who understand the purpose of their medications, recognise possible side effects and appreciate the importance of adherence are more likely to achieve favourable treatment outcomes. Furthermore, technological interventions such as medication reminder applications, electronic health records and pill organisers have demonstrated potential in improving medication adherence among patients receiving long-term therapy.

Multidisciplinary collaboration between physicians, pharmacists, nurses and patients has become an integral component of modern medication management. Such collaborative approaches ensure comprehensive medication assessment, early identification of medication-related problems and timely interventions to improve patient safety.

Research Gap

Despite increasing recognition of the challenges associated with polypharmacy, patient awareness regarding medication-related risks remains insufficiently explored in many community settings. Most published studies have focused on the clinical outcomes of polypharmacy, prescribing practices or hospital-based interventions, whereas comparatively fewer studies have examined patients' understanding of medication-related risks, awareness of drug interactions and perceptions regarding medication optimisation strategies.

Understanding patient perspectives is essential because patients play a central role in medication management. Their awareness, beliefs and experiences directly influence medication adherence, communication with healthcare providers and willingness to participate in medication review programmes. Assessing these factors may help identify existing knowledge gaps and guide the development of targeted educational interventions that improve medication safety.

Rationale of the Study

Given the increasing prevalence of chronic diseases and the widespread use of multiple medications, there is a growing need to understand how patients perceive the risks associated with polypharmacy and the measures that can improve medication management. Exploring patient awareness regarding drug interactions, adverse drug reactions, medication adherence and medication review practices may assist healthcare professionals in identifying barriers to safe medication use. The findings of this study are expected to contribute to a better understanding of patient perspectives and support the implementation of evidence-based strategies that

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promote rational prescribing, medication optimisation and improved healthcare outcomes.

Aim and Objectives

Aim

To assess patient awareness regarding polypharmacy, identify medication-related risks associated with the concurrent use of multiple medications, and evaluate patient perspectives on strategies for medication optimisation among adults receiving long-term pharmacotherapy.

Objectives

The present study was undertaken with the following objectives:

1. To assess the level of awareness among patients regarding polypharmacy and its associated health risks.
2. To evaluate medication usage patterns, including the number of medications consumed, frequency of administration and prescribing practices among the study participants.
3. To determine patients' awareness of potential drug–drug interactions and medication-related adverse effects associated with the use of multiple medications.
4. To assess medication adherence behaviours and identify factors contributing to missed doses or non-adherence.
5. To evaluate the frequency of medication review practices and the extent of communication between patients and healthcare professionals regarding medication management.
6. To explore patients' perceptions regarding the importance of medication optimisation strategies, including medication reviews, deprescribing where clinically appropriate, patient education and the use of medication management tools.
7. To identify areas where increased patient awareness and multidisciplinary healthcare interventions may improve medication safety and therapeutic outcomes.

Materials and Methods

Study Design

The present study was designed as a questionnaire-based cross-sectional observational study to assess patient awareness regarding polypharmacy, identify medication-related risks associated with the concurrent use of multiple medications, and evaluate patient perspectives on strategies for medication optimisation. A cross-sectional study design was selected because it enables the collection of information from a defined population at a single point in time, providing an overview of participants' knowledge, attitudes and experiences related to medication use without influencing their treatment or clinical management.

The observational nature of the study ensured that no interventions or modifications to participants' prescribed medication regimens were made during the research process. Instead, data were collected solely through participant responses to a structured questionnaire.

Study Setting

The study was conducted using a structured online questionnaire. The questionnaire was distributed electronically among adult participants receiving prescription medications. The online mode of data collection allowed participants to complete the questionnaire conveniently while maintaining confidentiality and reducing interviewer bias.

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Participation in the study was voluntary, and respondents were informed about the purpose of the research before completing the survey.

Study Population

The study population consisted of adult individuals receiving one or more prescribed medications for the management of acute or chronic medical conditions. Participants represented different age groups and included both male and female respondents. The survey aimed to capture diverse perspectives regarding medication use, awareness of medication-related risks and experiences with medication management.

