

Pattern of Analgesic Use Among Adults in Mysuru, Karnataka: A Community-Based Cross-Sectional Survey

Prakhar Gupta

20m01111@jssuni.edu.in

JSS Medical College and Hospital

Kavya G Upadhyia

JSS Medical College and Hospital

Research Article

Keywords: analgesics, self-medication, community survey, cross-sectional study, Mysuru, Karnataka, NSAIDs, paracetamol, adverse drug reactions, drug utilization, pharmacovigilance

Posted Date: July 21st, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-10145890/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License.
[Read Full License](#)

Additional Declarations: No competing interests reported.

Version of Record: A version of this preprint was published at BMC Public Health on September 25th, 2026. See the published version at <https://doi.org/10.1186/s12889-026-29601-5>.

Abstract

Background

Pain is among the most prevalent health complaints globally, and analgesics rank among the most frequently consumed medications in community settings. Self-medication with analgesics is a recognised public health concern in India, yet community-level data from Mysuru, Karnataka are entirely absent from the published literature. This study aimed to describe the pattern of analgesic use among adults in Mysuru and to identify associated sociodemographic and behavioural factors.

Methods

A community-based cross-sectional survey was conducted among 200 adults (≥ 18 years) in Mysuru, Karnataka, from September 2025 to April 2026, using convenience sampling. Data were collected via a structured Google Forms questionnaire covering sociodemographic characteristics, lifestyle habits, comorbidities, analgesic agents used, indications, frequency of use, procurement methods, and awareness of adverse drug reactions (ADRs). Descriptive statistics were computed in Microsoft Excel.

Results

A total of 200 participants were enrolled (mean age 29.94 ± 11.57 years; female 50.5%). The population was predominantly urban (89%) and highly educated (66% graduates or above). Paracetamol was the most commonly used analgesic ($n = 133$; 66.5%), followed by diclofenac ($n = 60$; 30.0%), aspirin ($n = 58$; 29.0%), and ibuprofen ($n = 56$; 28.0%). Headache ($n = 119$; 59.5%) and fever ($n = 95$; 47.5%) were the leading indications. Self-medication was the predominant procurement route ($n = 91$; 45.5%), with only 30.0% using analgesics on a medical prescription. Migraine was the most prevalent comorbidity ($n = 26$; 13.0%). Regular use (≥ 3 times/week) was reported by 30 participants (15.0%). Gastritis and nausea/vomiting were the most widely recognised ADRs; only 52 participants (26.0%) recognised skin rash and 59 (29.5%) recognised abdominal pain as analgesic adverse effects.

Conclusions

Self-medication with analgesics is highly prevalent in this urban Mysuru cohort. Widespread unsupervised NSAID use, limited ADR awareness, and regular use in 15% of participants collectively highlight the need for pharmacovigilance-based public health interventions and rational medicine education in Karnataka.

Background

Pain is one of the most universal human experiences and a leading driver of healthcare utilisation. The World Health Organization (WHO) estimates that low back pain alone affected 619 million people in 2020, making it the single leading cause of years lived with disability globally [1]. Headache disorders, including migraine, affect approximately 3.1 billion people—roughly 40% of the global population [2]. In India, musculoskeletal pain, headache, menstrual pain, and dental pain are among the most frequent conditions prompting both outpatient consultations and episodes of self-treatment.

Analgesics—principally non-steroidal anti-inflammatory drugs (NSAIDs) such as diclofenac, ibuprofen, aspirin, and naproxen; paracetamol (acetaminophen); and adjuvant agents such as pregabalin and gabapentin—are the pharmacological cornerstone of pain management at all levels of care. Their widespread over-the-counter (OTC) availability in India makes unsupervised use commonplace. While this improves timely access, unmonitored analgesic use carries well-documented risks: chronic NSAID use is associated with peptic ulceration, acute kidney injury, and cardiovascular events; paracetamol overdose remains a major cause of acute hepatic failure; and regular use of combination analgesics can produce medication overuse headache (MOH) [3–5].

Community-level data on analgesic use from Karnataka remain sparse. Swathi et al. (2016) surveyed elderly adults in Bangalore Urban district and found a 22.7% prevalence of analgesic use, with only 22% possessing any side-effect awareness [6]. Sali et al. (2024) reported a 24.8% self-medication prevalence with analgesics in rural Karnataka, predominantly via pharmacy purchase without prescription [7]. Kochhar and Gupta (2017) documented that 57% of rural Delhi adults self-prescribed paracetamol, with 65% unaware of adverse effects [8]. Despite these regional findings, no published community survey exists from Mysuru—a major urban centre with over one million residents, a high density of pharmacies, and a growing burden of lifestyle-related comorbidities that predispose individuals to analgesic use.

Primary objective

To describe the pattern of analgesic use (agents, indications, frequency, procurement) among adults in Mysuru, Karnataka.

Secondary objective

To describe sociodemographic characteristics, lifestyle habits, comorbidities, and adverse drug reaction awareness associated with analgesic use in this population.

Methods

Study design and setting

A community-based cross-sectional survey was conducted in Mysuru city and its immediate peri-urban periphery, Karnataka, India, from September 2025 to April 2026.

Participants

Adults aged 18 years and above residing in Mysuru were eligible. Exclusion criteria were: inability to comprehend or respond to the questionnaire due to severe cognitive impairment, and refusal to provide informed consent. No restriction was placed on sex, educational level, occupational status, or presence of comorbidities.

Sampling and sample size

Convenience sampling was employed, with participants recruited through community outreach in field practice areas, outpatient department waiting areas, and residential localities of JSS Medical College. A target of 200 respondents was set, consistent with comparable Indian community descriptive surveys. The final achieved sample was $n = 200$.

