

## ASSESSMENT OF KNOWLEDGE, ATTITUDE, AND PRACTICE REGARDING HERBAL AND ALLOPATHIC MEDICINE USE AND SAFETY AMONG THE GENERAL PUBLIC

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### ABSTRACT

The public's growing use of allopathic and herbal medicines has sparked worries about their efficacy, safety, and possible interactions. The purpose of this study was to evaluate the general public's knowledge, attitude, and practice about the usage and safety of allopathic and herbal medicines. Over the course of six months, from October 2025 to March 2026, 200 participants from specific urban and rural areas of Salem and Namakkal districts participated in a community-based cross-sectional survey. A self-created structured questionnaire with questions about knowledge, attitude, and practice as well as sociodemographic information was used to gather data. Descriptive statistics like frequency and percentage were used to examine the gathered data. According to the findings, 52% of respondents acknowledged that herbal medicines are not always safe, while 66% of respondents understood the

distinction between herbal and allopathic medications. Approximately 59% of respondents said that using herbal remedies over an extended period of time without consulting a doctor could have negative effects. In terms of practice, 34% of participants used both allopathic and herbal drugs, 20% used exclusively herbal medicines, and 46% used solely allopathic

medicines. According to the survey, there are still misconceptions about the safety of herbal medications and their use in conjunction with allopathic drugs, despite the public's reasonable awareness of medication safety. To guarantee the safe and sensible use of medications, it is crucial to raise public knowledge and promote contact with medical professionals.

**KEYWORDS:** Herbal medicines, Allopathic medicines, Drug safety, Public awareness.

## INTRODUCTION

The widespread use of herbal medicine, often alongside conventional allopathic treatments, necessitates a comprehensive understanding of public knowledge, attitudes, and practices concerning their safety and efficacy.<sup>[1]</sup> This growing global interest in herbal remedies, evidenced by significant consumption rates in various countries, highlights the importance of exploring the perceptions and acceptance of these alternative therapies among diverse populations.<sup>[2,3]</sup> This study aims to bridge this knowledge gap by assessing the public's understanding of both herbal and allopathic medicines, encompassing their perceived safety, efficacy, and patterns of use.<sup>[1,6]</sup> This research will also explore the prevailing perceptions of effectiveness and safety for both medicine types, especially when used concomitantly, recognizing that many individuals believe herbal remedies to be safer and equally effective as pharmaceutical medicines.<sup>[5]</sup>

Global trend where herbal medicinal product usage significantly surpasses that of conventional medications, with estimations suggesting that 75–80% of individuals worldwide incorporate herbal medicine into their health regimens, often perceiving them as natural and safe despite the lack of rigorous FDA classification as drugs.<sup>[5]</sup> Therefore, this study aims to evaluate the knowledge, attitude, and practices of the general public regarding the concomitant use and safety of herbal and allopathic medicines, thereby identifying areas for enhanced patient education and pharmacist intervention.<sup>[8]</sup>

The increasing global consumption of herbal medicines, often without professional medical guidance, presents significant challenges in patient safety, particularly concerning potential interactions with conventional medications.<sup>[9]</sup> This phenomenon is exacerbated by a general lack of awareness among both the public and healthcare professionals regarding the potential for adverse herb-drug interactions, which can compromise treatment efficacy or lead to serious health complications.<sup>[10,11]</sup>

Although allopathic medicine is based on established treatment methods and medications that have been scientifically confirmed, public perception and utilization are influenced by side effect concerns. In the wake of the worldwide COVID-19 outbreak, more people are looking at other forms of treatment.<sup>[3]</sup> The research also seeks to uncover the drivers behind the growing preference for herbal remedies, which are often perceived as safer and more natural alternatives to synthetic drugs, despite a significant knowledge deficit among consumers regarding their true efficacy and potential risks.<sup>[12]</sup> This growing market, projected to reach USD 386.07 billion by 2032, signifies a considerable public shift towards herbal remedies, thereby necessitating comprehensive investigations into public understanding and utilization.<sup>[3]</sup>

This study will examine public beliefs, attitudes, and practices related to herbal medicine, particularly considering that approximately 24.5% of adults globally use traditional herbal remedies, often influenced by media and cultural factors.<sup>[4]</sup>

Herbal remedies is often driven by perceived safety, accessibility, and cultural beliefs, despite a lack of rigorous scientific validation and potential interactions with conventional medications.<sup>[3,13]</sup> This perception of safety often leads to self-medication without professional consultation, further increasing the risk of adverse effects or drug-herb interactions.<sup>[14]</sup>

