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Knowledge and Perceptions of Analgesic Misuse Risks Among Patients in Taiz, Yemen: A Survey-Based Study

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ABSTRACT

Background: Pain relief medications known as analgesics do not influence mental awareness during treatment. The routine application of many types of analgesics creates notable health threats for users.
Objective: This research explores the patterns of analgesic utilization as well as the participants' knowledge of medicine side effects and pain management practices in a sample of 60 people.
Method: Cross-sectional research was conducted including sixty patients from Taiz City, Yemen. Participants were selected from various public locations and healthcare institutions to provide a varied sample reflective of the broader population.
Results: The analysis showed that analgesics receive daily usage by 67.24% of individuals who primarily need it for bone & joint pain (42.6%) and headache & gum pain (42.6%). Even though participants frequently used medications over half (51.7%) among them reported negative side effects mainly including stomach ulcers (49.12%) and digestive issues (29.82%). The pain medication statistics revealed that paracetamol shared equal usage with diclofenac since both drugs appeared in 40% of reports. Although 56.7% of participants identified potential risks of improper analgesic use, their side effect knowledge overall received poor ratings at 32.7% alongside acceptable evaluations at 32.7% while only 16.3% expressed excellent knowledge. Information about harmful effects did not stop 46.7% of participants from keeping their current analgesic usage. The public showed a preference for analgesic usage by necessity since 70% supported this method yet 30% suggested seeking medical advice for these treatments.
Conclusion: Research demonstrates extensive utilization of analgesics while showing numerous reported side effects which requires better educational practices for safe analgesic use to reduce dangers and abuses.

Keywords: Analgesics, Indiscriminate Use, Patient Awareness, Side Effects, Yemen

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INTRODUCTION

Healthcare requires effective pain management through which analgesics serve as vital agents for reducing multiple types of pain (1). The available pain medications belong to three categories: NSAIDs, opioids and analgesic antipyretics (2). The effectiveness of analgesics at treating acute and chronic pain comes with multiple serious health risks when they are misused or taken excessively because users face gastrointestinal issues and renal impairment and liver damage and dependency problems (3). The common practice of self-medication with analgesics as well as their non-prescribed use persists especially in developing countries even when safer medication options exist alongside standardized usage guidelines (4). The extensive misuse of analgesic drugs emphasizes why everyone needs to understand the dangers of random medicine consumption (5).

Yemen and numerous other territories lack comprehensive research regarding how analgesics are used and patient awareness of possible dangers along with side effects (6). Understandings and perceptions regarding analgesic medication usage determine the ability to stop their excessive use and protect against unwanted adverse effects (7). The three widespread analgesics paracetamol, diclofenac, and morphine serve as bone and joint pain and headache treatments and musculoskeletal discomfort remedies yet excessive or improper use triggers numerous adverse effects (8). Research explains that individuals demonstrate different levels of awareness about analgesic side effects since they continue using these pharmaceuticals although recognizing risks because they believe in the benefits and do not have better options (9 -12).

The mismatch between awareness and actual conduct highlighted the situation therefore requiring deeper research into analgesic usage factors. This research aims to measure how participants in Yemen use analgesics as well as their understanding of risks from improper medication use and their identification of side effects from these drugs. This research analyzes analgesic use levels along with major side effects and general awareness about potential harms by concentrating on three main study areas. The study results will help establish a better understanding about how people handle pain medications in society and point out particular areas for education improvement regarding safer utilization of medications.

This research attempts to expand current scholarly knowledge about public health effects of painkillers and their associated safety complications. Research outcomes will enable public health teams to develop better prevention strategies and healthcare authorities to create policies and clinicians to deliver appropriate care. The study works to understand public knowledge gaps about analgesic use to create improved pain management practices that minimize these drugs' negative effects.

METHODS

Study Design

Cross-sectional research was conducted including sixty patients from Taiz City, Yemen. Participants were selected from various public locations and healthcare institutions to provide a varied sample reflective of the broader population. The study sought to evaluate changes in analgesic intake, awareness of side effects, and understanding of the hazards linked to indiscriminate painkiller use.

Study Area and study Duration

This study conducted in the period between 1/08/2021 and 21/08/2021 in Taiz City, Yemen. Taiz city possesses a heterogeneous population with different access to healthcare services. This neighborhood was selected because to its urban environment and the accessibility of healthcare facilities, which are relevant for comprehending public health concerns associated with drug use.