Data collection instrument

A structured questionnaire was developed in Google Forms and administered in English, with verbal translation provided as required (Additional file 1). The instrument was reviewed by community medicine faculty and piloted among ten individuals (excluded from the final analysis) prior to deployment. The questionnaire covered:

- Sociodemographic data: age, sex, educational attainment, employment status, and place of residence.
- Lifestyle habits: tobacco use (smoking or smokeless), alcohol consumption, and other habits.
- Comorbidities: self-reported, physician-diagnosed chronic conditions including diabetes mellitus, hypertension, osteoarthritis, migraine, ischaemic heart disease (IHD), and hyperlipidaemia.
- Analgesic use: agents from a predefined list (paracetamol, aspirin, ibuprofen, diclofenac, naproxen, aceclofenac + paracetamol combination, pregabalin/gabapentin; multiple responses permitted).
- Frequency of use: regular (≥ 3 times/week in the preceding 3 months) or irregular/occasional.
- Indications: fever, headache, muscle sprain, joint pain, toothache, abdominal pain, menstrual pain (multiple responses permitted).
- Procurement method: self-medication (OTC), medical practitioner prescription, pharmacist recommendation, or advice from a friend/relative.
- ADR awareness: recognition of nausea/vomiting, gastritis/peptic ulcer, abdominal pain, skin rash, and organ damage (kidney/heart/liver) from a predefined list (multiple responses permitted).

Statistical analysis

Data were exported from Google Forms and analysed in Microsoft Excel (version 2021). Categorical variables are summarised as frequencies and proportions. Continuous variables (age) are described using mean, standard deviation (SD), median, mode, and range. No inferential testing was performed, in keeping with the descriptive objectives of the study.

Ethical considerations

The study was conducted under the academic supervision of the Department of Community Medicine, JSS Medical College. All participants provided verbal informed consent. Participation was voluntary, with the right to withdraw at any time without consequence. Anonymity and data confidentiality were assured; no personal identifiers were retained. The study adhered to the principles of the Declaration of Helsinki (2013 revision) and was conducted under institutional academic ethics oversight for low-risk observational student projects.

Reporting

This study is reported in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement for cross-sectional studies [9].

Results

Sociodemographic characteristics

A total of 200 adults were enrolled. The mean age was 29.94 ± 11.57 years (median 25 years; mode 24 years; range 18–77 years). As shown in Fig. 1, the age distribution was right-skewed, with the majority of participants aged 20–29 years. Sex distribution was near-equal: 101 females (50.5%) and 99 males (49.5%). Educational attainment was high: 35.5% held a graduate degree and 30.5% a diploma or professional degree (66% combined). A further 21.5% had completed secondary schooling and 8.5% pre-university education. Employment was near-equally split (employed 52.0%, $n = 104$; not employed 48.0%, $n = 96$). Residence was predominantly urban (89.0%, $n = 178$). Full sociodemographic data are presented in Table 1.

Table 1. Sociodemographic characteristics of study participants (n = 200)

Variable	Category	n (%)
Age (years)	Mean $\pm$ SD	29.94 $\pm$ 11.57
	Median	25
	Mode	24
	Range	18–77
Sex	Female	101 (50.5)
	Male	99 (49.5)
	Others	0 (0.0)
Education	Graduate	71 (35.5)
	Degree / Diploma	61 (30.5)
	High School (Secondary)	43 (21.5)
	Pre-university	17 (8.5)
	Others (Primary / Illiterate / PG)	<10 (<5.0)
Employment	Employed	104 (52.0)
	Unemployed / Student / Housewife / Retired	96 (48.0)
Residence	Urban	178 (89.0)
	Rural / peri-urban	22 (11.0)

SD: standard deviation; PG: postgraduate. "Others" in the education category had a combined $n < 10$ (<5.0%); individual subcategory counts are not reported to preserve anonymity of small subgroups.

Lifestyle habits and comorbidities

Current alcohol use was reported by 30 participants (15.0%) and current tobacco use by 27 (13.5%). Other habits (betel nut etc.) were reported by 1 participant (0.5%). Comorbidity data are presented in Table 2 and Fig. 2. Migraine was the most prevalent self-reported chronic condition ($n = 26$; 13.0%), followed by hypertension ($n = 19$; 9.5%), diabetes mellitus ($n = 15$; 7.5%), and hyperlipidaemia ($n = 15$; 7.5%). IHD was reported by 7 participants (3.5%) and osteoarthritis by 6 (3.0%). Multiple comorbidities were present in a subset of participants.

Table 2. Lifestyle habits and comorbidities among study participants ($n = 200$)

Characteristic	n	%
LIFESTYLE HABITS		
Alcohol use (current)	30	15.0
Tobacco use (current)	27	13.5
Other habits (e.g. betel nut)	1	0.5
COMORBIDITIES		
Migraine	26	13.0
Hypertension	19	9.5
Diabetes mellitus	15	7.5
Hyperlipidaemia	15	7.5
Ischaemic heart disease (IHD)	7	3.5
Osteoarthritis	6	3.0
Others	5	2.5

Comorbidities were self-reported by participants based on prior physician diagnosis. Multiple comorbidities could be reported per participant.

Analgesic agents used

Paracetamol was the most commonly used analgesic, reported by 133 participants (66.5%). Among NSAIDs, diclofenac (n = 60; 30.0%), aspirin (n = 58; 29.0%), and ibuprofen (n = 56; 28.0%) were used at broadly comparable frequencies. Fixed-dose combination products (aceclofenac + paracetamol) were reported by 47 participants (23.5%). Less commonly used agents were naproxen (n = 17; 8.5%) and pregabalin/gabapentin (n = 14; 7.0%). Multiple analgesic categories were reported by many participants. These findings are shown in Table 3 and Fig. 3.

Table 3. Analgesic agents used among study participants (n = 200; multiple responses permitted)

Analgesic agent	n	%
Paracetamol (acetaminophen)	133	66.5
Diclofenac	60	30.0
Aspirin	58	29.0
Ibuprofen	56	28.0
Aceclofenac + Paracetamol (combination)	47	23.5
Naproxen	17	8.5
Pregabalin / Gabapentin	14	7.0

Percentages are out of total participants (n = 200). Multiple responses were permitted; column total exceeds 100%.

Frequency of analgesic use

Regular analgesic use (≥ 3 times per week in the preceding three months) was reported by 30 participants (15.0%). The remaining 170 participants (85.0%) reported irregular or as-needed use (Table 4).

Table 4. Frequency of analgesic use among study participants (n = 200)

Frequency category	n	%
Regular (≥ 3 times/week in last 3 months)	30	15.0
Irregular / occasional (< 3 times/week)	170	85.0
Total	200	100.0

Regular use was defined as analgesic consumption on ≥ 3 occasions per week during the preceding three months.