Inadequate documentation and regulation of herbal products result in unregulated sales, incorrect labeling, and the dispensing of possibly subpar items without a prescription. This lack of stringent oversight underscores the necessity for comprehensive phytovigilance systems.<sup>[16]</sup> Pharmacovigilance systems must also leverage digital technologies and social media platforms to facilitate adverse event reporting and gather patient experiences.<sup>[18]</sup>

The high prevalence of concurrent herbal and allopathic medicine use, often without professional consultation, underscores the critical necessity for enhancing pharmacovigilance systems and increasing public health literacy to prevent adverse drug interactions.<sup>[1,17]</sup>

Healthcare providers are uniquely positioned to facilitate this collaborative process, as they play a pivotal role in conveying essential information and knowledge to patients during clinical practice, while navigating the complexities of diverse educational backgrounds and varying degrees of health literacy among populations.<sup>[19,20]</sup>

## AIM AND OBJECTIVE

### AIM

To evaluate the knowledge, attitude, and practice regarding the use and safety of herbal and allopathic medicines among the general public.

### OBJECTIVE

- To assess the level of public knowledge regarding the appropriate use of herbal and allopathic medicines, including indications, dosage, duration of therapy, and possible interactions.
- To evaluate public attitudes toward the safety, effectiveness, and concurrent use of herbal and allopathic medicines.
- To assess public practices related to the use of herbal and allopathic medicines, including self-medication, consultation with healthcare professionals, and reporting of adverse effects.

## METHODOLOGY

**Study Design:** A community-based, cross-sectional Knowledge, Attitude, Practice study was conducted to evaluate public awareness regarding the use, safety, and potential drug–drug and herb–drug interactions associated with herbal and allopathic medicines.

**Study Site:** The study was carried out among the general public residing in selected urban and rural areas, Community pharmacy of the locations of Salem and Namakkal

**Study Period:** The study was conducted for a period of Six months, from Oct 25 to Mar 26. During which participant recruitment, data collection, and preliminary data verification were completed.

**Study Population:** The study population comprised members of the general public aged 18 years and above who had experience using herbal medicines, allopathic medicines, or both.

**Sampling Method:** Participants were recruited using a convenience sampling technique based on their availability and willingness to participate in the study.

### Study Criteria

#### Inclusion Criteria

- Individuals aged 18 years and above
- Members of the general public
- Individuals who had used herbal medicines, allopathic medicines, or both
- Participants willing to provide informed consent.

### Exclusion Criteria

- Healthcare professionals and students of medical or paramedical courses
- Individuals unwilling to participate
- Participants with no prior use of herbal or allopathic medicines
- Incomplete or partially filled questionnaires

### Study Tool

Data were collected using a self-designed, structured questionnaire developed based on literature review. The questionnaire consisted of four sections:

#### 1. Sociodemographic details

**2. Knowledge domain** – awareness regarding use, safety, adverse effects, and drug–drug and herb–drug interactions

**3. Attitude domain** – beliefs and perceptions regarding safety and combined use of herbal and allopathic medicines

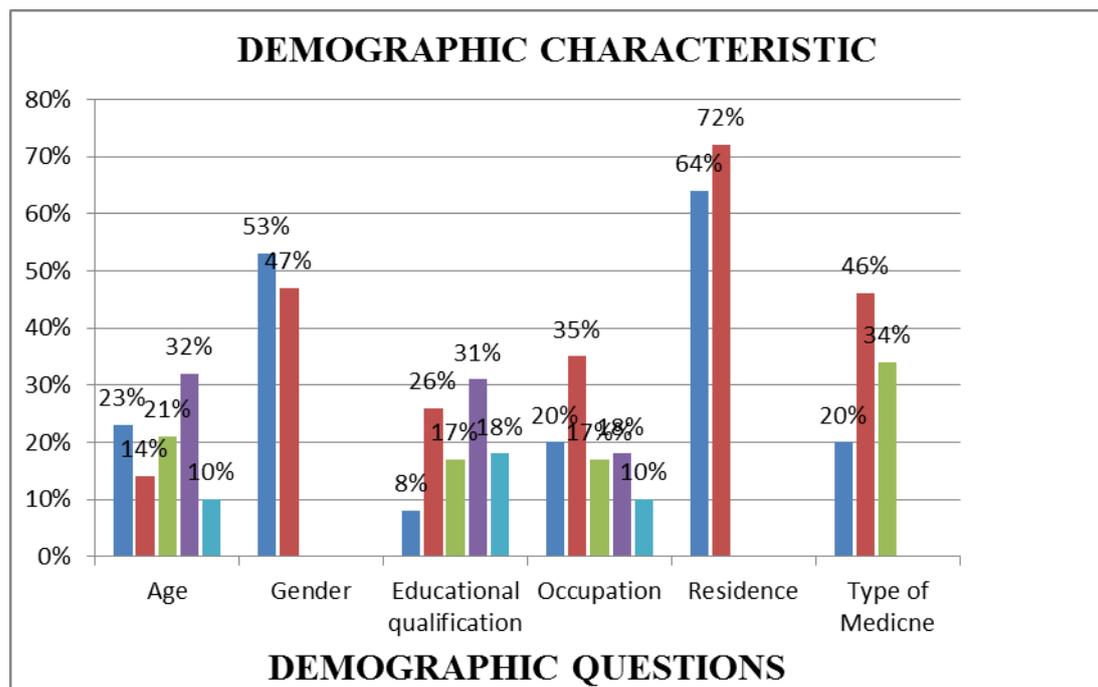
**4. Practice domain** – self-medication behaviour, consultation practices, and reporting of adverse effects

