WJPMR, 2026, 12(3), 242-259

Research Article

WORLD JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.wjpmr.com

Impact Factor: 7.555

ISSN (O): 2455-3301

ISSN (P): 3051-2557

Coden USA: WJPMBB

EVALUATION OF MEDICATION ADHERENCE AMONG PATIENTS OF LONG-TERM DRUG USERS AND SHORT-TERM DRUG USERS AND SPREADING AWARENESS AMONG PATIENTS

Mrs. K. Sojarna[1]*, Ms. S. Dharshini[2], Ms. G. Divya[3], Mr. S. Haffusulla[4], Mr. M. Monaj Kumar[5]

[1]Assistant Professor) Department of Pharmaceutical Chemistry, P.S.V. College of Pharmaceutical Science and Research, Krishnagiri, India.

[2,3,4,5]B. Pharmacy, Final year Students of P.S.V College of Pharmaceutical Science and Research, Krishnagiri, India.

***Corresponding Author: Mrs. K. Sojarna**

Assistant Professor) Department of Pharmaceutical Chemistry, P.S.V. College of Pharmaceutical Science and Research, Krishnagiri, India.

DOI: https://doi.org/10.5281/zenodo.18799340

How to cite this Article: Mrs. K. Sojarna[1]*, Ms. S. Dharshini[2], Ms. G. Divya[3], Mr. S. Haffusulla[4], Mr. M. Monaj Kumar[5] (2026). Evaluation Of Medication Adherence Among Patients Of Long-Term Drug Users And Short-Term Drug Users And Spreading Awareness Among Patients. World Journal of Pharmaceutical and Medical Research, 12(3), 242–259.

Article Received on 17/01/2026 **Article Revised on 06/02/2026** **Article Published on 01/03/2026**

1. ABSTRACT

The influence of medication adherence on therapeutic outcome and disease complication is significant. Our investigation is intended to evaluate adherence in long- and short-course treatment patients. The survey addresses determinants of adherence, such as patient knowledge, socio-economic status, side effects, and complexity of drug regimens. A structured questionnaire and patient interviews was applied to assess adherence patterns according to the standard scales of adherence. The comparative assessment of long-term and short-term drug users outlines differences in adherence patterns and in motivation. Also, a sensitization campaign was organised to create awareness among patients on the value of regular medicines, their uses, and the influence in success treatment. The results highlight the importance of ongoing patient counselling and communication strategies to improve adherence and general health outcomes.

KEYWORDS: Medical Adherence, Therapeutic Outcome, Regimen, Long-term, Short-term, Awareness.

1. INTRODUCTION

The degree of a patient's adherence to medication is defined by how well the patient follows their doctor's orders, especially with respect to when, how much, and how regularly the patient takes their medications. Good adherence is necessary to meet therapeutic objectives, to manage the disease process, and to improve health outcomes, and non-adherence may lead to loss of treatment benefits, further complications, hospitalization, and increased cost of care.[1]

• Compliance with long-term therapy is the term to which the World Health Organization (WHO) refers when talking about long-term therapy.

• The WHO (World Health Organization) defines medical adherence as the extent to which an individual's behaviour—taking medication, following a diet, and/or making lifestyle changes—aligns with the recommendations from a healthcare provider.[2]

1. **Subjective assessments** that result in questioning the patients, relatives, caregivers and physicians about medication usage of the patient.

2. **Objective assessments** including pill counts, reviewing pharmacy refill records, or with the aid of an electronic medication event monitoring system (MEMS).

3. **Biochemical assessments** such as by adding an inert marker to the drug and then detecting it in urine or blood, or serum drug levels measurement.

Medication adherence is classified into two types.

i. Adherence

ii. non-adherence

Adherence

Compliance in medicine is the degree to which a patient correctly follows medical advice, including taking medications, following a diet, and/or making lifestyle changes. It highlights collaboration and joint decision-making between patient and provider to attain best health results.

For example
- ✓ Taking medication as directed.
- ✓ Follows dietary / lifestyle advisement
- ✓ Enhancing medication Compliance could have a more significant impact on the health of our population than in finding any novel treatment.

1.1 Non-Adherence
Non-adherence is a patient's action against in which they do not comply with the agreed upon recommendations of its healthcare provider, including not taking a prescribed medication as directed or at all. Non-adherence can be intentional, a patient makes an active decision to not comply with a treatment regimen, or unintentional where the patient desires to comply but is prevented from doing so by impediments such as forgetfulness, misunderstanding, or practical difficulties (Does not take their medication correctly).

For Example.
→ Taking wrong Doses.
→ Stopping the medicine too early.
→ Taking it at the wrong time

There are two types of non-adherence
i. Intentional
ii. Unintentional
1. intentional (by choice or belief).
2. unintentional (by forgetfulness or practical barriers).

- Skipping doses, errors in timing, or discontinuing a drug without the supervision of a prescriber are forms of nonadherence."
- The importance of compliance with medication regimens to slow down the disease process, prevent complications, and improve Treatment efficacy.

1.1.1 INTENTIONAL
Intentional non-adherence is a negative decision-making process in which an individual actively and consciously chooses to deviate from the prescribed treatment protocol, often based on their own beliefs related to medication, disease or health in general. This choice can be motivated by fear of side effects, perceived risks, concerns about the need for or benefits of treatment, or dissatisfaction with the healthcare provider.

Key Points
1. It is a conscious decision by the patient.
2. Common reasons include:
3. Feeling better and thinking treatment is no longer needed
4. Lack of trust in the healthcare provider
5. Belief that the medicine is not effective or not necessary

Example
Intentional non-adherence happens when, for example, a patient with high blood pressure stops taking his or her medication because they feel fine and assume that their blood pressure is normal.

1.1.2 UNINTENTIONAL
Unintentional non-adherence includes situations where patients are motivated to adhere to their prescribed regimen but are unable to so due to practical barriers (e.g., forgetfulness or carelessness) or other external factors (e.g., limited health literacy or difficulty obtaining medication). It is described as a passive failure to comply with the treatment regimen (different from intentional non-compliance with the treatment, a situation in which the patient has a conscious decision to not follow the regimen).[3]

Key Points
1. It is not a deliberate decision.
2. Causes often include:
3. Forgetting to take the medicine
4. Misunderstanding the dosage or schedule
5. Physical problems (like difficulty swallowing pills)
6. Limited access to medicines (financial or logistical issues)
7. Complex medication regimen (too many drugs or confusing timing)

Example
An individual with diabetes forgets to take their insulin because they were busy or on the road - that's unintentional non-adherence.

1.2 FACTORS AFFECTING THE MEDICATION ADHERENCE
1. Patient-related factors
* Insufficient understanding of the illness and treatment
* Forgetting the medication
* Lack of motivation to or interest in pursuing further treatment
* Anxiety over potential side effects
* Psychological factors (e.g., depression, anxiety)
* Perceptions and attitudes towards medicines (such as they are not needed or that they cause harm).

2. Therapy-related factors
* Complicated treatment (too many pills or doses in a day)
* Prolonged treatment period (typical for chronic diseases)
* "hard to suffer side-effects"
* Medication changes (multiple changes confuse patients).

3. Healthcare system-related factors
* Poor communication between the healthcare provider and patient
* Lack of trust in healthcare professionals
* Inadequate follow-up or counselling
* Limited access to healthcare services

4. Socioeconomic factors
* Expense of drug (Econ hardship)
* Lack of education (difficulty interpreted instructions)

* Busy life or work related hours
* No social/family support

5. Condition-related factors

* Chronic or asymptomatic conditions (the patient may feel "fine" and forget or skip doses)
* Disease severity (illness severity correlates with adherence mild illness is associated with poor adherence)
* Comorbidities (polypharmacy complicates regimens).[4]

2. AIM AND OBJECTIVES

2.1 AIM

To improve patients' health outcomes by ensuring consistent and correct use of prescribed medications in both short-term and long-term treatments.

2.2 OBJECTIVES

SHORT-TERM MEDICATION ADHERENCE

i. To keep treatment on track during sudden health issues like infections.
ii. To avoid getting sick again because you stopped too soon.
iii. To get quick relief from symptoms while reaching complete healing.
iv. To ensure patients complete the full course of prescribed medication (e.g., antibiotics, pain relievers).
v. To promote understanding of the importance of taking medication as directed, even after symptoms improve.
vi. To evaluate barriers to short-term adherence, such as forgetfulness, side effects, or misunderstanding instructions.

LONG-TERM MEDICATION ADHERENCE

i. To keep chronic illnesses like diabetes or high blood pressure in check.
ii. To cut down on problems or trips to the hospital.
iii. To boost how you feel, plus make care work better as days go by.
iv. To boost changes in daily habits while keeping up with regular medicine intake.[5]

3. PLAN OF WORK

The entire study was planned for 3 months

This study was designed in six different phases, as given below.