Method of analgesic procurement

Self-medication (OTC procurement without professional consultation) was the most common route, reported by 91 participants (45.5%). A medical practitioner's prescription guided analgesic use in 60 participants (30.0%). Pharmacist recommendation accounted for 29 participants (14.5%) and advice from a friend or relative for 17 participants (8.5%). Three participants (1.5%) reported other or combined routes. Full procurement data are presented in Table 5 and Fig. 4.

Table 5. Method of analgesic procurement among study participants (n = 200)

Procurement method	n	%
Self-medication (OTC; own decision)	91	45.5
Prescription by a medical practitioner	60	30.0
Pharmacist recommendation	29	14.5
Suggested or given by a friend / relative	17	8.5
Other (combination / NA)	3	1.5
Total	200	100.0

Data sourced from the procurement pie chart (Fig. 4). OTC: over-the-counter.

Indications for analgesic use

Headache was the most frequently cited indication (n = 119; 59.5%), followed by fever (n = 95; 47.5%). Musculoskeletal indications were common: muscle sprain (n = 58; 29.0%) and joint pain (n = 42; 21.0%). Menstrual pain (n = 39; 19.5%), abdominal pain (n = 28; 14.0%), and toothache (n = 18; 9.0%) were also reported. Multiple indications were selected by many participants. Full data are presented in Table 6 and Fig. 5.

Table 6. Indications for analgesic use (n = 200; multiple responses permitted)

Indication	n	%
Headache	119	59.5
Fever	95	47.5
Muscle sprain	58	29.0
Joint pain	42	21.0
Menstrual pain	39	19.5
Abdominal pain	28	14.0
Toothache	18	9.0

Multiple responses permitted; percentages are out of n = 200.

Awareness of adverse drug reactions

When asked to identify analgesic side effects from a predefined list, gastritis/peptic ulceration was the most widely recognised ADR (n = 109; 54.5%), followed by nausea/vomiting (n = 106; 53.0%) and organ damage affecting the kidney, heart, or liver (n = 102; 51.0%). Awareness was substantially lower for abdominal pain as a distinct adverse effect (n = 59; 29.5%) and skin rash (n = 52; 26.0%). Full ADR awareness data are shown in Table 7 and Fig. 6.

Table 7. Awareness of analgesic adverse drug reactions (n = 200; multiple responses permitted)

Adverse drug reaction	n aware	%	Rank
Gastritis / peptic ulceration	109	54.5	1
Nausea / vomiting	106	53.0	2
Organ damage (renal, cardiac, hepatic)	102	51.0	3
Abdominal pain (as distinct adverse effect)	59	29.5	4
Skin rash	52	26.0	5

Multiple responses permitted; percentages are out of n = 200.

Discussion

This community-based cross-sectional survey in Mysuru, Karnataka is—to our knowledge—the first published study to characterise the analgesic use landscape in this city. The five headline findings are: paracetamol dominates analgesic use; NSAIDs are used by 28–30% of adults without consistent medical oversight; headache and fever are the primary drivers; self-medication is the most common procurement route (45.5%); and ADR awareness is high for visible acute effects but drops sharply for skin rash and abdominal pain.

The predominance of paracetamol (66.5%) is both expected and reassuring, consistent with published data from Karnataka and across India. Swathi et al. (2016) identified paracetamol among the two most used agents in their Bangalore elderly cohort [6]; Kochhar and Gupta (2017) found a 57% paracetamol self-medication rate in rural Delhi [8]; and Sali et al. (2024) reported similar patterns in rural Karnataka [7]. Our slightly higher proportion (66.5%) may reflect greater OTC access in urban settings and heightened brand familiarity among a more educated, media-exposed population. The co-use of fixed-dose combination products (aceclofenac + paracetamol, 23.5%) is clinically noteworthy: these products contain a full paracetamol dose alongside an NSAID, and users who simultaneously take standalone paracetamol may inadvertently exceed the recommended daily dose, a scenario that is a leading cause of inadvertent hepatotoxicity [3].

The NSAID burden in this cohort is substantial. Combined, diclofenac (30.0%), aspirin (29.0%), ibuprofen (28.0%), and naproxen (8.5%) were used by sizeable proportions without reliable medical supervision. Among the 91 self-medicating participants, an unknown but likely significant subset were using NSAIDs

—agents carrying dose- and duration-dependent gastrointestinal, renal, and cardiovascular risk. The concurrent alcohol use in 15.0% compounds this risk: ethanol independently damages the gastric mucosa and potentiates both NSAID-induced peptic injury and paracetamol hepatotoxicity at supratherapeutic doses [4]. Tobacco use in 13.5% further amplifies cardiovascular risk in NSAID users, particularly given the near-5% prevalence of self-reported IHD in this cohort.

The self-medication rate of 45.5% is higher than the 24.8% reported from rural Karnataka [7] but broadly comparable to urban self-medication rates reported from other Indian cities (40–60%) [10]. The additional route of pharmacist recommendation (14.5%) effectively brings the proportion receiving analgesics without a medical consultation to 60%. This is striking given that several commonly used drugs in this study—diclofenac, pregabalin/gabapentin, and higher-dose ibuprofen formulations—are Schedule H or H1 medications legally requiring a prescription under the Drugs and Cosmetics Act, 1940. Their de facto OTC availability in Indian retail pharmacies is a structural regulatory gap that this and similar community surveys consistently highlight.

The 15.0% regular use rate ($n = 30$; ≥ 3 times/week) has clinical implications beyond NSAID toxicity. In a cohort where headache is the leading indication (59.5%), this frequency of use raises clinical concern for MOH. Defined by the International Headache Society as headache occurring on ≥ 15 days/month in the context of regular acute headache medication overuse [11], MOH is typically underdiagnosed in community settings. Paracetamol and NSAIDs are both recognised MOH-precipitating agents, and the co-occurrence of high headache prevalence (59.5%), regular use (15%), and paracetamol dominance (66.5%) in our cohort constitutes a risk constellation that warrants active primary care screening.