### Statistical Analysis

The collected data were entered into Microsoft Excel and analyzed using SPSS Version 31. Descriptive statistics such as frequency and percentage were used. Associations between awareness levels and sociodemographic variables were analyzed using the Chi-square test. A p-value < 0.05 was considered statistically significant.

## RESULT AND DISCUSSION

### Distribution of Participants based on Knowledge, Attitude, and Practice Regarding Herbal and Allopathic Medicines



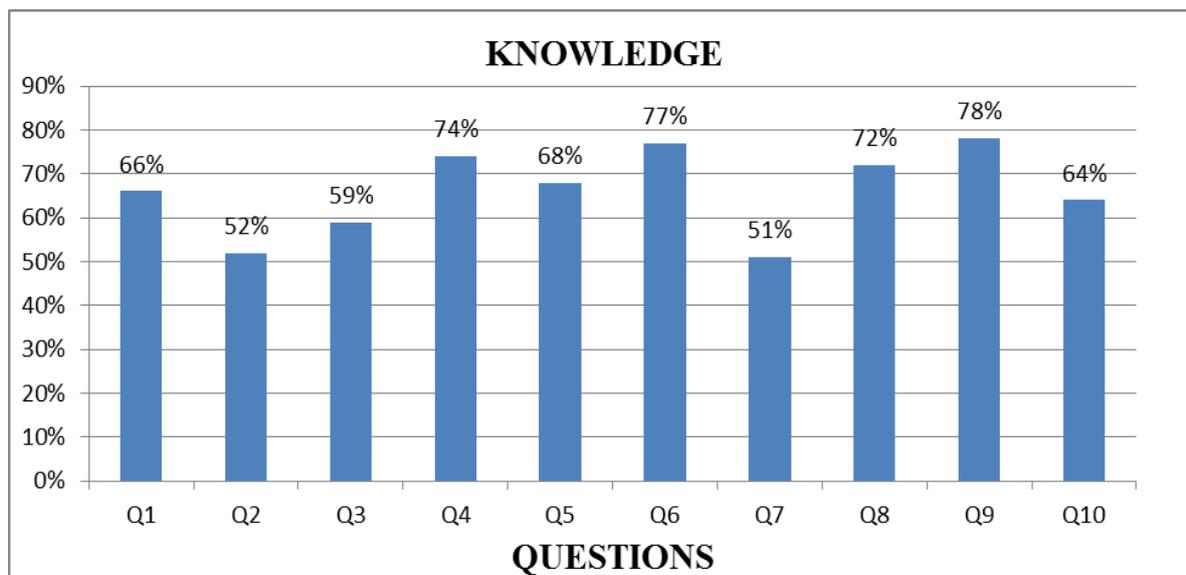
**FIGURE NO: 01- Distribution of Participants According to Demographic Variables.**

Figure 1 shows the demographic details of the 200 participants who took part in the study. Most respondents belonged to the 46–55 years age group (32%), followed by 18–25 years (23%) and 36–45 years (21%), indicating that middle-aged individuals made up the largest portion of the study population. The gender distribution was fairly balanced, with 53% males and 47% females, suggesting that both genders were adequately represented in the study.

Regarding educational background, the majority of participants had completed undergraduate education (31%), while 26% had school-level education. In addition, 18% were postgraduates and 17% were diploma holders, whereas only 8% had no formal education. This indicates that most participants had some level of educational exposure, which may influence their understanding of medicine use and health-related decisions.