PHASE 1

- Selection of the topic.
- Classify based on long-term and short-term.
- Checking feasibility.
- Preparation of the study protocol.
- Designing the questionnaire and data collection form.
- Literature survey.
- Using the scale.

PHASE 2

- Selection of the hospital.
- Visiting the hospital and explaining the study in detail to the medical officer.
- Preparation of the data collection form.
- Preparation of the online survey form.

PHASE 3

Direct interview

- Directly visited the patients and the data were collected from the study population.

Online survey

- After getting appropriate consent, data were collected from the study population.
- The Google Form link has been distributed through social media.
- Getting responses from participants via filled forms.

PHASE 4

- Review of individual responses from both direct and online surveys.
- Analysing the collected data.
- Review of results.
- Discussion.

PHASE 5

- Created awareness among the patients.
- Understanding.

PHASE 6

- Report preparation given as a graph using the collected data.
- Submission

4. METHODOLOGY

PART: 1

4.1 MEDICATION ADHERENCE IN SHORT-TERM

STUDY TYPE: Observational study.

STUDY PLACE

- Primary health care centre, Krishnagiri
- PSV Hospital, Orappam
- Government Hospital, Bargur
- Visited near by pharmacy

STUDY DURATION

3 months (October 2025 to December 2025)

STUDY POPULATION

Using the MEDICATION ADHERENCE RATING SCALE for short-term with a 10% margin of error, 90% confidence interval and 60% response distribution, the estimated sample size is found to be 200.

STUDY CRITERIA

INCLUSION CRITERIA

- People who are all using drugs
- People of all ages
- People who are in pregnancy and lactating

EXCLUSION CRITERIZ

- People who are not willing to participate in the study
- People who are not responding properly

STUDY PROCEDURE

The data collection form has been prepared, and it contains information about people's medication adherence. The data will be collected by visiting the hospital and direct interaction with patients who take medicines. Medication adherence is assessed by **the medication adherence rating scale** according to the data collected from the patients.

PART:2

4.2 MEDICATION ADHERENCE IN LONG-TERM

STUDY TYPE: Observational study.

STUDY PLACE

- Primary health care centre, Krishnagiri
- PSV Hospital, Orappam
- Government Hospital, Bargur

STUDY DURATION

3 months (October 2025 to December 2025)

STUDY POPULATION

Using the MEDICATION ADHERENCE RATING SCALE for long-term with a 10% margin of error, 90% confidence interval and 60% response distribution, the estimated sample size is found to be 200.

STUDY CRITERIA

INCLUSION CRITERIA

People who are using medicines for a long time for the treatment of a diseases like diabetes, hypertension, tuberculosis, cardiac disorders and ect.

EXCLUSION CRITERIA

- People who are not willing to participate in the study
- People who are not responding properly.

STUDY PROCEDURE

The data collection form has been prepared, and it contains information about people's medication adherence. The data will be collected by visiting the hospital and direct interaction with patients who take medicines. Medication adherence is assessed by **the medication adherence rating scale** according to the data collected from the patients.

PART: 3

4.3 AWARENESS OF MEDICATION ADHERENCE AMONG THE PATIENTS

STUDY TYPE: Observational study.

STUDY PLACE: PSV Hospital, Orappam

STUDY DURATION: One day (December 2025)

STUDY CRITERIA

INCLUSION CRITERIA

People who are willing to participate in awareness programme.

EXCLUSION CRITERIA

People who are not willing to participate in the awareness programme.

STUDY PROCEDURE

By visiting the hospital and spreading awareness among the patients.[6]

5. SCALES USED TO MEASURE MEDICAL ADHERENCE

A Medication Adherence Measuring Scale is a standardized tool for evaluating how well patients adhere to taking their prescribed medicines.[12] These scales provide insight for researchers and healthcare providers to understand if the patient is adhering to its treatment plan (dose, timing, and frequency) and to the reasons of non-adherence.[13]

4.4 PRIMARLY USED SCALES

1. Morisky Medication Adherence Scale (MMAS)

- Most widely used
- Available in:
  - MMAS-4 (4 items)
  - MMAS-8 (8 items)
- Measures forgetfulness, carelessness, stopping medication when feeling better/worse
- Scoring classifies adherence as low, medium, or high.[7]

2. Medication Adherence Rating Scale (MARS)

- Self-report questionnaire
- Combines.
  - Medication-taking behavior
  - Attitudes toward medication
- Commonly used in psychiatric patients

3. Brief Medication Questionnaire (BMQ)

- Screens adherence barriers.
  - Regimen
  - Belief
  - Recall
- Identifies why patients are non-adherent

4. Hill-Bone Compliance to High Blood Pressure Therapy Scale

- Specifically designed for hypertension
- Measures:
  - Medication taking
  - Appointment keeping
  - Diet adherence

5. Adherence to Refills and Medications Scale (ARMS)

- Suitable for patients with low literacy
- Measures:
  - Medication use
  - Prescription refills

6. Self-Efficacy for Appropriate Medication Use Scale (SEAMS)

- Measures patient confidence in taking medications correctly
- Useful for chronic illness management

4.5 SCALE USED FOR OUR TOPIC IS

MEDICATION ADHERENCE RATING SCALE (MARS)

ABSTRAC T Purpose The self-report Medication Adherence Rating Scale (MARS) is widely used to assess medication adherence especially for chronic diseases and psychiatric disorders; however, its psychometric properties have not been fully investigated. It measures both level of adherence and attitudes/beliefs of patients towards medicines.

Developed by

Originally adapted from the Drug Attitude Inventory (DAI) and the Morisky Medication Adherence Scale (MMAS).

Purpose of MARS

- The scale is used to.
- Evaluate the medication taking behaviour of a patient in terms of frequency
- Detect unintentional non-adherence (forgetting)
- Detect intentional non-adherence (discontinuing medication, missing doses)
- Uncover patient beliefs, attitudes and concerns
- Provide a measure of the level of adherence complexity to support research and clinical practice.

Structure of MARS

There are two versions.

MARS-10 (ORIGINAL VERSION – 10 ITEMS)

It contains 10 statements evaluating.

1. Medication-taking behavior

- Forgetfulness
- Carelessness
- Stopping medication
- Changing dosage
- Skipping

2. Attitudes and beliefs

- Feeling worse on medication
- Feeling tired or slowed down
- Feeling like a "patient"
- Benefit vs. harm perception
- Scoring System (MARS-10)

Each item is rated on a 5-point Likert scale

0 = Always,1 = Often, 2 = Sometimes, 3 = Rarely, 4 = Never

High score = High adherence

Score Range: 0-40

Cut-off (commonly used):

≥ 30 = Good adherence

< 30 = Poor adherence

(Depending on the study, cutoffs may vary).

MARS-5 (SHORT VERSION – 5 ITEMS)

The MARS-5 is the abbreviated version of MARS-10 and is the most widely applied in studies of chronic diseases (diabetes, hypertension, asthma, etc.).

Items focus only on medication-taking behavior

- I forget to take my medicines
- I alter the dose
- I stop taking my medicines
- I miss out a dose
- I take less medication than instructed

Scoring (MARS-5)

- Same 5-point Likert scale
- Score range: 5–25
- Higher score = Better adherence

Interpretation (commonly used):

> 20 = Good adherence

≤ 20 = Low adherence

Psychometric Properties

MARS has strong reliability and validity.

Reliability

MARS-5 Cronbach's alpha: 0.68–0.85

MARS-10 Cronbach's alpha: 0.75–0.87

Validity

Correlates well with MMAS, pill counts, and refill data. Demonstrates good construct validity for both psychiatric and medical conditions.

Advantages of MARS

- Short and easy to administer
- Measures both behavior and attitudes
- Good internal reliability
- Suitable for chronic diseases & psychiatric disorders
- Gives numerical score for statistical analysis

Limitations

- Self-report → may overestimate adherence
- Cultural/language adaptation required for different populations
- Less accurate for patients who intentionally hide non-adherence.[8]

6. RESULTS AND DISCUSSION

- The result and discussion are made by using the chart and pie charts by the data collected.
- The data are collected according to the drugs using period and disease. They are:

1. Long-term drug users.
2. Short-term drug users.

- The below all the data collected are by our own and they are coverted as data by the patients we intracted

at hospital. The data may be inaccurate or not approximate because we collected data from approximately 200 and they are all the patients who are intrested to it only.