The comorbidity profile deserves specific comment. Migraine—the most prevalent comorbidity (13.0%)—is clinically concordant with the high headache indication burden and with the known sex and age distribution of migraine (predominantly female adults of reproductive age). The presence of hypertension (9.5%), diabetes mellitus (7.5%), and IHD (3.5%) in analgesic-using adults without systematic prescriber oversight represents an underappreciated composite risk: NSAIDs raise blood pressure by 3–5 mmHg on average, counteract the antihypertensive effects of ACE inhibitors and diuretics, cause sodium and water retention exacerbating diabetic nephropathy, and are independently associated with increased major adverse cardiovascular events in at-risk populations [5]. Community health workers and pharmacists in Mysuru should be equipped to flag NSAID use in adults with these comorbidities as a priority intervention.

ADR awareness showed an interesting bimodal pattern. Gastritis (54.5%), nausea/vomiting (53.0%), and organ damage (51.0%) were each known to over half the cohort—reflecting the prominence of these effects in public health messaging and OTC packaging. By contrast, only 29.5% recognised abdominal pain and 26.0% recognised skin rash as analgesic adverse effects. This is paradoxical: abdominal pain is often the earliest symptom of NSAID-induced peptic injury, and skin rash can signal hypersensitivity reactions ranging from mild urticaria to life-threatening Stevens–Johnson syndrome. The knowledge gap for these early-warning symptoms means that users are unlikely to self-identify the onset of serious drug

reactions and are likely to continue use or escalate the dose—exactly the scenario pharmacovigilance education aims to prevent. Our ADR awareness data mirror the findings of Kochhar and Gupta (2017), who documented near-65% unawareness of any analgesic side effects in rural Delhi [8], and of Swathi et al. (2016), who found 78% unawareness in the Bangalore elderly cohort [6], underscoring that this is not an isolated local problem but a structural issue in public health communication about medicines in India.

Limitations

This study has several limitations. First, convenience sampling from an urban online platform overrepresents younger, educated, urban adults, limiting generalisability. Second, the sample size of 200, while appropriate for a descriptive internship project, precludes subgroup analysis with adequate statistical power. Third, the cross-sectional design prevents causal inference. Fourth, all data are self-reported, introducing recall and social desirability bias. Fifth, the online-only format may systematically exclude populations without smartphone or internet access. Sixth, comorbidity data reflect self-reported physician diagnoses and were not independently verified. Despite these limitations, this is the first community-level analgesic use survey from Mysuru and the findings carry direct implications for local health policy and future research design.

Conclusions

Analgesic use is widespread among adults in Mysuru. Paracetamol appropriately dominates, yet nearly one third of the cohort uses NSAIDs—often without medical supervision—and 15% use analgesics regularly, raising concern for medication overuse headache. ADR awareness is good for gastritis and nausea but poor for abdominal pain and skin rash, which are precisely the early-warning symptoms whose recognition would prevent serious harm. Comorbidities such as migraine, hypertension, and diabetes in self-medicating adults represent a high-risk intersection that current community practice is not addressing. These findings support a case for structured pharmacovigilance outreach, rational medicine education through primary care facilities and community pharmacies, and targeted surveillance for medication overuse headache in Mysuru. Future research should employ probability sampling and inferential statistical methods to quantify associations between sociodemographic factors and analgesic use patterns at the population level.

Abbreviations

ADR: Adverse drug reaction

IHD: Ischaemic heart disease

MOH: Medication overuse headache

NSAID: Non-steroidal anti-inflammatory drug

OTC: Over-the-counter

SD: Standard deviation

STROBE: Strengthening the Reporting of Observational Studies in Epidemiology

WHO: World Health Organization

Declarations

Ethics approval and consent to participate

This study was approved by the Institutional Ethics Committee, JSS Medical College, JSS Academy of Higher Education & Research, Mysuru, Karnataka, India. Verbal informed consent was obtained from all participants. Waiver of written consent was granted by the IEC given the observational, low-risk nature of the study.

Consent for publication

Not applicable. No person's identifiable data are included in this manuscript.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Clinical trial number

Not applicable.

Competing interests

The authors declare no competing interests.

Funding

No external funding was received for this study.

Authors' contributions

PG: Conceived and designed the study, developed the questionnaire, collected data, performed the analysis, drafted the manuscript, and approved the final version.

KGU: Supervised the study design, reviewed methodology and data interpretation, critically revised the manuscript for intellectual content, and approved the final version.

All authors read and approved the final manuscript.

Acknowledgements

The authors thank all study participants for their time. The authors also thank the Department of Community Medicine, JSS Medical College, Mysuru, for institutional support and mentorship throughout the study.

References

1. World Health Organization. Low back pain. Fact sheet. <https://www.who.int/news-room/fact-sheets/detail/low-back-pain>. Published June 19, 2023. Accessed May 2026.
2. World Health Organization. Migraine and other headache disorders. Fact sheet. <https://www.who.int/news-room/fact-sheets/detail/headache-disorders>. Published October 24, 2025. Accessed May 2026.
3. McGill MR, Jaeschke H. Metabolism and disposition of acetaminophen: recent advances in relation to hepatotoxicity and diagnosis. *Pharm Res*. 2013;30(9):2174–87.
4. Wolfe MM, Lichtenstein DR, Singh G. Gastrointestinal toxicity of nonsteroidal antiinflammatory drugs. *N Engl J Med*. 1999;340(24):1888–99.
5. Bhatt DL, Scheiman J, Abraham NS, Antman EM, Chan FK, Furberg CD, et al. ACCF/ACG/AHA 2008 expert consensus document on reducing the gastrointestinal risks of antiplatelet therapy and NSAID use. *Circulation*. 2008;118(18):1894–909.
6. Swathi HN, Reddy BV, Franco A, Chethana VR, Ashwathappa S, Joshi R. Pattern of analgesic usage in the rural elderly, Bangalore urban district—a cross-sectional study. *J Evid Based Med Healthc*. 2016;3(5):154–6.
7. Sali RMS, Kumar NSJ, Mokhasi VR. Assessment of self-medication with analgesics among rural community of South India. *Panacea J Med Sci*. 2024;14(1):269–76.
8. Kochhar A, Gupta T. Pattern of self-prescribed analgesic use in a rural area of Delhi: exploring the potential role of internet. *J Clin Diagn Res*. 2017;11(7):UC04–7.
9. von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP, STROBE Initiative. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Lancet*. 2007;370(9596):1453–7.