In terms of occupation, employed individuals formed the largest group (35%), followed by students (20%), homemakers (18%), self-employed individuals (17%), and retired participants (10%). A majority of respondents (64%) were from urban areas, while 36% were from rural regions. When asked about the type of medicines used, 46% reported using only allopathic medicines, 20% used only herbal medicines, and 34% used both types, indicating

that a considerable number of people combine traditional herbal remedies with modern medicines.



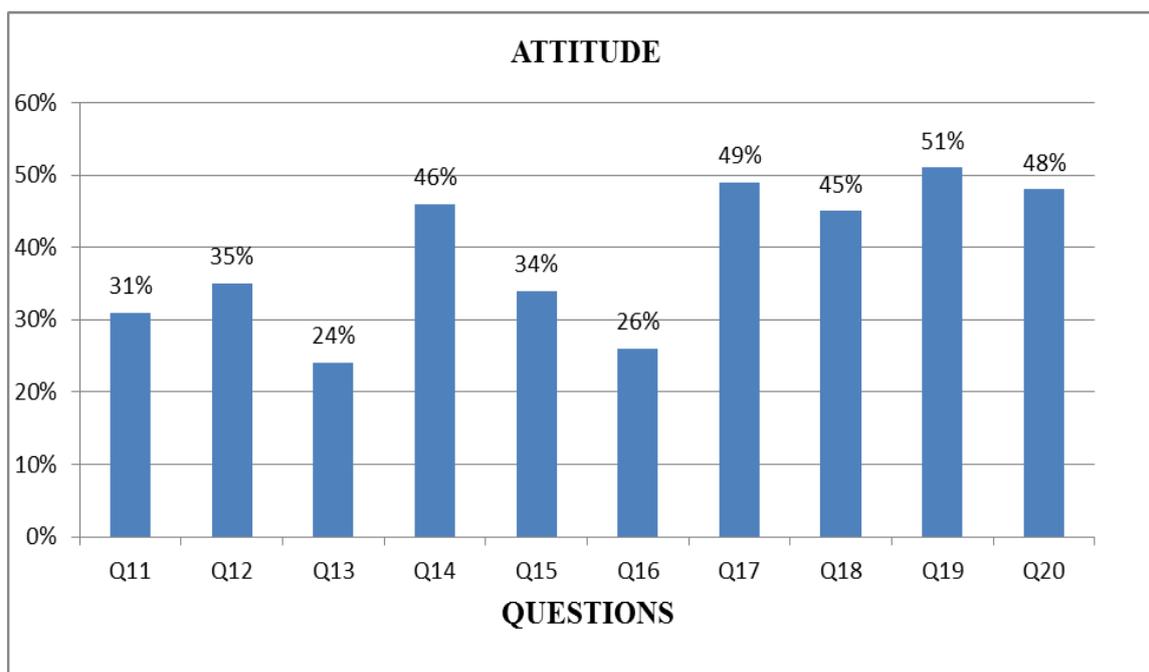
**FIGURE NO: 02-Knowledge regarding Herbal and Allopathic Medicines.**

Figure 2 describes the knowledge of participants about herbal and allopathic medicines, including their safety and proper usage. The results showed that 66% of respondents were aware of the difference between herbal and allopathic medicines, while 22% were not aware and 12% were unsure. This indicates that although many participants had basic knowledge, a noticeable portion still lacked clear understanding of these two systems of medicine.

When asked about the safety of herbal medicines, 52% correctly stated that herbal medicines are not always safe even though they are natural. However, 29% believed herbal medicines are always safe, and 19% were uncertain, showing that misconceptions about the safety of natural products still exist. In addition, 59% of participants were aware that herbal medicines can cause side effects, whereas 23% believed they do not cause side effects and 18% were unsure.

Knowledge regarding proper medicine use was also observed among many respondents. About 68% agreed that the correct dose should be followed when using herbal medicines, and 77% recognized the importance of completing the full course of allopathic medicines such as antibiotics. Furthermore, 51% were aware that herbal medicines can interact with allopathic medicines, while 72% believed pregnant or lactating women should be cautious when using

herbal medicines. Around 64% of participants were also aware of adverse drug reaction reporting, suggesting a moderate level of knowledge overall.