6.1. DATA OF LONG-TERM DRUG USERS

1. AGE WISE FOR LONG TERM DRUG USERS

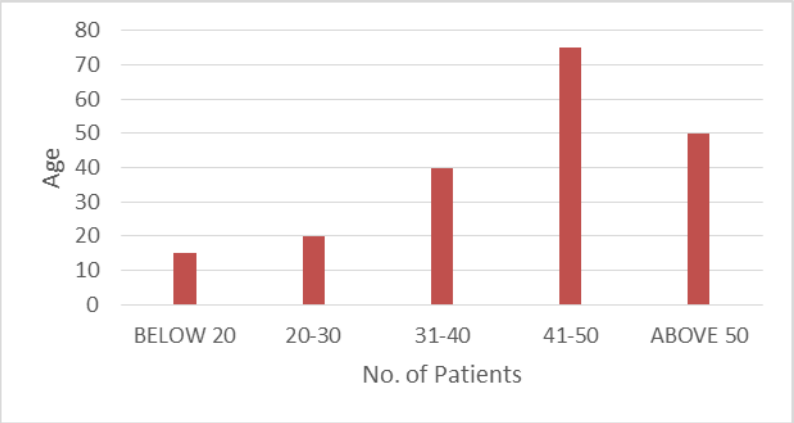

Fig. 1: Age of the patients.

Age distribution of long-term drug use The drug adherence was the highest among 41–50 years with~75 patients in this age group. Followed by 31–40 years and above 50 years with ~50 patients in each arm suggesting long term medication users are middle aged & elderly persons. The 21–30 years group is a smaller share land with about 20 patients, while under 20 years has the fewest amount of patients, standing in at 4. In general these data point towards the age group of middle aged to older adults having the highest prevalence of long-term drug use, which may indicate either a higher burden of chronic conditions or more active healthcare seeking behavior in this age group.

2. LONG-TERM DRUG USERS GENDER WISE

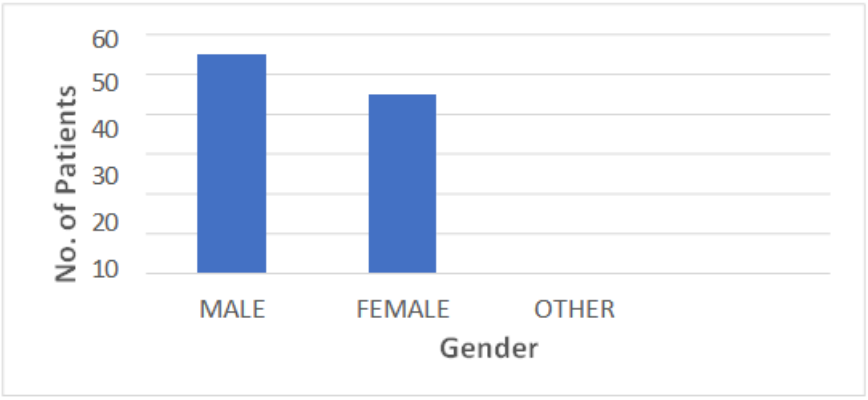

Fig. 2: Gender of the Patients.

On the basis of gender distribution in term of adherence to long-term drug treatment, it can be interpreted from the data that male patients adhere more, with about 55 % of men being a constant follower of their course of treatment. Adherence was moderately high also among female patients with around 45 % that is indicative of a somewhat lower level of compliance, albeit still high, compared to male patients. In contrast, for the “Other” gender there is zero adherence recorded in this dataset, which could imply that there was a negligible, or no response in reporting from this group. In general, the results reveal a pronounced gender disparity in medication-taking behaviour, with males exhibiting superior long-term adherence relative to females, signifying a conceptual framework for fostering more best practice intervention accessibility to all gender group and among the under-represented in particular.

3. PREVIOUS HISTORY FOR LONG-TERM DRUG USERS

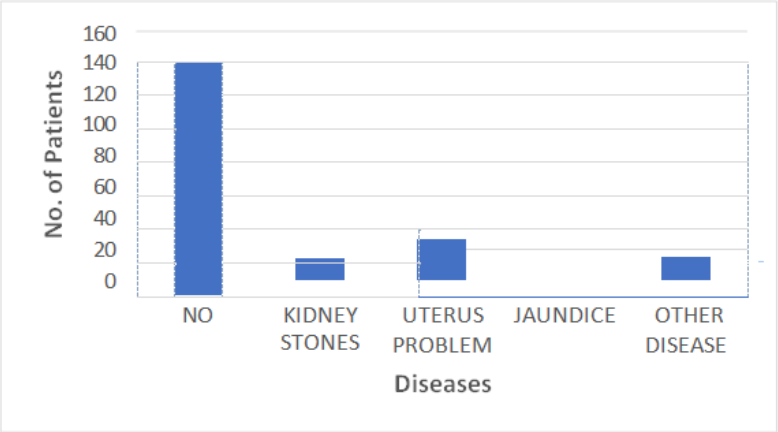

Fig. 3: Previous history of the patients.

Review of the patients' previous medical records reveals that approximately 135 patients long-term users of the drug) they had no significant prior illness, suggesting that the majority of people taking the drug for prolonged periods do not have a significant chronic or recurrent medical illness. Among those on record, problems with the uterus were most prevalent (n~27), followed by kidney stones (n~13), and miscellaneous conditions (n~15). A history of jaundice was much less common with around eight patients. In summary, these results indicate that a minority of long-term medication users have a history of certain medical conditions, but most do not have significant prior health problems, suggesting a heterogeneous patient group among long-term drug users.

4. REASON FOR TAKING MEDICINE LONG-TERM DRUG USERS

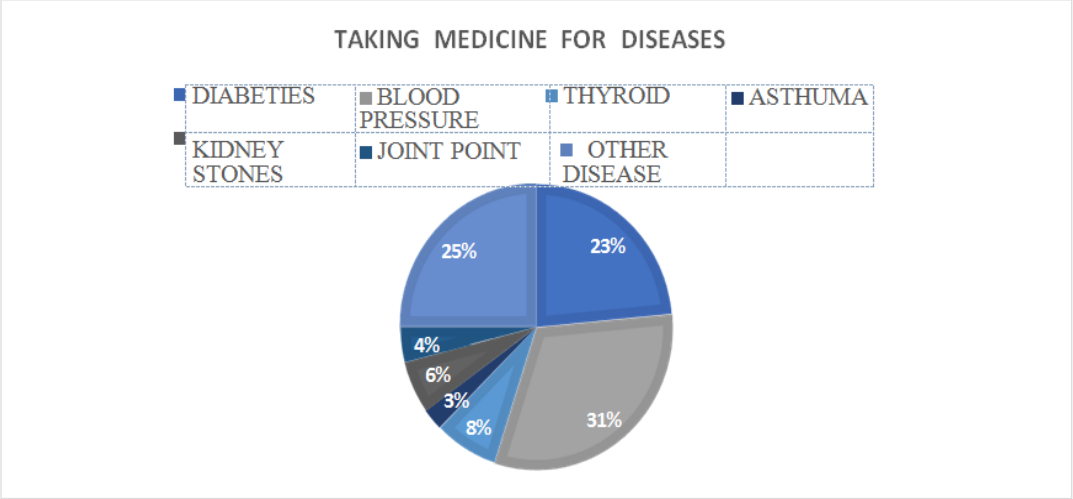

Fig. 4: Reason for taking the Long-term medicines.

The pie chart illustrates the proportion of long-term users of drugs by chronic diseases. Blood pressure leads with 31% of patients, suggesting that hypertension is still the most prevalent disease requiring long-term medication. Then there are other diseases 25%, which means that there are many chronic diseases at lengths of take drugs. Diabetes accounts for 23% underlining the significance of the disease in long-term medication dependence. Problems with the thyroid account for 8% and for 6% for kidney stones and 4% for joint pain, so those are moderately represented. Asthma least common reason, it accounts for 3% of people on long term drugs. On the whole, the findings indicate that lifestyle-related and metabolic diseases, particularly hypertension and diabetes, are the strongest contributors to continued use of pharmacological therapy, with a number of other diseases making up smaller but still non-trivial Shares.

5. TAKING MEDICINES PER DAY

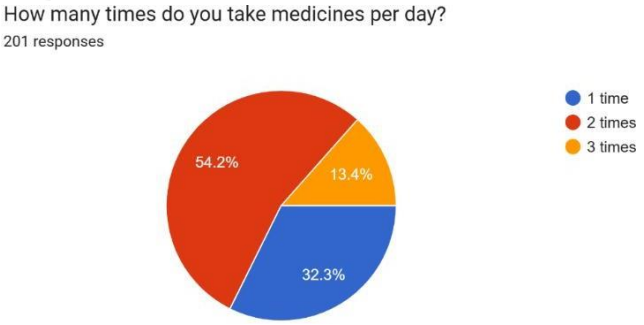

Fig. 5: Taking medicines Per Day.