Sample Size

A total of 50 participants successfully completed the questionnaire and were included in the final analysis.

Only fully completed questionnaires were considered for statistical analysis to ensure completeness and reliability of the collected data.

Sampling Technique

A non-probability convenience sampling technique was employed for participant recruitment. Individuals who met the eligibility criteria and were willing to participate voluntarily were invited to complete the questionnaire.

Convenience sampling was selected due to its practicality, ease of participant recruitment and suitability for exploratory questionnaire-based research conducted within a limited time frame.

Inclusion Criteria

Participants were included in the study if they fulfilled the following criteria:

- Adults aged 18 years and above.
- Individuals currently taking one or more prescription medications.
- Participants capable of understanding and responding to the questionnaire.
- Individuals who voluntarily agreed to participate in the study.
- Participants who provided informed consent before completing the questionnaire.

Exclusion Criteria

The following participants were excluded from the study:

- Individuals below 18 years of age.
- Participants who declined to provide informed consent.
- Individuals who submitted incomplete questionnaire responses.
- Duplicate responses identified during data screening.
- Participants who were unable to understand the questionnaire.

Development of the Questionnaire

A structured questionnaire was developed after reviewing previously published literature related to polypharmacy, medication adherence, medication safety and medication optimisation. The questionnaire was designed to collect information regarding demographic characteristics, medication usage patterns, awareness of polypharmacy, medication adherence, adverse drug reactions, medication review practices and patient perceptions regarding strategies for optimising medication use.

The questionnaire consisted of 24 questions, including multiple-choice questions, Yes/No responses and opinion-based questions. The questionnaire was organised into the following sections:

- Demographic information (age and gender)
- Existing medical conditions
- Number of medications currently prescribed
- Frequency of medication administration
- Prescribing healthcare professional

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- Awareness regarding drug–drug interactions
- Experience of medication-related side effects
- Medication adherence practices
- Reasons for missing medication doses
- Use of medication reminder tools
- History of medication-related hospitalization
- Medication review practices
- Awareness regarding polypharmacy
- Preferred strategies for medication optimisation

The questionnaire was designed to be simple, clear and easily understandable to encourage accurate and complete responses.

Data Collection Procedure

Participants were provided with an electronic link to the questionnaire. Before beginning the survey, each participant was presented with a brief description of the study objectives and an informed consent statement explaining that participation was entirely voluntary.

No personally identifiable information such as names, addresses or contact details was collected, ensuring participant anonymity and confidentiality. Participants completed the questionnaire independently, and responses were automatically recorded in Google Forms before being exported into Microsoft Excel for further processing and statistical analysis.

After completion of data collection, responses were carefully reviewed to remove incomplete or duplicate submissions before analysis.

Ethical Considerations

Participation in the study was entirely voluntary. Prior to completing the questionnaire, participants were informed about the purpose of the study and provided electronic informed consent. The confidentiality and anonymity of all participants were maintained throughout the study by ensuring that no personally identifiable information was collected or disclosed.

The collected data were used exclusively for academic and research purposes. Participants were informed that they could choose not to answer any question or discontinue participation at any stage before submitting the questionnaire without any consequences.

Statistical Analysis

The collected data were exported for data cleaning and organisation. Descriptive statistical analysis was performed to summarise participant responses. Categorical variables were expressed as frequencies and percentages, while the findings were presented using tables, bar charts and pie charts to facilitate interpretation.

The analysed variables included demographic characteristics, medication usage patterns, awareness regarding polypharmacy, medication adherence, drug–drug interaction awareness, medication review practices, adverse drug reactions and preferred medication optimisation strategies.

The results obtained from the statistical analysis were interpreted to identify common trends, knowledge gaps and patient perspectives regarding polypharmacy and medication management.

