

ASSESSMENT OF MEDICINE STORAGE PRACTICES AND HOME MEDICATION
SAFETY AMONG HOUSEHOLDS IN A SELECTED COMMUNITY IN KERALADr. Shamna M. S.^{1*}

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ABSTRACT

Background: Unsafe medicine storage at home can lead to accidental poisoning, medication misuse, antimicrobial resistance, and poor adherence.^[1] **Objective:** To assess home medication storage practices and identify gaps in medication safety among households. **Methods:** A community-based cross-sectional study was conducted in 60 households in a selected community block in Kottayam District as part of the author's *Field Research Fellowship in Community Pharmacy Practice*. Data were collected using a structured checklist assessing storage location, labelling, expiry status, and disposal practices. **Results:** Only 22% of households stored medicines in a designated cabinet. Expired medicines were found in 38% of households. Safe disposal practices were followed by only 12%. **Conclusion:** Unsafe home medication storage is common. Community pharmacist-led awareness programs are urgently needed to ensure safe storage and disposal of medicines.

KEYWORDS: Home Medication Safety; Medicine Storage Practices; Household Medicines; Community Pharmacy; Medication Disposal; Field Research Fellowship.

1. INTRODUCTION

Proper storage of medicines at home is essential for maintaining drug quality and ensuring patient safety. Many households store prescription and over-the-counter (OTC) medicines without adequate knowledge of appropriate storage conditions, increasing the risk of accidental poisoning, drug degradation, unsafe self-medication, and antimicrobial misuse.^[1-3]

Previous studies have reported that improper household medicine storage contributes significantly to medication errors and inappropriate drug use.^[2-4] Home medicine audits conducted by trained pharmacy professionals, including those undergoing structured field research fellowships, provide valuable insights into real-world medication safety issues and support community-based educational interventions.^[5]

This study, conducted as part of a *Field Research Fellowship in Community Pharmacy Practice*, evaluates medicine storage practices and home medication safety among households in a selected community in Kerala.

2. OBJECTIVES**Primary Objective**

To assess the medicine storage practices and home medication safety among selected households.

Secondary Objectives

- To identify the prevalence of expired and unused medicines in households.
- To study the disposal methods used for unused and expired medicines.

3. METHODOLOGY**Study Design**

Community-based cross-sectional field study conducted under the author's *Field Research Fellowship in Community Pharmacy Practice*.

Study Area

A selected community area in Kottayam District, Kerala.

Sample Size

60 households.

Study Tool

A structured observation checklist used during household visits.

Inclusion Criteria

- Households willing to participate.
- Adults aged ≥ 18 years representing the household.

Exclusion Criteria

- None

Data Collection

House-to-house visits were conducted as part of the fellowship training module. Observations were recorded regarding:

- Storage location and storage environment.
- Label readability.
- Presence of expired or unused medicines.
- Disposal practices.
- Self-medication behaviour.

Ethical Consideration

Institutional Ethics Committee (IEC) approval was not required, as the study did not involve patient records, clinical interventions, or personal health data. Only household medicine storage practices were observed.^[6]

4. RESULTS**Storage Practices**

- Medicines stored in a safe, closed cabinet: **22%**
- Medicines stored in the kitchen: **41%**
- Medicines accessible to children: **33%**

Medicine Status

- Expired medicines present: **38%**
- Duplicate medicines present: **27%**

Disposal Practices

- Disposed in household waste: **72%**
- Flushed into the toilet: **16%**
- Returned to pharmacy: **12%**

Self-Medication Practices

- Practiced in **58%** of households.
- Commonly misused medicines: analgesics and antibiotics.

5. DISCUSSION

The present study identified substantial gaps in home medication storage and safety practices, consistent with findings from previous studies conducted in India and other low- and middle-income countries.^[2-4]

Medicines stored in kitchens and open shelves are exposed to heat and humidity, which can compromise drug stability and effectiveness.^[1-3] The presence of expired and duplicate medicines reflects poor household inventory management and increases the risk of inappropriate medication use.

Improper disposal practices, such as flushing medicines into toilets or discarding them in household waste, contribute to environmental contamination and antimicrobial resistance.^[5-6]

As part of the *Field Research Fellowship*, this study demonstrates the critical role of trained pharmacy professionals in identifying medication safety gaps and implementing community-level interventions.

6. CONCLUSION

Unsafe home medication storage and disposal practices are widely prevalent among households in the selected community.

Field research initiatives and community pharmacist-led educational programs can play a significant role in improving household medicine safety and rational medicine use.

7. Recommendations

- Incorporate home medicine audit modules into pharmacy field research fellowships.
- Conduct regular community awareness programs through pharmacy colleges.
- Promote safe medicine disposal campaigns.
- Provide educational leaflets in Malayalam for households.
- Encourage community pharmacies to accept unused and expired medicines.

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9. Author Contribution

Dr. Shamna MS (Field Research Fellow) contributed to.

- Conceptualization of the study
- Household visits and data collection
- Data analysis and interpretation
- Manuscript preparation

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