Figure shows depicts the frequency of daily drug intake among long-term users. The majority of the respondents (54.2%) took the medicine two times per day, indicating that twice daily dosing is the most prevailing dosage regimen for chronic diseases. At the same time, 32.3% of the respondents are taking medicines once a day, indicating a group of people with less complicated medication needs. Only 13.4% of patients stated to take tablets three times daily, these are presumably the more complex cases. Taken together, these results indicate that the bulk of patients only need one or two doses per day, but a smaller, yet non-negligible proportion is on the other extreme, taking the medication more frequently, reflecting the diverse needs of treatment depending on one's health condition.

6. HOW LONG THE PATIENT TAKE MEDICINE FOR THE DISEASE

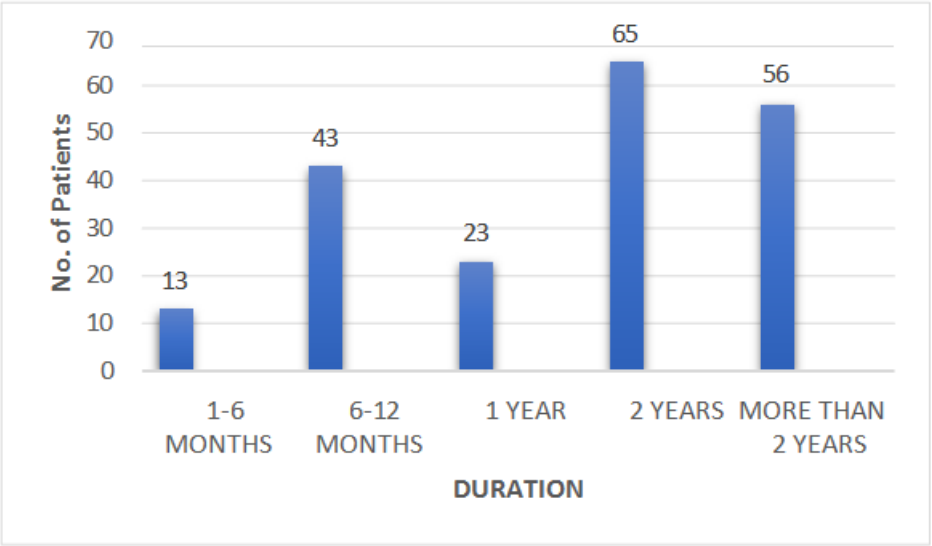

Fig. 6: Duration of taking the medicine.

The bar graph details the length of time in the number of months) for which patients have been taking drugs for their diseases. The largest number of patients, 65, have taken medication for 2 years, suggesting that long-term treatment is typical in this sample. The next group consists of 56 patients on drugs for over 2 years, which again is a significant number which suggests that many patients need prolonged or lifelong treatment. 43 patients said they took medication between 6 and 12 months, 31 for about one year. And for a period of six to 12 months is the number of 43 patients which represents the number of 31 patients taking medication. Long/ very long-term category do contribute to the high figure overall, but the data shows clearly that most of them are in the former group, not the latter, which reflects the chronicity of solid tumors and the necessity for long-term pharmacological management.

7. PATIENTS FEELING ON TAKING MEDICINE

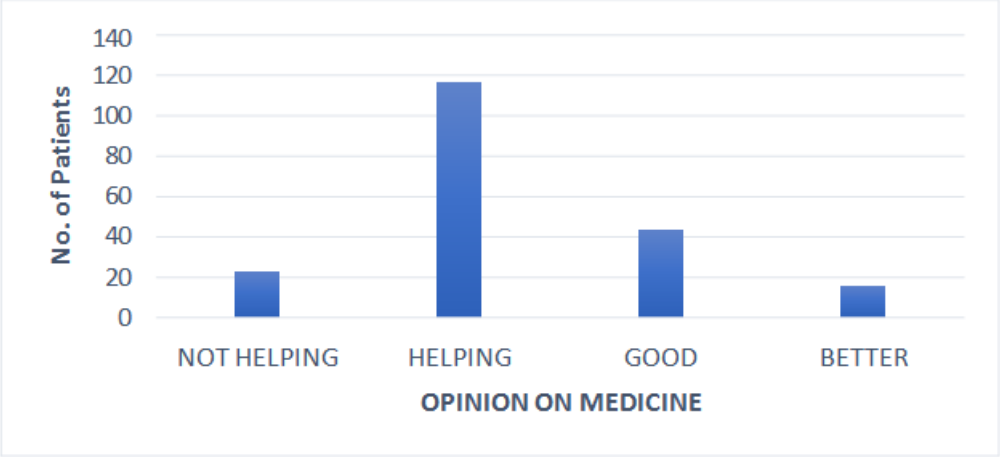

Fig. 7: Opinion on taking medicine.

The graph presents patients' opinions on how well the drugs they are taking work. A vast majority of 117 patients felt the drug was beneficial, showing a general favourable attitude towards the drug.

Furthermore, 44 patients (22 on ponatinib, 20 on imatinib) expressed the opinion that their status was "good", indicating a meaningful improvement while on treatment. 16 patients are also a minority, having reported mild/moderate improvement. But 22 patients said the drugs were not helping — a reminder that some people will need to experiment with a few different treatment plans and may eventually require specialized care. Overall, the findings suggest that the majority of patients gain from their medication, but a minority are left with suboptimal therapeutic results.

8. PATIENT BELIEF IN THEIR MEDICATIONS

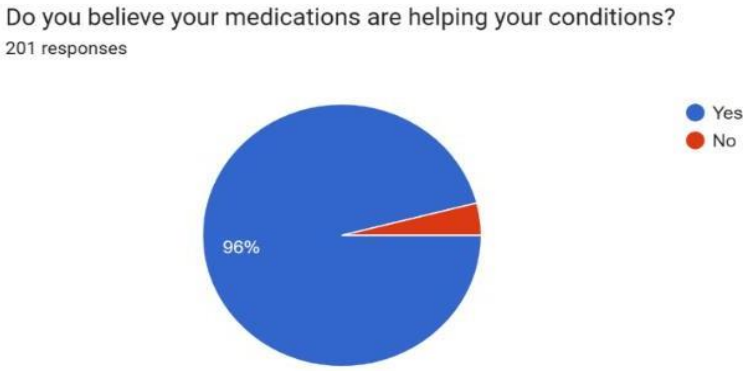

Fig. 8: Belief of patients.

96% of these regular users said their medication was working for them, and 4% said it wasn't. This high perceived effectiveness of长term repro users is consistent with literature reporting that satisfaction and perceived efficacy tend to increase with longer duration of therapy in chronic diseases, which may contribute to better adherence to treatment over time.

9. FOOD RESTRICTIONS

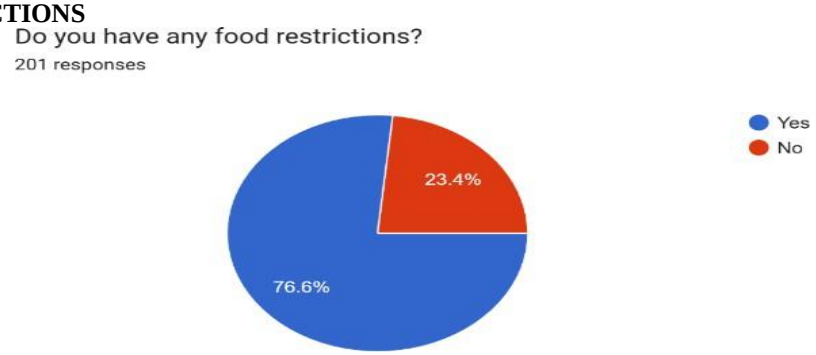

Fig. 9: Food restrictions for patients.

Seventy-six point six percent of the pool reported dietary restriction of some sort, while 23.4% reported no food restrictions. That is, over three quarters of the respondents are holding restricted diets that might be associated with health issues, medicament intake or personal and cultural tastes within the subject group.

10. TAKING MEDICINE IN DOCTOR PRESCRIBED TIME

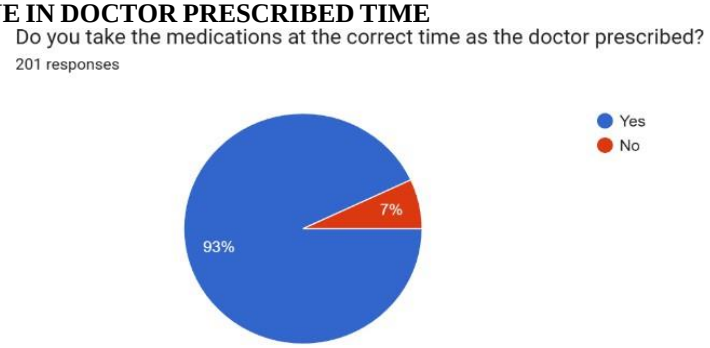

Fig. 10: Taking medicine as doctor prescribed.