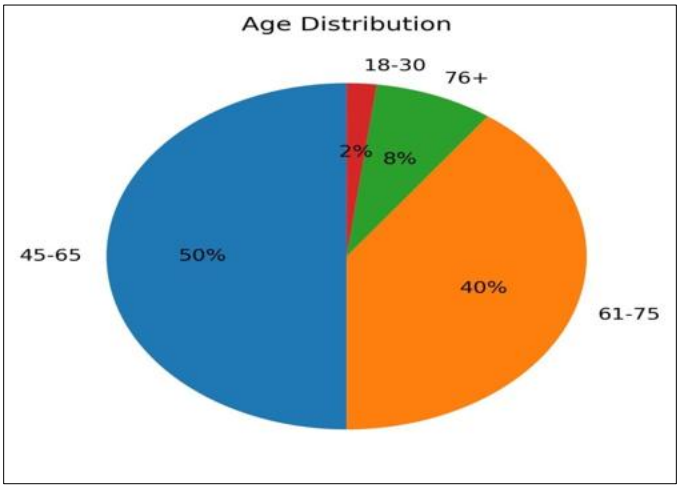
Results

A total of 50 participants completed the questionnaire and met the inclusion criteria for the study. Descriptive statistical analysis was performed to summarise the responses. The findings are presented under demographic characteristics, medication usage patterns, awareness regarding polypharmacy, medication adherence, medication review practices, and patient perspectives on medication optimisation.

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Demographic Characteristics

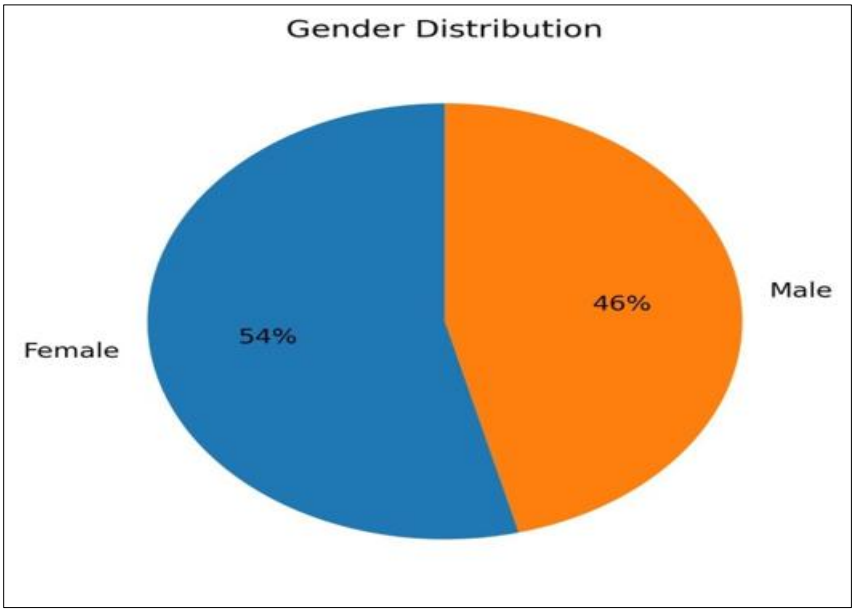
Figure 1: Age Distribution of Participants



Interpretation

Among the 50 participants, the majority belonged to the 45–60 years age group (50%), followed by 61–75 years (40%). Only 8% were above 75 years, while 2% were between 18 and 30 years. The study population was therefore predominantly composed of middle-aged and older adults, who are more likely to require long-term pharmacotherapy.