The inclusion criteria

Participants must be a minimum of 18 years old, reside in Taiz City, Yemen, and have utilized analgesics during the preceding six months.

Exclusion criteria

Individuals who have not utilized analgesics in the prior six months, and individuals with cognitive disorders or other conditions that may impede their ability to complete questionnaires.

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Sample Size
Sixty study participants were included in the research. The size of the selected participants gave researchers a detailed overview of how the population used analgesics as well as their awareness of possible side effects and their beliefs regarding correct medication usage.

Data Collection Tool
Data were collected through a structured questionnaire. The questionnaire was first extracted from previous study (13) and then modified and drafted in English and then translated into Arabic to ensure that all participants could understand and respond accurately. The survey was administered face-to-face by trained interviewers to ensure clarity and accuracy of the responses. Participants were informed of the study's objectives and gave their consent prior to participation.

The questionnaire had both multiple-choice options and structured questions that formed the study tool. The tool collected personal data among other information related to how people used analgesics and their understanding of the possible side effects and their perceptions on analgesic misuse. The main sections of the questionnaire included specific areas.

1. Demographic information (e.g., age, gender).
2. Disease management frequency combined with the reasons why participants use analgesics.
3. Individuals should have detailed knowledge about the side effects that occur when taking analgesics.
4. Personal experience with analgesic side effects.
5. People take steps to reduce the risks connected to analgesic use.

Data Analysis
Once the data were collected, responses were entered into Microsoft Excel for analysis. Descriptive statistics, including frequencies and percentages, were used to summarize the demographic characteristics, analgesic use patterns, awareness of side effects, and common adverse effects. The results were then analyzed to draw conclusions regarding the prevalence of analgesic use, the level of awareness about potential side effects, and the overall knowledge among the population in Taiz City. The findings were presented in tables and discussed to highlight significant patterns and inform recommendations for improving public health education on analgesic use.

Ethical Approval
The research received authorization from the Ethics Committee of the University of Science and Technology, Aden, Yemen (MEC/AD067) Every participant gave their consent before the study while the study practices full confidentiality protection for all participants. The research followed ethical principles from the committee which maintained participant rights and protected their physical health.

RESULTS
The gender distribution shows a significant skew toward males, who comprise 76.67% of the participants, while females account for 23.33%. In terms of age, the majority of participants (47.46%) are in the 20-30 years age group, followed by 30-40 years (23.7%) and > 40 years (20.33%). A small proportion of participants are under 20 years old (8.47%). This suggests that the sample is predominantly male and the most common age group is young adults (Table 1).

Table 1: Demographic analysis among participants n = 60

	Subcategory	Number	Percentage (%)
Gender Distribution of Participants	Male	46	76.67%
	Female	14	23.33%
	Total	60	**100%**
Age Distribution	< 20 years	5	8.47%
	20-30 years	29	47.46%
	30-40 years	14	23.7%
	> 40 years	12	20.33%
	Total	60	**100%**

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The survey findings in table 2 show that 67.24% of participants utilize analgesics for their pain relief needs together with substantial numbers using such medication for bone & joint (42.6%) and headache & gum (42.6%) issues yet cardiovascular pain was not noted. The majority of individuals who use analgesics experience side effects with stomach ulcers affecting 49.12% of users and digestive issues affecting 29.82% of users. Paracetamol and diclofenac stand as the primary analgesics used by patients since each medication achieves 40% utilization while aspirin follows with 10% use along with 5% relying on morphine. Contrary to the 56.7% who comprehend the dangers of uncontrolled drug usage, 43.3% do not understand them and the assessment of side effect knowledge reveals acceptable levels (32.7%) linked with poor levels (32.7%). A high percentage of 46.7% still uses analgesics even though they are aware of potential risks. 70% of the population supports the need for proper prescription of analgesics while the other 30% recommend seeking medical advice before use.