10. Varadarajan V, Paul P, Sivagnanam CMS, Srinivasan G, Kumar P. A cross-sectional study on the prevalence of self-medication in a Chennai-based population, Tamil Nadu, India. *Int J Community Med Public Health*. 2017;4(2):418–23.

11. Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition. *Cephalalgia*. 2018;38(1):1–211.

Figures

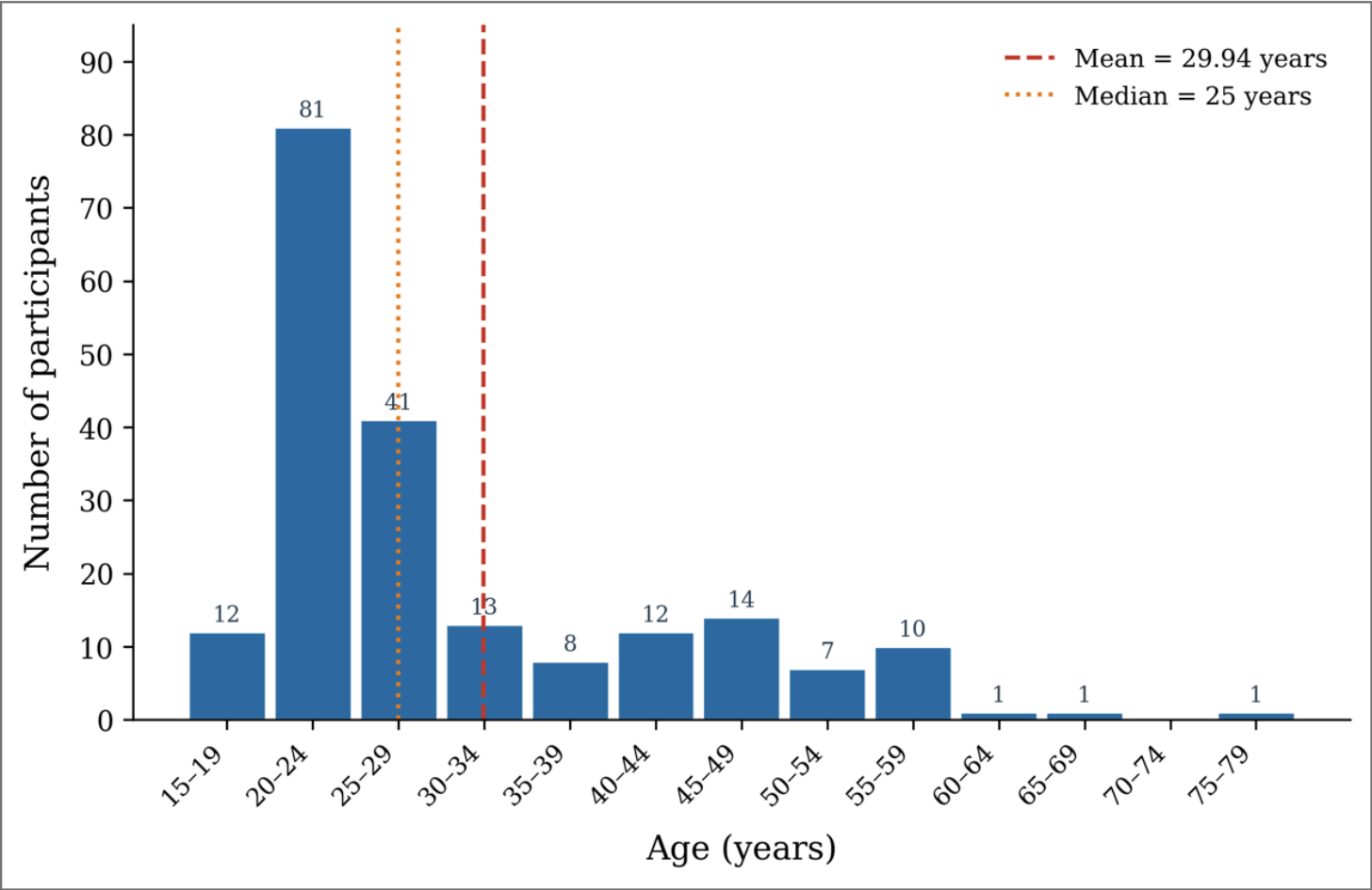


Figure 1

Distribution of participant age (years). Histogram showing right-skewed distribution with peak in the 20–24-year age group. Dashed line: mean (29.94 years); dotted line: median (25 years). n = 200.