Figure 2. Gender Distribution of Participants



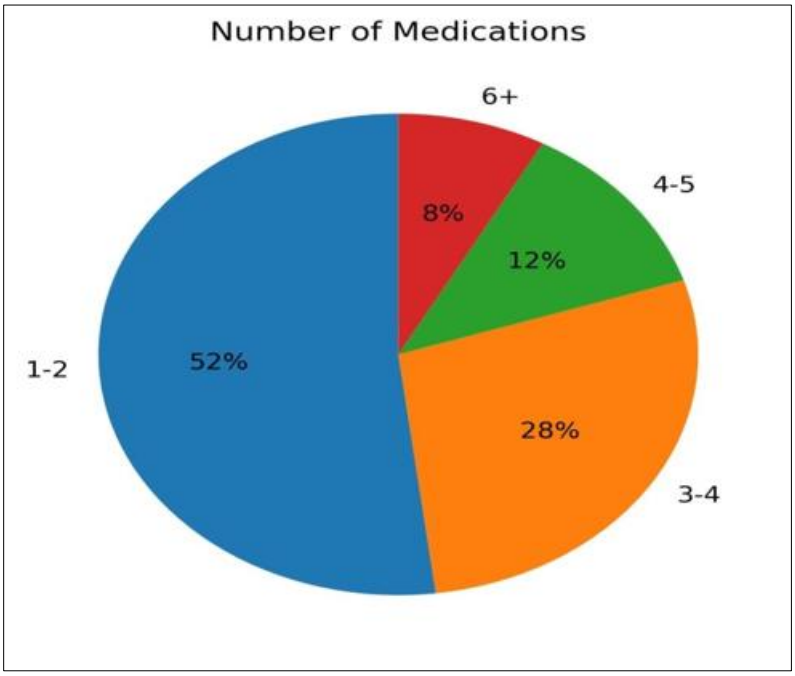
Interpretation

Of the total participants, 27 (54%) were female and 23 (46%) were male. The nearly equal gender representation provides perspectives from both sexes regarding medication use and awareness of polypharmacy.

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Medication Usage Pattern

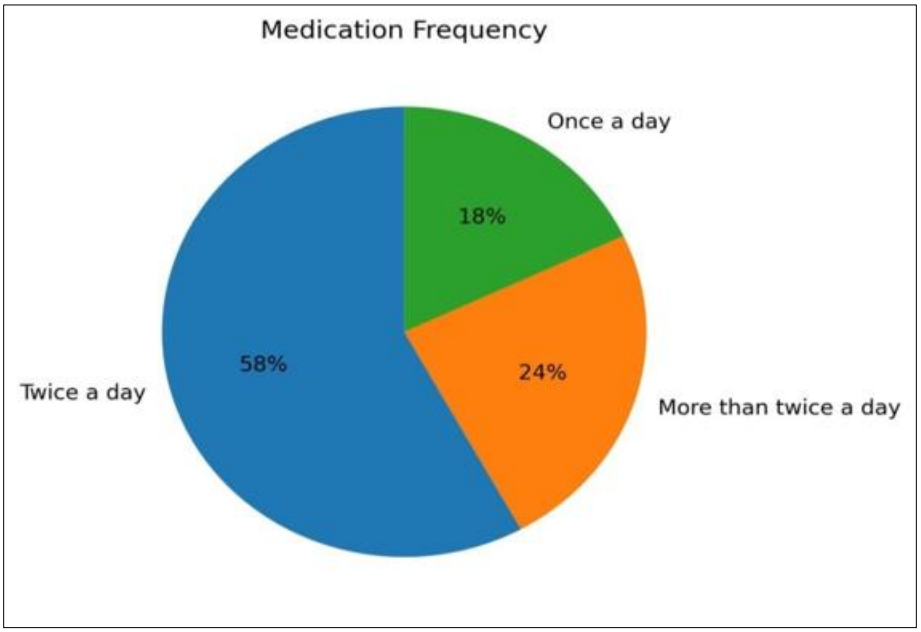
Figure 3: Number of Medications Used



Interpretation

More than half of the participants (52%) reported taking one to two medications, whereas 28% were taking three to four medications. A smaller proportion reported using five or more medications, indicating that although most participants were receiving relatively fewer medications, a notable subgroup experienced higher medication burden.

Figure 4. Frequency of Medication Intake



Interpretation

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Most participants (58%) reported taking their medications twice daily, while 24% required medication more than twice a day. Only 18% took medication once daily, suggesting that multiple daily dosing schedules were common among the respondents.