Table 2: Prevalence and response of participants to the survey n= 60

Survey Question	Response Options	Percentage (%)
Do you use analgesics?	Yes	67.24%
	No	32.76%
For what conditions do you use analgesics?	Bone & Joint Pain	42.6%
	Gastrointestinal Pain	8.2%
	Urinary Tract Pain	6.6%
	Cardiovascular Pain	0%
	Headache & Gum Pain	42.6%
Have you experienced any side effects from analgesic use?	Yes	51.7%
	No	48.3%
Which analgesics do you use most frequently?	Paracetamol	40%
	Diclofenac	40%
	Aspirin	10%
	Morphine	5%
	Other	5%
Are you aware of the side effects of indiscriminate analgesic use?	Yes	56.7%
	No	43.3%
How would you rate your knowledge about the side effects of analgesics?	Excellent	16.3%
	Good	18.3%
	Acceptable	32.7%
	Poor	32.7%
Do you continue using analgesics despite knowing their harmful effects?	Yes	46.7%
	No	53.3%
What are the most common side affects you have experienced?	Stomach Ulcers	49.12%
	Liver Problems	1.75%
	Kidney Problems	12.3%
	Digestive Issues	29.82%
	Other	7.01%
What is the best way to avoid the indiscriminate use of analgesics?	Use only when necessary	70%
	Consult a doctor	30%

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DISCUSSION

The results from this survey highlight key patterns in the use of analgesics, awareness of their side effects, and overall knowledge about pain management. The Switzerland study by Scheurer PA et al. (14) among 200 UK adults showed that 16% of participants used painkillers mainly for bone & joint pain and headache & gum pain just like the predominant reasons in this survey. On the other hand, the current data was in line with another study conducted by Salah S, et al (15) which indicated found a high occurrence of side effects where stomach ulcers stood as the most frequently encountered adverse outcome. Moreover, this research showed matching results concerning participants' knowledge about analgesic side effects because some of participants recognized them but failed to modify their behavior.

People seem to share a common pattern of medication usage because they comprehend the risks yet use analgesics because they need pain relief. A research study by Paulose-Ram R, et al. (16) in USA and data was derived from third National Health and Nutrition Examination Survey (1988–1994), for persons 17 years and older showed participants used analgesics at a rate of approximately 30% despite results showing similar data in the other studies. The decreased analgesic usage in the rural sector seems linked to population characteristics because members of this population had limited medical care access and primarily relied on non-drug pain remedies.

According to Smith et al.'s research patients understood analgesic side effects in detail as people reached about 70% understanding level while also tending to seek medical advice prior to using these medications. The comparison reveals that public health management strategies depend heavily on the availability of healthcare services and educational information. Other research confirms that 67.24% of participants used analgesics which shows a widespread need for pain medications. Results show that stomach ulcers and other gastrointestinal side effects were reported by 51.7 % of participants since this proves the necessity of educating people about analgesic risks when used over extended periods. The knowledge of dangerous side effects did not stop almost half of users from taking analgesics either because they needed pain control or because other treatment choices were unavailable.

The current data also indicated that majority of the surveyed participant's selected necessary use of analgesics as the most effective method for avoiding misuse of analgesics. This revealed that understanding dedicated use guidelines along with professional consultation could be limited. Public understanding about safe analgesic practices exists but practical knowledge needs better development. The observed differences in healthcare accessibility and educational levels between studies explain the discovered dissimilarities in analgesic-related knowledge and behavior patterns. The research establishes the necessity of providing proper education about analgesic safety to the public together with alternative pain management solutions.

CONCLUSION

People who suffer from pain regularly receive medication relief through paracetamol and diclofenac doses. The widespread indiscriminate usage continues even though patients remain conscious of the possible side effects. Gastrointestinal side effects together with stomach ulcers stand as the most frequent adverse reactions that demonstrate the importance of following correct prescription protocols. Public education about dangerous risks from prolonged analgesic use should be a priority because pain medications enjoy widespread usage. The educational program must teach population members about analgesic security while providing diverse pain control techniques. The acquisition of safe analgesic practice techniques requires more development. Treatment options and education programs about analgesics must be accessible for public health managers to accomplish effective administration of pain medication.

RECOMMENDATIONS

1. Addition of medication beyond the determined dosage should not happen.
2. When educating patients healthcare providers should discuss the potential hazards associated with self-medication.
3. All patients need to consult their doctor before taking painkillers on a regular basis.
4. The regulation of sales of painkillers at pharmacies through policies should aim to reduce improper medication use.

CONFLICT OF INTEREST

The authors declare that no conflict of interest.

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