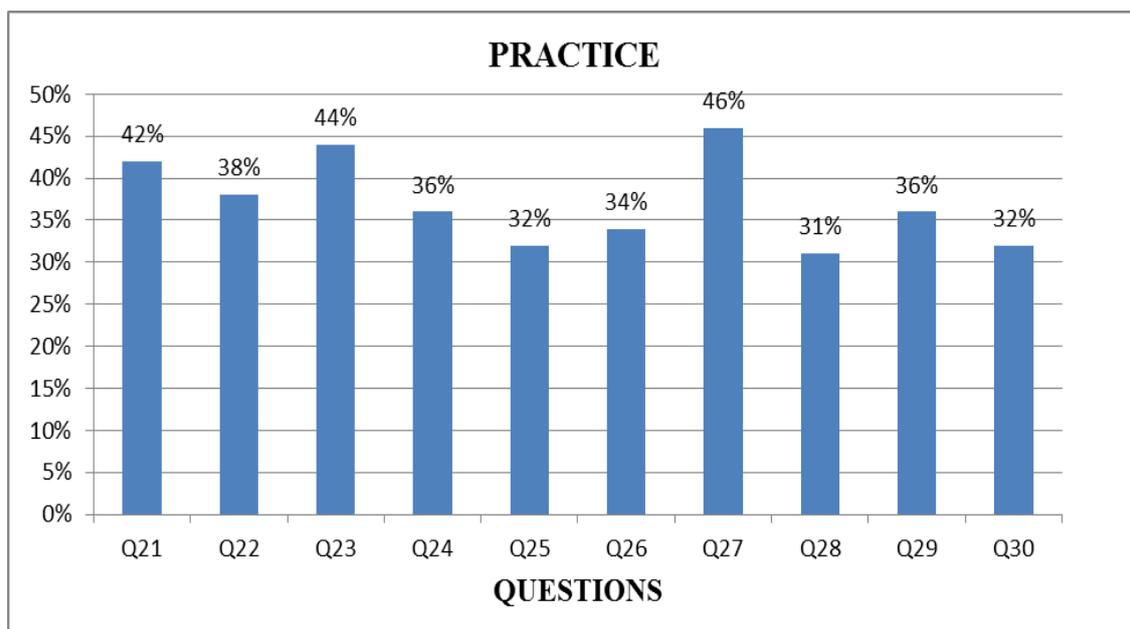


**FIGURE NO: 03: Attitude toward Herbal and Allopathic Medicines.**

Figure 3 presents the attitudes of participants toward the use and safety of herbal and allopathic medicines. A large proportion of respondents believed that herbal medicines are safer than allopathic medicines, with around 60–67% agreeing or strongly agreeing with this statement. This reflects the common belief among the public that natural remedies are safer and have fewer harmful effects.

However, opinions were more divided when participants were asked about using herbal and allopathic medicines together. Only 38% believed that using both types of medicines simultaneously is safe, while a similar percentage disagreed and 24% remained neutral. This variation in responses suggests that many people are uncertain about the safety of combining different types of medicines.

Despite these perceptions, most participants showed a positive attitude toward professional medical guidance. About 83% agreed that consulting healthcare professionals before using medicines is important. Responses about self-medication were mixed, as some participants felt it was acceptable for minor illnesses, while others were concerned about the risks associated with using medicines without proper advice.



**Figure NO: 04- Practice related to Herbal and Allopathic Medicine Use.**

Figure 4 illustrates the practices of participants regarding the use of herbal and allopathic medicines. Many respondents reported using medicines for common health problems such as cough, cold, fever, and other minor illnesses. Self-medication was also commonly practiced for these conditions, which is consistent with findings from previous studies on general medicine-use behavior among the public.

The study also found that participants obtained information about herbal remedies mainly from family members, traditional knowledge, and personal experience. In contrast, information about allopathic medicines was more often obtained from healthcare professionals or pharmacies. This shows how cultural traditions and family influence continue to play a role in the use of herbal medicines.

Although several participants reported consulting healthcare professionals before using medicines, some still practiced self-medication without professional advice. In addition, reporting of adverse drug reactions was not very common, possibly due to limited awareness about pharmacovigilance systems. These findings highlight the need to improve public education about the safe and responsible use of both herbal and allopathic medicines.

## CONCLUSION

The study shows that the public has moderate knowledge of herbal and allopathic medicines, including their uses and side effects. However, gaps remain in understanding drug

interactions and adverse effect reporting. Participants show positive attitudes toward consulting healthcare professionals and rational medicine use. Despite this, practices often do not reflect their knowledge. Self-medication, early discontinuation of therapy, and combined use of herbal and allopathic medicines without guidance are common. Pharmacists and healthcare professionals can help bridge this gap through counselling and awareness programs.

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