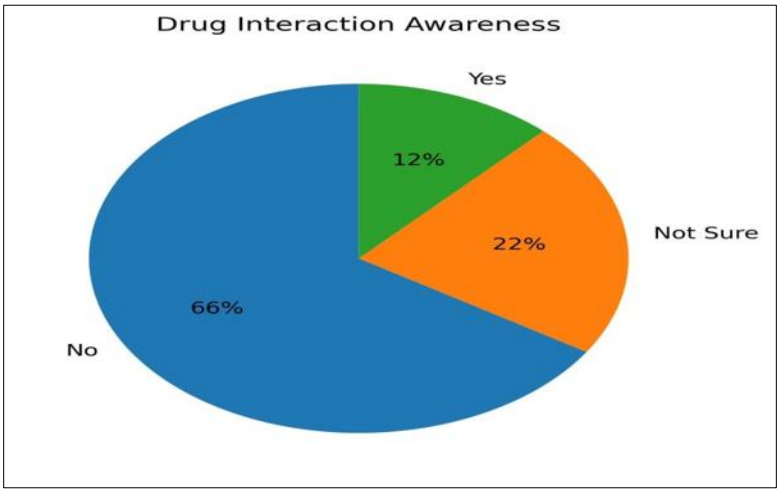
Prescribing Healthcare Professional

Interpretation

The majority of medications were prescribed by general physicians (76%), followed by a combination of general physicians and specialists (12%). A smaller proportion received prescriptions exclusively from specialists or pharmacists.

Awareness of Medication-Related Risks

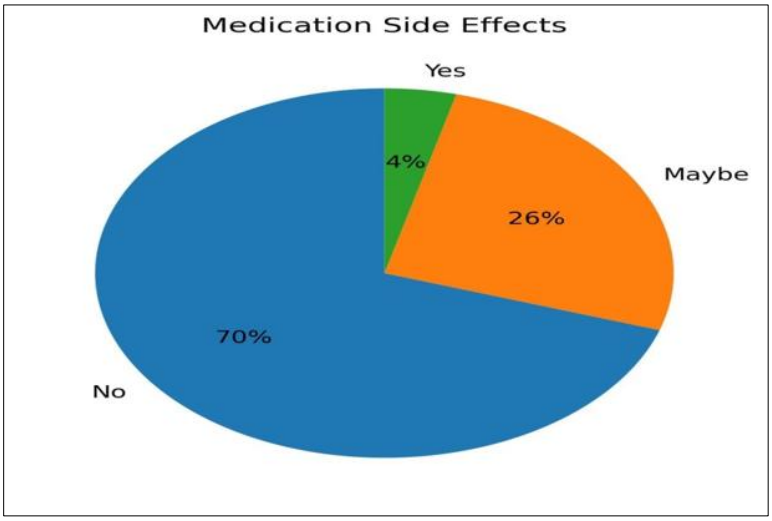
Figure 5: Awareness of Drug–Drug Interactions



Interpretation

Only a small proportion of participants (12%) reported being aware of possible drug–drug interactions. Most participants (66%) indicated that they were unaware, while 22% were uncertain. These findings suggest limited awareness regarding potential medication interactions.

Figure 6: Medication Side Effects

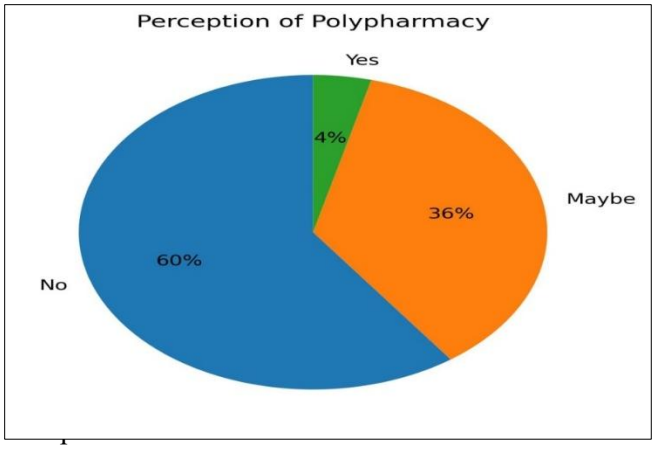


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Interpretation

Most participants (70%) reported that they had not experienced side effects from their medications. However, 26% were uncertain whether symptoms they experienced were medication-related, while 4% confirmed experiencing side effects.