Of these, 93% said that they take their medicine at the right time and 7% said that they don't adhere to the timing instructions. This is indicative of the fact that, in general, the study population adhered well to the dosing schedule, although there was a small portion of the population that may have been at risk for experiencing decreased therapeutic efficacy or increased adverse events if not timing compliant.

11. OK WITH TAKING MEDICINE

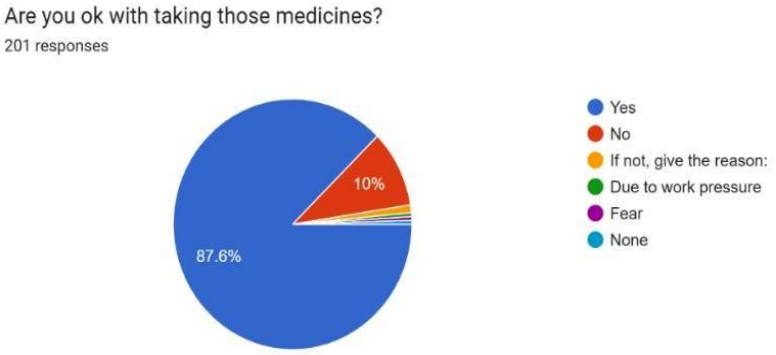

Fig. 11. Patient comfortable on taking medicine.

In this study, adherence to medication regimens was monitored by determining if the participants took their medications at the right time as instructed by their physicians. Among 201 respondents, 93% complied at a substantial level with originally recommended timing of medication. Only 7% said they were not able to keep to the recommended timetable. A high level of adherence indicates that the participant had a responsible attitude towards medication taking, which is a significant contributing factor to the success of the therapeutic outcome. Yet the minority of non-adherent individuals indicates the potential for interventions especially through education to raise even further awareness on the importance of timely administration of medication.

12. ADR OF DRUG

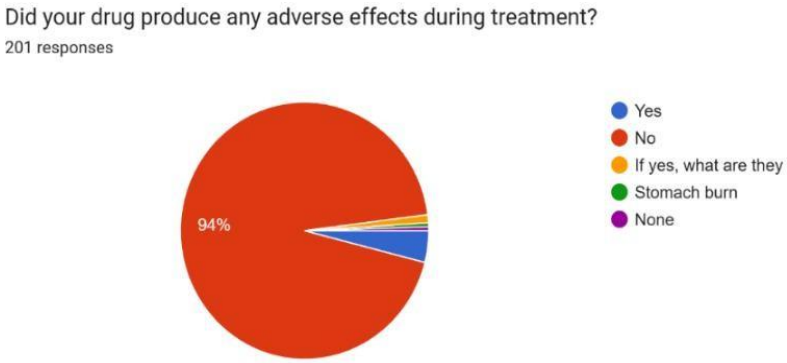

Fig. 12: Facing ADR on taking medicine.

Occurrence of Adverse drug reaction (ADR) were assessed among the subjects. Of the 201 respondents, 94% had had no side effects while taking the drug, suggesting that the safety profile of the medications taken was broadly positive. About 6%—only a few handfuls—had adverse effects. The responses submitted included cases of stomach burn and other minor complaints. The extreme rarity of adverse drug reactions indicates that the majority of people who were prescribed these medications tolerated them well. Even ballpark figure side effects reports serve to underscore the need for ongoing surveillance and patient counseling to provide safe and effective therapy.

13. STOPPING MEDICINE MIDDLE OF TREATMENT

The report also examined if participants ever thought of stopping their medication while being treated. Among the 201 respondents, 85.6% reported that they did not have a premature stop in thinking, which indicated a high level of finishing commitment to the prescribed therapy.

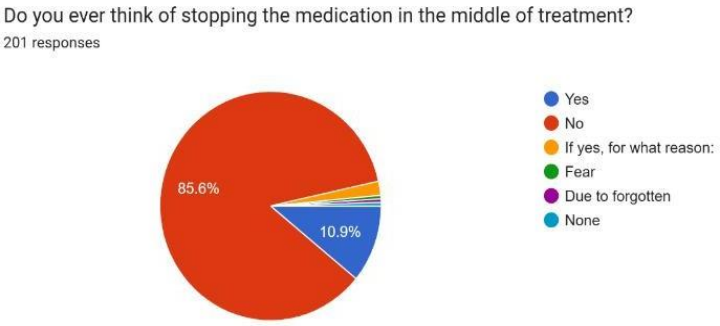

Fig. 13: Patient think to stop medicine.

Yet, 10.9% of the replies were that yes, they did contemplate stopping the treatment. Psychological reasons such as fear, forgetfulness and other minor reasons were also reported by a very small number of participants. Although most had positive attitudes towards adherence, the fact that some subjects were considering ceasing treatment indicates that patient education, reassurance and follow- up during treatment need to be strengthened to avoid the risk of dropout.

14. REGULAR CHECKUP AS DOCTOR ADVICED

The research also looked into whether participants followed their doctors' recommendations for follow- up visits. Among 201 respondents, 88.1% reported that they regularly went to their scheduled checkups, indicating that they were highly motivated to receive continuing medical care. To the contrary, a lesser percentage of participants said that they did not comply with checkups. Among the reasons for noncompliance with checkups were forgetfulness, work commitments and other minor reasons, but these were the reasons given by very small percentages of subjects.

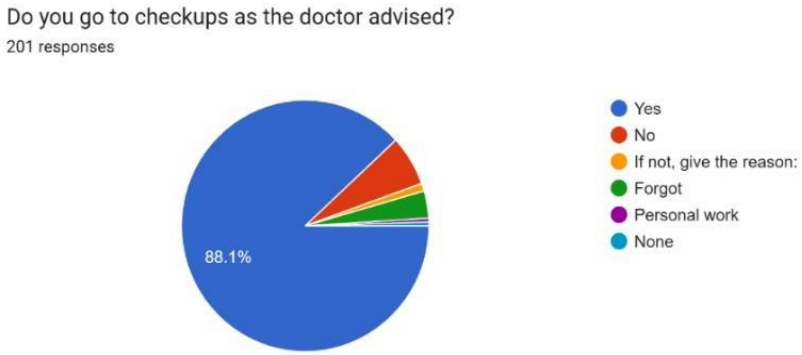

Fig. 14: Regular checkup.

These results indicate that although the majority of people have good follow-up, focused counseling for those with insurmountable personal or logistical limitations to attend may help to ensure continuity of monitoring and improved treatment results.

15. HERBAL DRUGS DURING TREATMENT

The use of herbal preparations during therapy was considered in the questionnaire. 92% of 201 respondents said they did not use any herbal medication while undergoing their prescribed treatment, and they only 8% have used herbal remedies in treatment. This indicates that the overwhelming majority of participants depended on the conventional medical treatment as recommended by the medical professionals. The low rate of use of herbal drugs suggests a poor acceptance of alternative remedies in this group which could be due either to an adequate confidence in the prescribed medications or to

knowledge about possible interactions between herbal and allopathic medicines. These results emphasize the necessity of counseling patients for safe and informed use of complementary therapies in the context of active treatment.

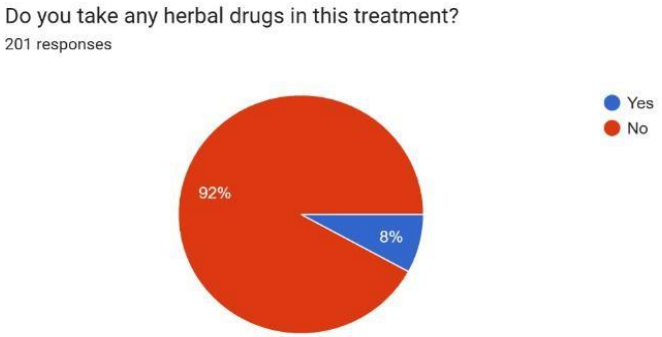

Fig. 15: Taking herbal medicine during treating.

16. STOPPING OTHER MEDICINES FOT TREATMENT

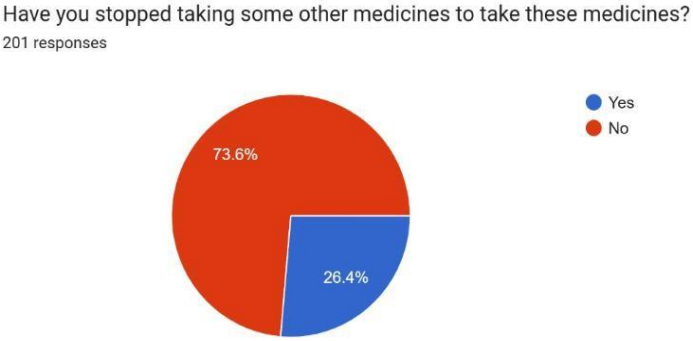

Fig. 16: Stopped other medicine for taking current medicine.