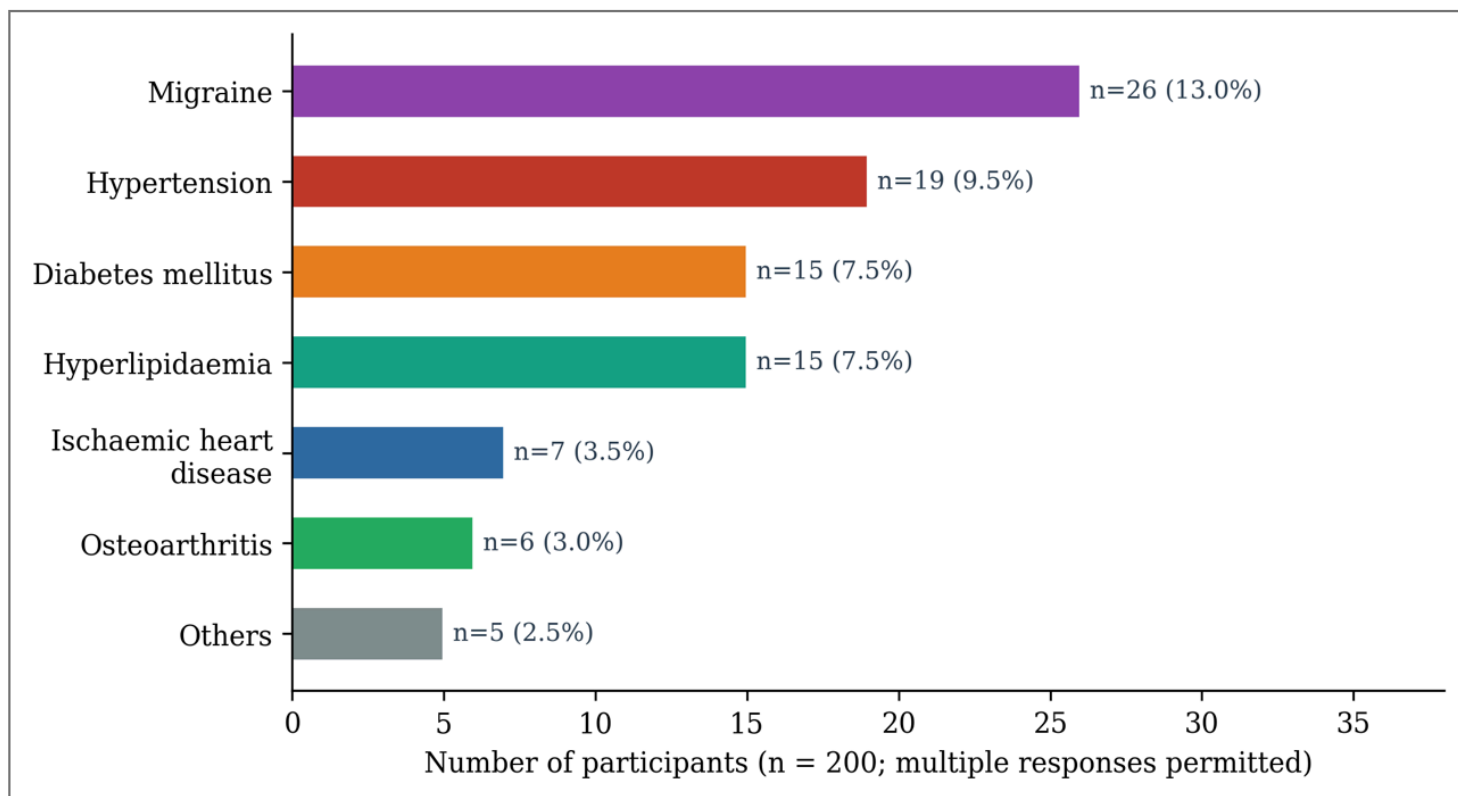


Figure 2

Self-reported comorbidities among study participants (n = 200; multiple responses permitted). Migraine was the most prevalent condition. IHD: ischaemic heart disease.

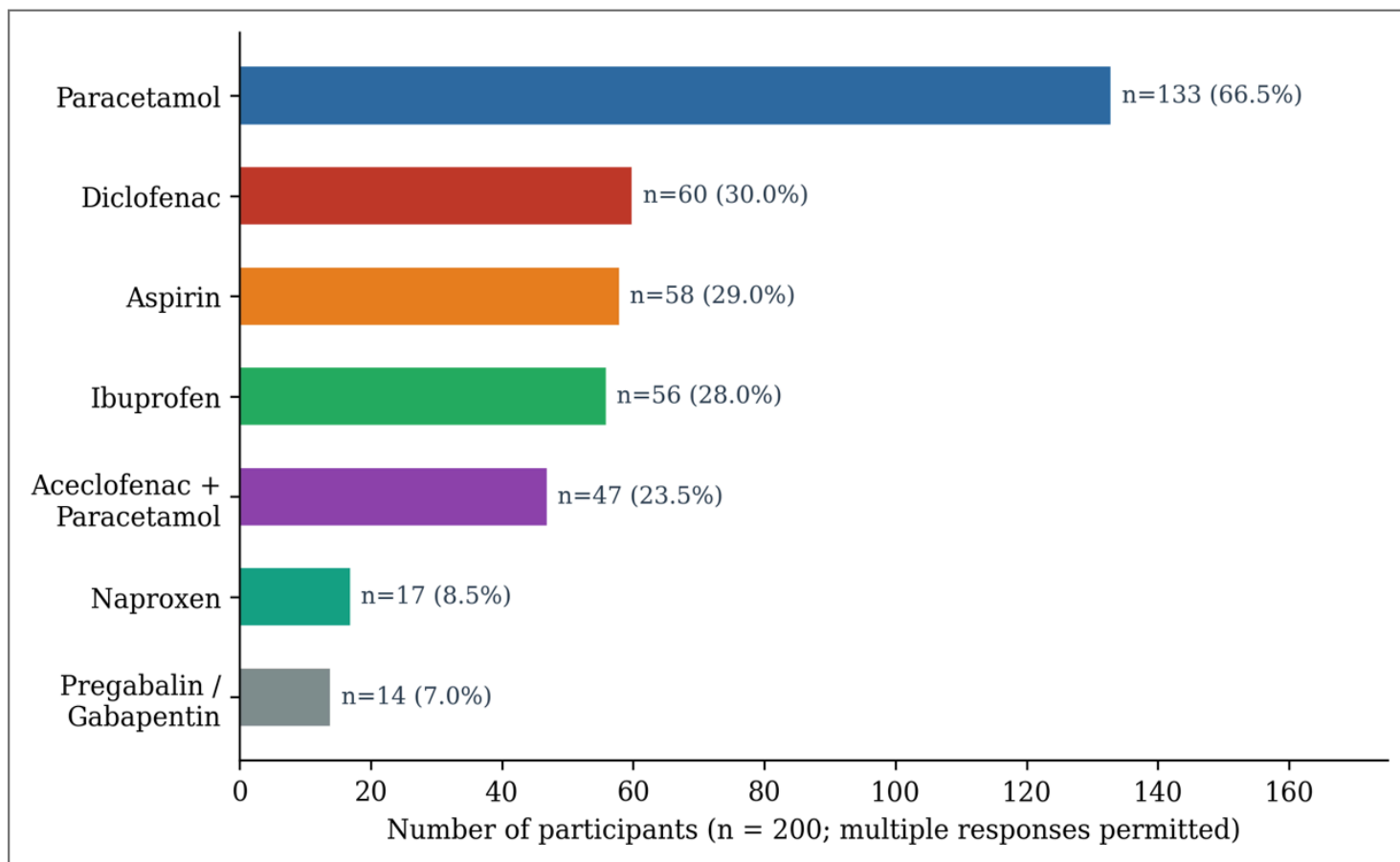


Figure 3

Analgesic agents reported by study participants (n = 200; multiple responses permitted). Paracetamol dominated usage at 66.5%.