Figure 7: Awareness of Polypharmacy



A majority of participants (60%) did not consider polypharmacy to be a health risk, while 36% were unsure. Only 4% recognised polypharmacy as a potential health concern, indicating a considerable knowledge gap among respondents.

Medication Adherence and Review Practices

Medication Adherence

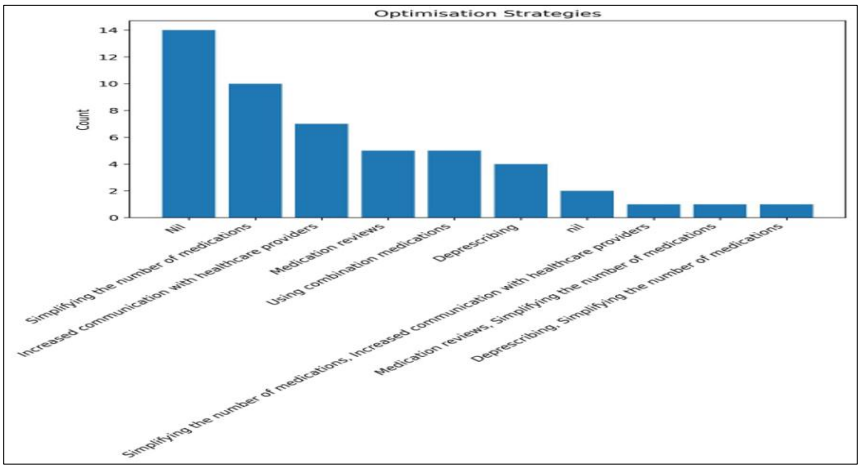
Medication adherence varied among participants. While 28% reported never forgetting to take their medications, 30% stated that they rarely missed doses. A smaller proportion admitted to forgetting medications sometimes, often, or always, indicating varying levels of adherence within the study population.

Medication Review

Interpretation

Participants showed mixed responses regarding medication review practices. Similar proportions reported undergoing medication reviews, not receiving reviews, or being uncertain about whether their medications had been reviewed, suggesting inconsistency in routine medication optimisation practices.

Figure 8: Patient Perspectives on Medication Optimisation Strategies

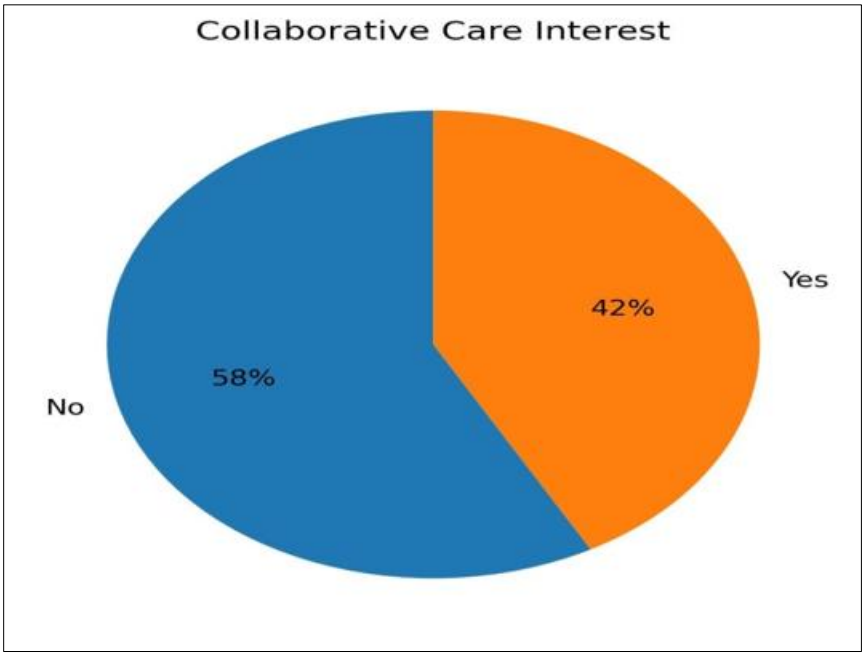


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Interpretation

Participants identified simplifying medication regimens as the most preferred strategy for improving medication management. Other commonly selected approaches included regular medication reviews, patient education and improved communication with healthcare professionals

Figure 9: Interest in Collaborative Care



Interpretation

Responses regarding collaborative care were divided. While 42% of participants expressed interest in a multidisciplinary approach involving doctors, nurses and pharmacists, 58% were not interested. This indicates differing perceptions regarding team-based medication management.