The research also examined if participants had stopped using any medications prior to initiating their current one. Among the 201 respondents, 73.6% said that they hadn't discontinued any other medications, suggesting that the patients followed the guidance to continue on their pre-existing treatment. But 26.4% claimed that they had stopped taking other drugs before switching to the new one. This is in line with the idea that a substantial minority may have concerns about drug interactions, treatment burden, or side effects that would cause them to discontinue prior medications. These results highlight the need for clearly defined medical recommendations and patient counseling to avoid unwarranted discontinuation which may otherwise result in the loss of therapeutic outcomes.

17. OTC DURING TREATMENT

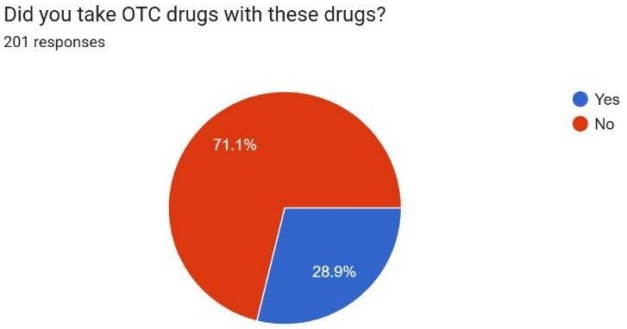

Fig. 17: Taking OTC drugs during treatment.

The use of OTC drugs in addition to the prescribed treatment was also investigated in the survey. (71.1%) of the 201 patients said they did not use any OTC drugs with their prescribed medication. Meanwhile, 28.9% acknowledged to taking OTC products at the same time. This means that about 30% of the respondents were self-medicating, a practice that could lead to adverse events, including drug interactions, impaired treatment effectiveness, or unexpected side effects. Most of the respondents strictly followed the prescribed therapy, but the high number of people using OTC drugs signals that patients need to be informed better about the risks of taking medication unsupervised while being treated.

18. TAKING MEDICINES WHEN OUTSIDE

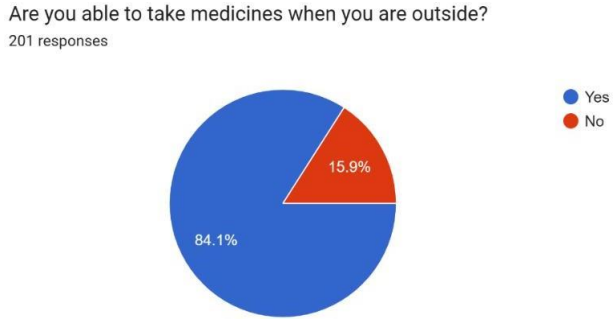

Fig. 18: Taking medicine while in the outside places.

The investigation also focused on participants' capacity to keep up with medication while traveling. Among 201 respondents, a large majority 84.1% indicated that they took their medicines even when they were outside, suggesting strong adherence despite disturbances in routine or environment. On the other hand, 32(15.9%) subjects reported that they could not take their medicines when outside the home, indicating that for a minority of people adherence may be influenced by situational factors, including forgetfulness, unavailability of medicines or inconvenience. These data points signify that more emphasis on reinforcing reasonable measures—such as bringing medicines, employing reminders, or utilizing pill organizers—may be necessary to ensure day-to-day adherence across environments.

19. CHANGING MEDICINE TAKING TIME BECAUSE OF SCHEDULE

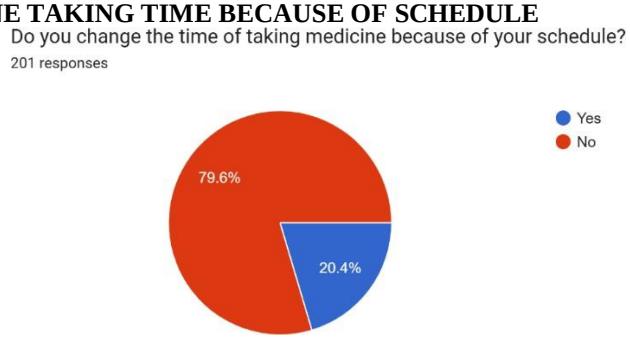

Fig. 19: Patient taking medicine in different time due to schedule.

Of the 201 participants who completed the survey, 79.6% were the majority that answered that they do not change the time when they take their medication because of their daily schedule. Among the participants, only 20.4% stated that they change the time of medicine intake due to scheduling issues. This implies that the majority of people stick to their prescribed medication timings while a minor percentage have difficulty following a rigid schedule.

6.2 DATA OF SHORT-TERM DRUG USERS

1. GENDER WISE FOR SHORT-TIME MEDICINE USERS

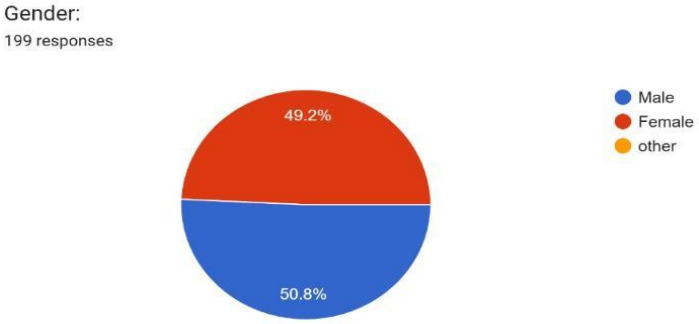

Fig. 1: Gender of patients.

The 199 patients who had applied medicines for short-term use were almost evenly split by gender. Male patients were 50.8% of the respondents and female patients were 49.2%. This almost equal participation suggests that both genders are well-represented in the short-term medication users, which may imply that both had a similar likelihood of use.

2. AGE WISE

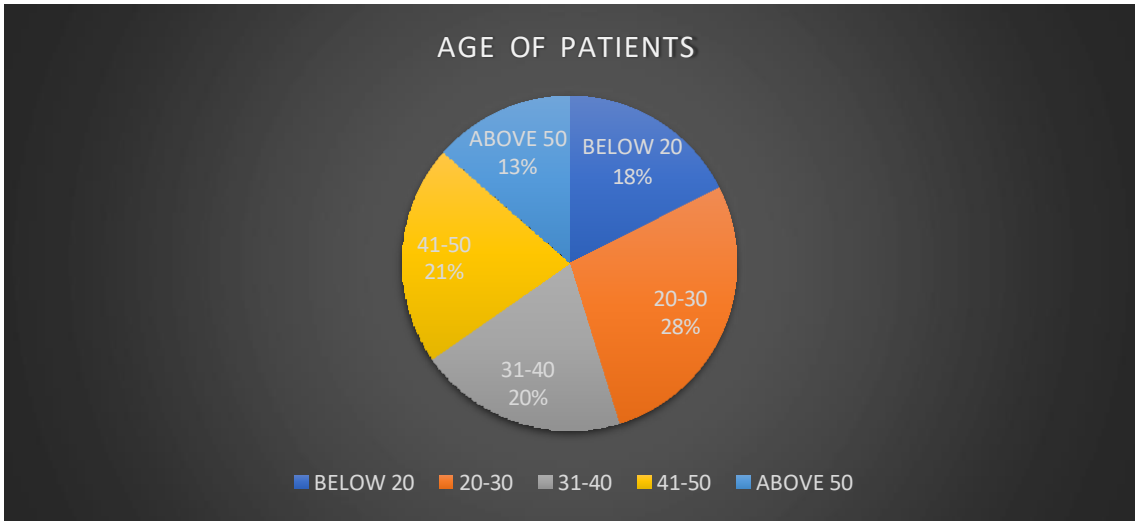

Fig. 2: Age of patients.

use is most common among young adults, with a gradual decline seen in older age groups. The age- wise distribution of patients reveals that the majority of the respondents are 20–30 years aged group (28%). This is succeeded by patients within the age group of 41–50 years (21%) and 31–40 years (20%). Under 20s make up 18% of the sample, while the over 50s are the smallest group at 13%. In general, these results suggest that use of medicine for a short duration is highly prevalent among young adults and decreases in the older age cohorts.

3. DIFFICULTIES IN TAKING MEDICINES

Among the 199 respondents who used medicines for a short duration, a vast majority (94.5%) do not hold any difficulty in consuming the medications. A minuscule fraction reported facing difficulty, and an even smaller fraction mentioned the kind of difficulty faced. This would mean that the majority of patients get through their short-term prescribed medications without too many problems and therefore that the acceptance and usability are both good.