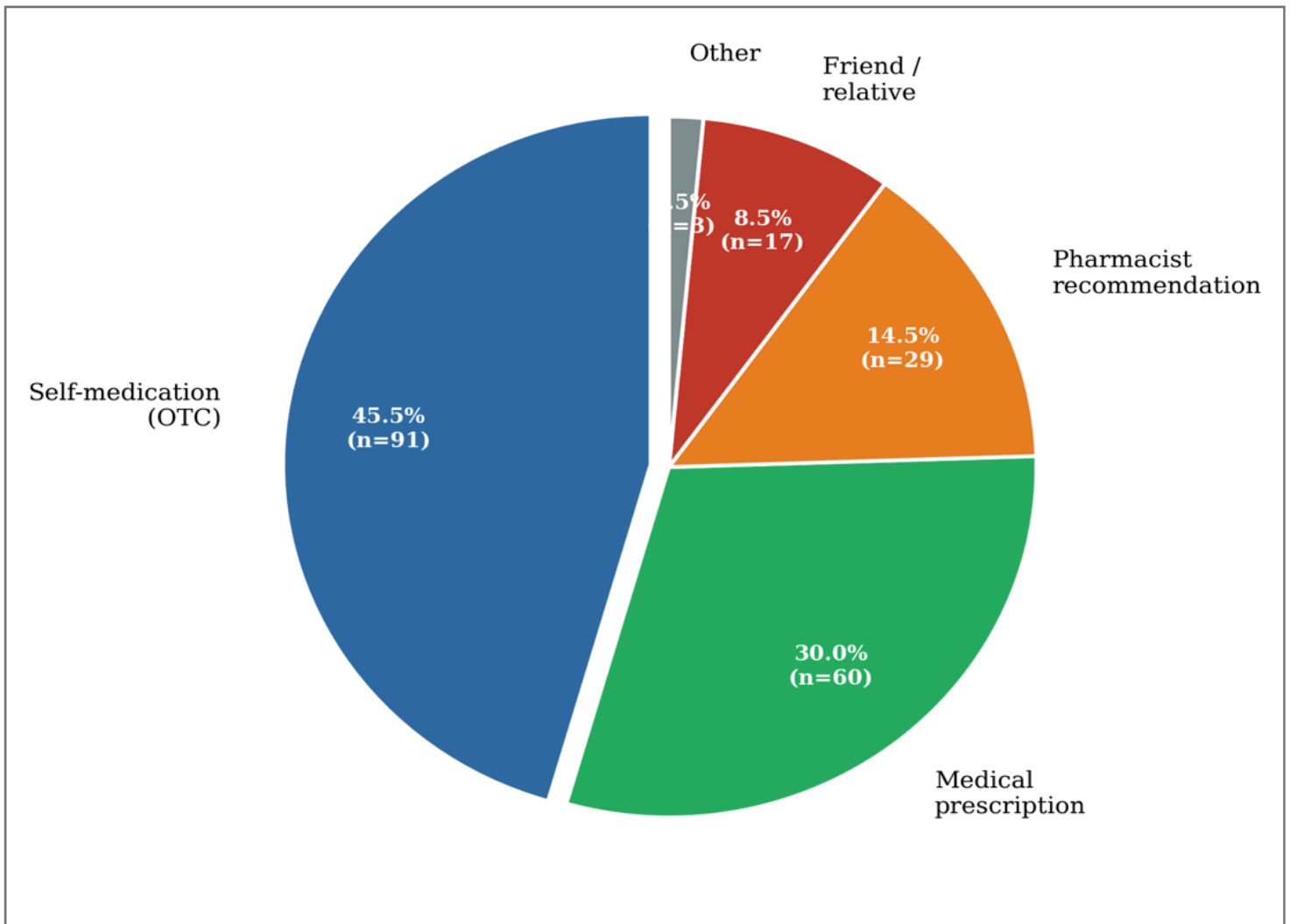


Figure 4

Method of analgesic procurement among study participants (n = 200). Self-medication (OTC) was the most common route (45.5%), followed by prescription (30.0%) and pharmacist recommendation (14.5%).