Discussion

The present cross-sectional questionnaire-based study was conducted to assess patient awareness regarding polypharmacy, identify medication-related risks associated with the concurrent use of multiple medications, and evaluate patient perspectives on medication optimisation strategies. A total of 50 participants receiving prescription medications participated in the study. The findings provide valuable insights into medication use patterns, patient awareness, adherence behaviour and perceptions regarding medication management.

The demographic profile of the participants revealed that the majority belonged to the 45–60 years (50%) and 61–75 years (40%) age groups. This finding is consistent with the well-established observation that polypharmacy is more prevalent among middle-aged and older adults due to the increasing burden of chronic diseases such as hypertension, diabetes mellitus and cardiovascular disorders. As life expectancy increases, individuals are more likely to develop multiple chronic conditions requiring long-term pharmacotherapy, thereby increasing the likelihood of polypharmacy. Previous studies have similarly reported that advancing age is one of the strongest predictors of multiple medication use and medication-related complications.

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With respect to medication usage patterns, more than half of the participants reported taking one to two medications, while a considerable proportion required three or more medications. Although only a smaller percentage of respondents were taking five or more medications, these individuals may still be at increased risk of adverse drug reactions, drug–drug interactions and reduced medication adherence. The findings demonstrate that medication burden exists even among community-dwelling adults and should not be overlooked simply because the number of medications appears relatively modest. Regular review of medication regimens remains important to ensure that each prescribed medicine continues to provide therapeutic benefit.

The study also demonstrated that most participants required medication administration more than once daily, with twice-daily dosing being the most common schedule. Increased dosing frequency has been associated with poorer medication adherence in several previous studies. Complex medication schedules may contribute to confusion, missed doses and unintentional non-compliance, particularly among older adults managing multiple chronic conditions. Simplifying medication regimens through combination therapies or once-daily dosing, where clinically appropriate, may therefore improve adherence and overall treatment outcomes.

One of the most significant findings of this study was the limited awareness regarding drug–drug interactions. Nearly two-thirds of participants reported that they were unaware of potential interactions between the medications they were taking, while only a small proportion demonstrated awareness. Similar findings have been reported in previous studies, which indicate that many patients lack adequate knowledge regarding the risks associated with concurrent medication use. Limited awareness may increase the likelihood of inappropriate self-medication, the use of over-the-counter medications without professional consultation and delayed recognition of adverse drug reactions. These findings emphasise the need for improved patient counselling during prescribing and dispensing.

Participants also demonstrated limited awareness regarding polypharmacy as a health risk. The majority did not perceive taking multiple medications as potentially harmful, while many others remained uncertain. Only a small percentage recognised polypharmacy as an important healthcare concern. This finding highlights an important knowledge gap and suggests that many patients continue to associate medication quantity with better disease management rather than recognising the risks associated with unnecessary or inappropriate medication use. Increasing public awareness regarding the concept of appropriate polypharmacy, medication safety and deprescribing may therefore improve patient engagement in medication review programmes.

Most participants reported that they had not experienced medication-related side effects; however, more than one-quarter were unsure whether symptoms they had experienced were related to their medications. This uncertainty may reflect inadequate counselling regarding expected adverse effects or difficulty distinguishing medication-related symptoms from underlying disease. Healthcare professionals should encourage patients to report new or unusual symptoms promptly and educate them regarding common adverse drug reactions associated with their prescribed medications.