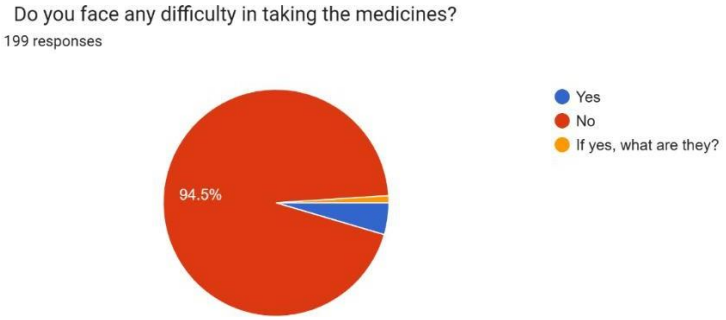

Fig. 3: Facing difficulty in taking medicine.

4. COMPLITION OF FULL COURSE OF MEDICINES FOR SHORT TERM

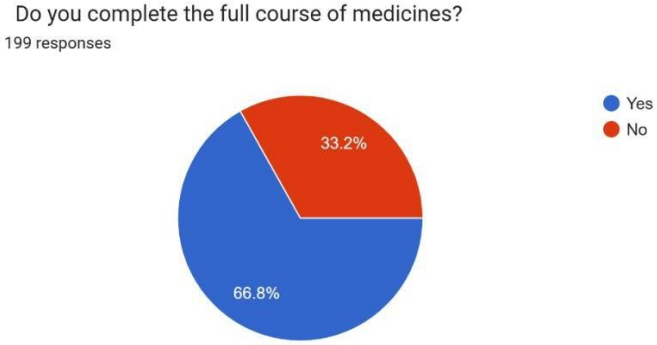

Fig. 4: Chart of patient either complete their full course of medicine.

Discussion Short-term medication use among 199 respondents Study of the use of short-term medication among the 199 respondents revealed that 66.8% of them finish the entire course of prescribed medicines,

indicating good adherence to treatment. Nevertheless, 33.2% of the participants confessed that they do not end up taking the whole course and this might also influence in the curative power of the treatment and in the patient's healing. This underscores the importance of raising awareness about the need to complete prescribed medication regimens.

5. EXACT TIME AS PRESCRIBED

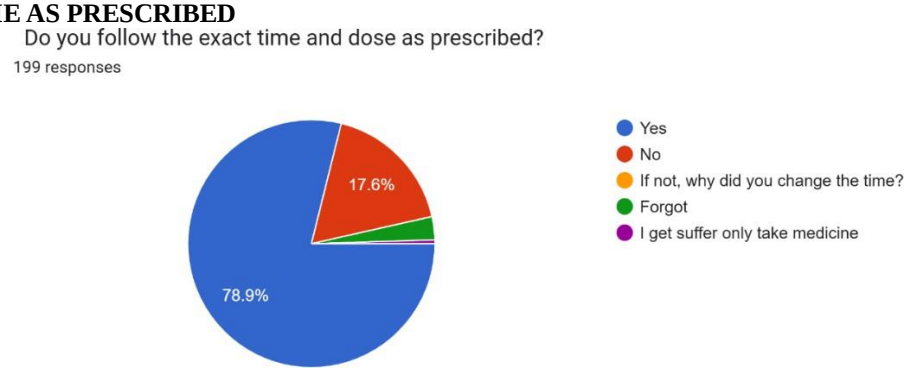

Fig. 5: Patient taking medicine as exactly time as prescribed.

Of the 199 patients surveyed, 78.9% claimed that they took prescribed drugs at the exact time and dosage, showing good adherence to short-term treatment guidelines. However, 17.6% confessed that they do not adhere to the prescribed regimen and a small number reported forgetting to take medicines or taking them only when symptoms worsening. These results indicate that although most patients obey doctors' orders, a small number do not, and their deviations could influence the outcome of treatment.

6. TAKING MEDICINE BY DOCTOR CONSULTING, OR BY OTC

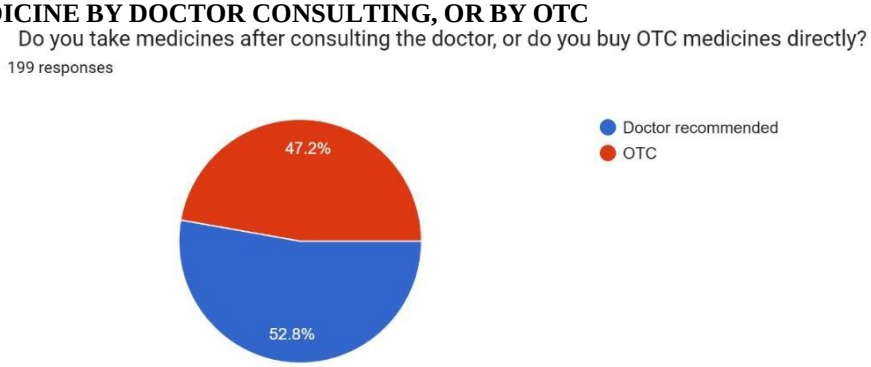

Fig. 6: Patient taking medicine either by doctor consultations or as OTC drugs.

From the 199 short term medicine users who responded, 52.8% indicated that they take medicines after consulting a doctor, showing a tendency towards professional medical advice. Meanwhile, 47.2% said that they buy the OTC medicines straight away without any consultation. While this indicates that a small majority follows the recommendations of the doctors, a good number of patient choose to medicate themselves, signalling an area that requires more awareness for safe and appropriate usage of medicine.

7. AWARENESS OF FOOD AND OTHER DURING TREATMENT

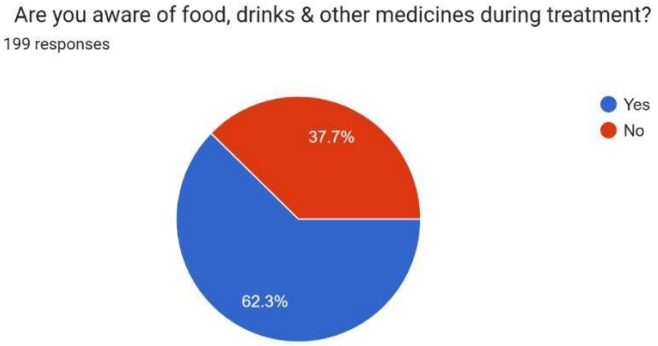

Fig. 7. Patient awareness of food consume during medicine.

Among the 199 respondents, 62.3% said that they knew to avoid certain foods, drinks, and other medicines during their treatment, reflecting a good understanding of possible interactions. On the other hand, 37.7% replied that they were not informed of such precautions, potentially exposing them to a reduction in effectiveness and/or an increase in side effects of the treatment. This underscores the necessity for improved patient education on food and drug interactions during treatment.

8. ANY ADR THAT MADE STOP EARLYIER

Of the 199 subjects using short-acting drugs, 86.4% reported no adverse effects that lead them to premature termination. Just 13.6% of participants said they had side effects severe enough to stop taking the drug. This indicates that the majority of patients tolerate the prescribed short-term therapy well, however, a minor fraction might necessitate more intensive observation and alternative treatment modalities due to adverse reactions.

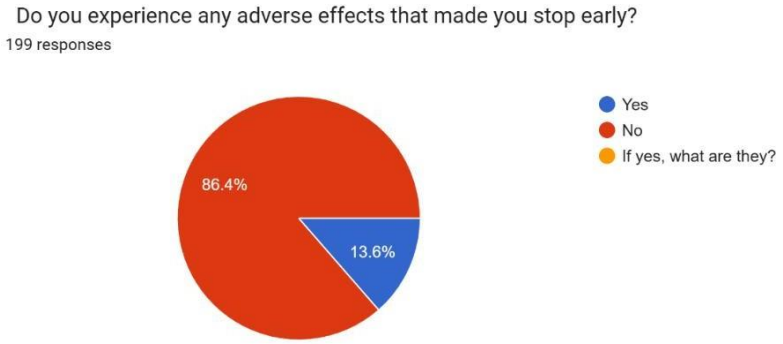

Fig. 8: Patient experience any ADR that made them stop the medicines taking.

9. WHEATHER KNOW WHAT COULD HAPPEN IF STOP EARLYIER

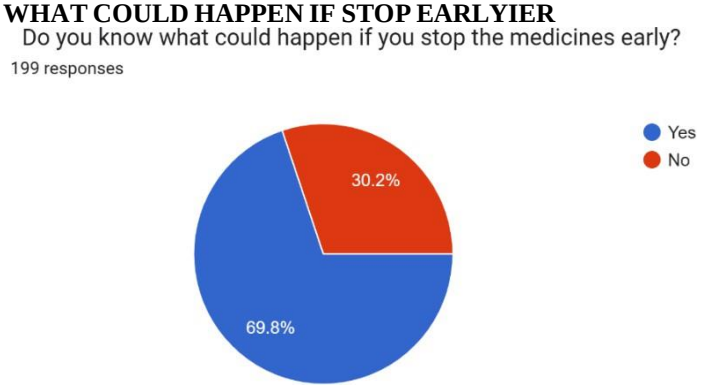

Fig. 9: Patient knowledge on what if they stop medicine early.