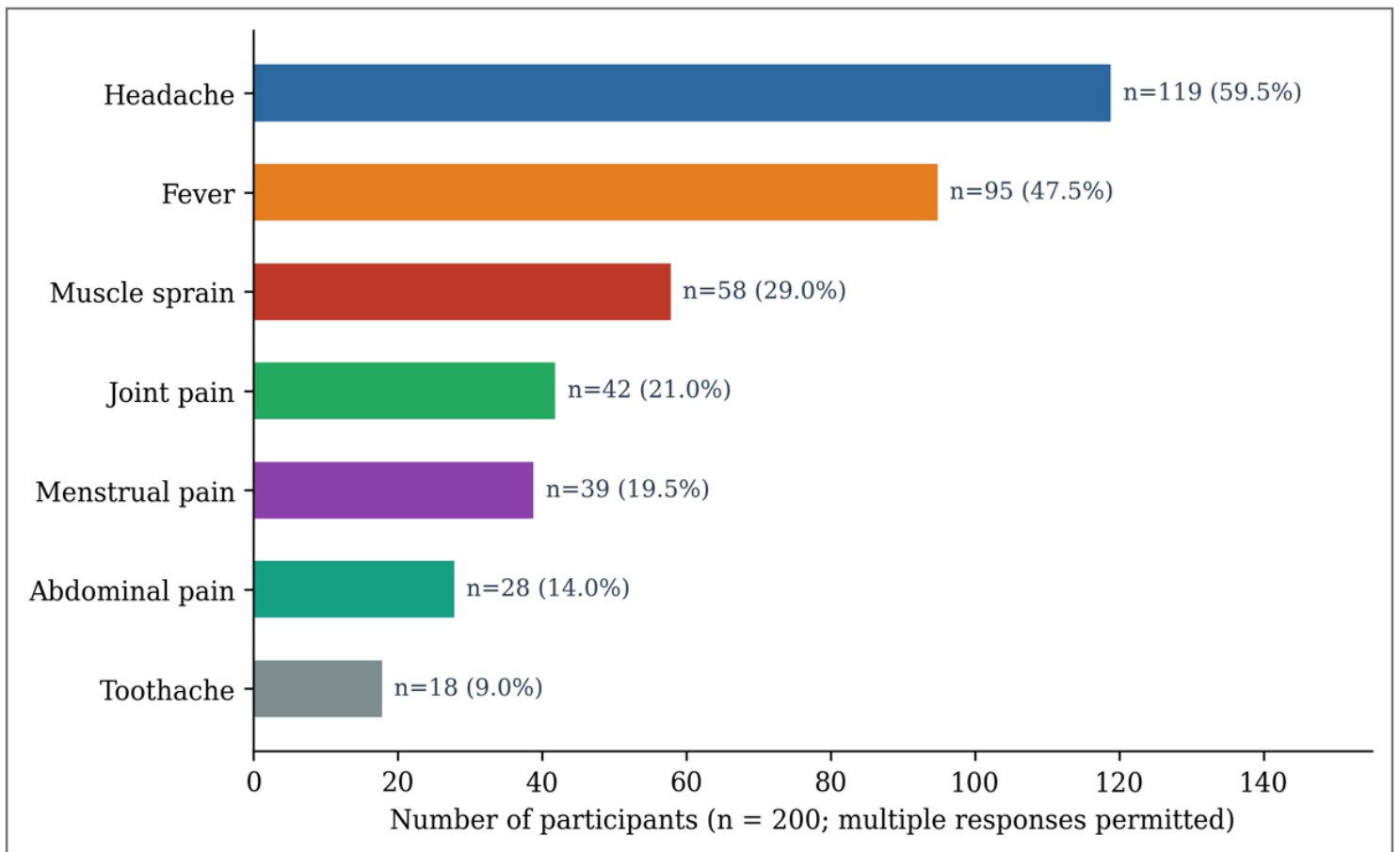


Figure 5

Indications for analgesic use among study participants (n = 200; multiple responses permitted). Headache (59.5%) and fever (47.5%) were the leading indications.

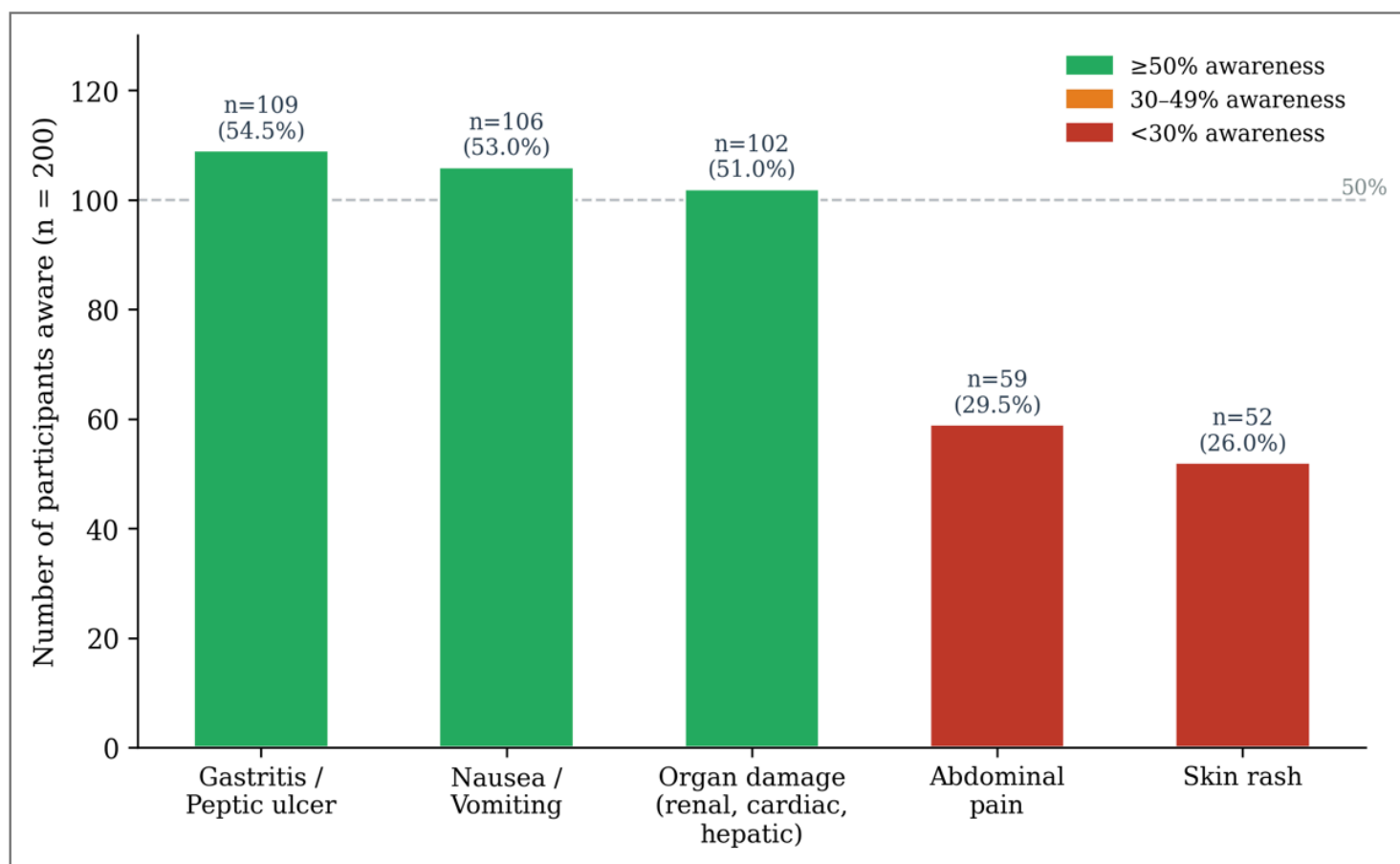


Figure 6

Awareness of analgesic adverse drug reactions among study participants (n = 200; multiple responses permitted). Green bars: ≥50% awareness. Orange bars: 30–49%. Red bars: <30%. Dashed line at n = 100 (50% threshold).

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Additionalfile1.docx](#)