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Medication adherence remains an important determinant of treatment success. Although a substantial proportion of participants reported rarely or never forgetting to take their medications, a notable number admitted missing doses either occasionally or frequently. Medication non-adherence remains a major contributor to poor disease control, increased hospitalisation and unnecessary healthcare expenditure worldwide. Factors such as complex medication schedules, forgetfulness and limited understanding of treatment goals have been consistently associated with poor adherence. The findings of this study support the need for reminder systems, patient education and simplified medication regimens to improve long-term adherence.

The study also explored participants' experiences regarding medication review practices. Responses indicated that medication reviews were not routinely performed for all participants, and several respondents were uncertain whether their medications had ever been reviewed. Medication review represents a fundamental component of medication optimisation and provides opportunities to identify unnecessary medications, duplicate therapies, inappropriate prescribing and potential drug interactions. Regular medication review, particularly among individuals receiving multiple medications, has been shown to reduce medication-related problems while improving treatment effectiveness and patient safety.

An encouraging finding of the study was that many participants expressed a preference for simplifying medication regimens as a strategy for improving medication management. Medication simplification, where clinically appropriate, has been associated with improved adherence, reduced treatment burden and enhanced quality of life. Participants also recognised the value of patient education and improved communication with healthcare professionals in optimising medication use. These findings support the growing emphasis on patient-centred care and shared decision-making in chronic disease management.

Interest in collaborative care involving physicians, pharmacists and other healthcare professionals was variable among participants. While a considerable proportion expressed interest in multidisciplinary medication management, others were less receptive. Increasing awareness regarding the role of pharmacists and multidisciplinary healthcare teams may help improve acceptance of collaborative care models, which have consistently demonstrated benefits in reducing medication-related problems and improving clinical outcomes.

Overall, the findings of the present study indicate that although many participants were managing chronic medications appropriately, important gaps remain in patient awareness regarding polypharmacy, medication-related risks and routine medication review practices. These findings reinforce the importance of strengthening patient education, promoting regular medication reviews and encouraging multidisciplinary collaboration to optimise medication therapy. Healthcare providers should adopt a proactive approach in counselling patients regarding medication safety, particularly among individuals receiving multiple long-term medications. Improving patient knowledge and engagement may ultimately reduce preventable medication-related complications and contribute to safer, more effective pharmacotherapy

Strengths of the Study

The present study possesses several strengths that enhance its relevance. It provides real-world insights

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into patient awareness and perceptions regarding polypharmacy using a structured questionnaire. The study examined multiple aspects of medication management, including medication use patterns, adherence, awareness of drug interactions, medication review practices and optimisation strategies within a single survey. Furthermore, participants represented different age groups and both genders, allowing for a broader understanding of patient perspectives. The findings may serve as baseline data for future studies and help inform healthcare professionals about areas requiring targeted patient education.

Limitations of the Study

Despite its strengths, the study has certain limitations. The sample size was relatively small (n = 50), which may limit the generalisability of the findings to larger populations. The use of convenience sampling may have introduced selection bias, as participants were recruited through online platforms and voluntary participation. Data were self-reported and therefore subject to recall bias and response bias. In addition, the cross-sectional design provides information at a single point in time and does not permit conclusions regarding causal relationships. Future studies involving larger, multicentre populations and validated assessment tools are recommended to further strengthen the evidence.

Conclusion

This cross-sectional questionnaire-based study assessed patient awareness of polypharmacy, medication-related risks, and perceptions of medication optimisation among adults taking prescription medications. While most participants were under healthcare supervision and demonstrated generally satisfactory medication adherence, significant gaps were identified in their understanding of polypharmacy, drug–drug interactions, and medication side effects. Participants recognised the importance of medication simplification, regular medication reviews, and better communication with healthcare professionals. The findings highlight the need for greater patient education, routine medication reviews, multidisciplinary collaboration, and patient involvement in medication management to promote safer and more rational medication use. Despite limitations including a small sample size and questionnaire-based design, the study provides preliminary evidence supporting targeted interventions to improve medication safety and optimisation, with further research recommended in larger and more diverse populations.

Acknowledgement

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