Out of the 199 patients, 69.8% had the perception that they could foresee the consequences of quitting their medicines with an awareness for early termination of medication, suggesting sufficient knowledge on adherence. However, 30.2% responded that they are not aware of the risks of stopping a medication prematurely. This indeed emphasizes the importance of education to make sure that no one has been missed in really engraining the message that completing the prescribed course of therapy is critical to prevent adverse consequences or loss of efficacy.

10. IMPORTANCE OF COMPLITION

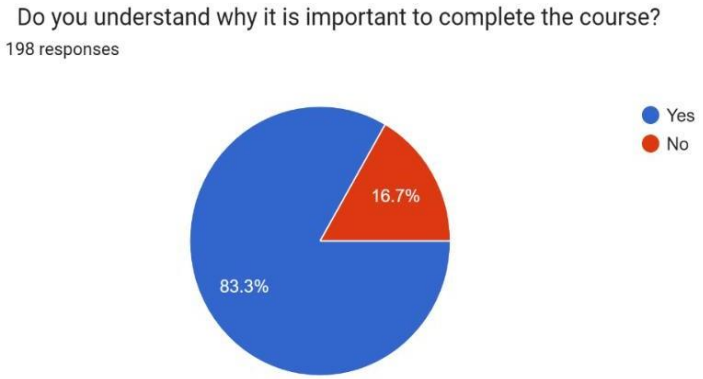

Fig. 10: Patient understanding on completion of medicine.

Among the 198 patients that were surveyed, 83.3% strongly agreed that they know why it is important to take all of their prescribed medication. However, 16.7% of the respondents said they did not know the reason to finish the course. This indicates that although the majority of the patient is well aware of adherence to treatment, some are not which again calls for further patient education. The consequences of under treatment may be devastating for the patient, and the community.

11. DISEASE CURED OR CONTROLLED

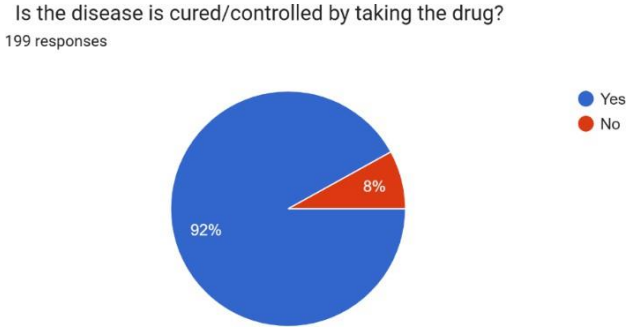

Fig. 11: Either disease cured or controlled by taking medicine.

Of 199 patients surveyed, 92% said that their illness was cured or effectively controlled by taking the drug. Just 8% stated that they felt no or insufficient relief or control from the treatment. This indicates that transient medications tend to work well for most patients, although a small number of patients may need alternative treatments and/or additional medical review to obtain the best results.

7. LIMITATIONS

Direct observation

- The main limitation of direct observation was not responding to the intractions to the interview.
- They do not spend time giving full information while in direct interviews.
- Due to the short period of study, it is difficult to assess the long-term drug users.

Google form

- No face-to-face questionnaire was performed.
- Only an online survey was carried out which was easy as most were young compared to old, which is why most of the participants were young in short-trem & in long-term too.
- The uneducated or people who cannot deal with the online applications could not participate in the study.

8. IMPROVEMENT OF MEDICAL ADHERENCE

Patient management could be enhanced through patient education about their disease and the need to follow the regimen, by regimen simplification (i.e., decreasing the number of tablets or doses), by good doctor–patient communication to build trust and encourage a partnership model of care, by using reminder systems (alarms, mobile phone text messages, pill boxes), by predicting and managing potential side effects before and if they arise, providing psychological/emotional support to reduce fear and anxiety, by increasing the availability of low-cost drugs and/or health care centers, or by recruiting family members or caregivers to support the patient on a continuing basis, given that multicomponent intervention is likely to result in greater benefit to adherence and ultimately to patient outcome and quality of life.[9]

9. AWARENESS OF MEDICAL ADHERENCE

The management of patients might be improved through patient education regarding their disease and the need to adhere to the regimen, by simplification of the regimen (i.e., reduction of the number of tablets/doses), through good doctor–patient communication leading to trust and a partnership-model of care, through the use of reminder systems (alarms, text messages on mobile phones, pill boxes), by predicting and managing potential side effects, before and if they appear, offering psychological and emotional support to diminish fear and anxiety, through enhanced accessibility of inexpensive drugs and/or health care facilities, or by enlisting the help of family members or caregivers to provide long-term support for the patient, on the assumption that a multicomponent intervention is more likely to produce a better outcome for both adherence and, ultimately, for patient outcome and quality of life.[10]

10. CONCLUSION

Our adherence to treatment survey among long- and short-term drug users, along with the awareness programme delivered at the co-located hospital, demonstrates descriptive results in favor of focused measures in promoting better medication-taking behavior. The results of the survey were Long-term drug users are fatigued with treatment, have complicated regimens, and are poorly followed; short- term users frequently stop taking their medicines once they get better. These were the key findings that enabled us to develop an awareness campaign that would speak to the unique challenges of each audience. The programme effectively enhanced participants' knowledge of the importance of adherence in chronic and acute disorders through patient education classes, counseling, and practical measures such as reminder tools and appropriate medication handling. In summary, this

synergistic model of data-guided evaluation followed by community-based education strongly suggests that enhancing medical adherence involves more than simply pinpointing patients' obstacles to adherence, but also actively engaging them through empathetic and user-friendly mediated interventions. Enhancing such programs could improve therapy outcomes, prevent complications, and create a more enlightened and health-conscious society.

11. REFERENCE

1. INGESTIBLE BIOSENSOR: A COMPREHENSIVE OVERVIEW OF SMART PILLS. International Journal of Progressive Research in Engineering Management and Science, 2025 Aug 11. https://www.doi.org/10.58257/IJPREMS43280
2. Brown MT, Bussell JK. Medication Adherence: WHO Cares? Mayo Clinic Proceedings, 2011 Apr; 86(4): 304–14. https://doi.org/10.4065/mcp.2010.0575
3. Rolnick SJ, Pawloski PA, Hedblom BD, Asche SE, Bruzek RJ. Patient Characteristics Associated with Medication Adherence. Clinical Medicine & Research, 2013 Apr 11; 11(2): 54–65. https://doi.org/10.3121/cmr.2013.1113
4. Kane JM. Treatment Adherence and Long-Term Outcomes. CNS Spectrums, 2007; 12(S17): 21–6. https://doi.org/10.1017/S1092852900026304
5. Brookhart MA. Physician Follow-up and Provider Continuity Are Associated With Long-term Medication Adherence. Archives of Internal Medicine, 2007 Apr 23; 167(8): 847. https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/412308
6. Gloria G. ASSESSMENT OF ADVERSE DRUG INTERACTIONS DURING IN THE COVID-19 VACCINE AND PUBLIC UNDERSTANDING OF VACCINE IN SOUTH INDIA. Zenodo (CERN European Organization for Nuclear Research). 2022 Sep 30; http://doi.org/10.5281/zenodo.7111162
7. Uchmanowicz B, Jankowska EA, Uchmanowicz I, Morisky DE. Self-Reported Medication Adherence Measured With Morisky Medication Adherence Scales and Its Determinants in Hypertensive Patients Aged ≥60 Years: A Systematic Review and Meta-Analysis. Frontiers in Pharmacology. 2019 Mar 1; 10. https://doi.org/10.3389/fphar.2019.00168
8. Thompson K, Kulkarni J, Sergejew AA. Reliability and validity of a new Medication Adherence Rating Scale (MARS) for the psychoses. Schizophrenia Research, 2000 May; 42(3): 241–7. https://doi.org/10.1016/S0920-9964(99)00130-9
9. Nieuwlaat R, Wilczynski N, Navarro T, Hobson N, Jeffery R, Keepanasseril A, et al. Interventions for enhancing medication adherence. Cochrane Database of Systematic Reviews, 2014 Nov 20; 11(11). https://doi.org/10.1002/14651858.CD000011.pub4
10. Costa E, Pecorelli S, Giardini A, Savin M, Menditto E, Lehane E, et al. Interventional tools to improve medication adherence: review of literature. Patient Preference and Adherence [Internet], 2015; 9: 1303. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4576894/