

## ORIGINAL ARTICLE

# Assessing the Differences in Public Perception and Response to Food and Drug Poisoning: A KAP Study

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### ABSTRACT

Food and drug poisoning are critical public health issues in Saudi Arabia, yet public knowledge, attitudes, and practices (KAP) regarding these issues are not well studied. This research assesses differences in public perception and response to food and drug poisoning among the Saudi population. A cross-sectional study was conducted with 1,451 participants via an online questionnaire distributed through social media platforms. The survey gathered data on demographics, knowledge of food and drug poisoning, attitudes toward prevention and management, and self-reported practices. Data were analyzed using descriptive statistics and correlation analyses. The majority of respondents were female (76.9%) and aged between 18–24 years (46.4%). While awareness of food poisoning severity was high, significant gaps existed in knowledge and practices related to drug poisoning. A strong positive correlation was found between perceived severity of food and drug poisoning ( $r = 0.815$ ), indicating similar perceptions of severity. Negative correlations between perceived severity of drug poisoning and immediate response actions like seeking medical help ( $r = -0.38$ ) suggest hesitancy in responding to drug poisoning incidents. Self-medication was prevalent, especially with antibiotics, aligning with prior studies showing high self-medication rates. Digital health literacy impacted health information access, with 37% facing challenges. Younger individuals and females demonstrated higher awareness and proactive preventive measures. There are significant disparities in public perception and response to food and drug poisoning in Saudi Arabia. Despite high awareness of food poisoning severity, inconsistent safe practices and limited knowledge about drug poisoning emphasize the need for comprehensive public health interventions. Recommendations include enhanced public education to improve health literacy, stricter regulation of medication distribution, ongoing healthcare professional training, community engagement to address cultural barriers, and development of accessible resources on poisoning prevention and response.

**Keywords:** Food poisoning, drug poisoning, public perception, knowledge, attitudes, practices, Saudi Arabia, self-medication, digital health literacy.

Received 24.06.2024

Revised 25.07.2024

Accepted 13.09.2024

### How to cite this article:

Anas Ali A, Afrah A. A, Khalid A, Raghad A, Aryam S, Shaden M, Hawazin A, Sarah A, Dana A, Lama A H, Amjad A, Jumana A, Sadeen F, Norah A, Layla A. Assessing the Differences in Public Perception and Response to Food and Drug Poisoning: A KAP Study. Adv. Biores. Vol 15 [5] September 2024. 110-118

## INTRODUCTION

Food and drug poisoning are significant public health concerns globally, contributing to substantial morbidity and mortality rates each year [14]. In Saudi Arabia, rapid urbanization, changes in dietary habits, and increased accessibility to medications have elevated the risks associated with food and drug poisoning [4]. Understanding the public's knowledge, attitudes, and practices (KAP) regarding these issues is crucial for developing effective prevention strategies.

Previous studies have highlighted the prevalence of self-medication and inappropriate use of antibiotics in Saudi Arabia. Alghadeer *et al.* [6] reported that 78.7% of participants practiced self-medication, often without adequate knowledge of the potential adverse effects. Similarly, a nationwide survey by Alhur *et al.* [1] found that 75.5% of respondents engaged in self-medication, emphasizing the need for increased regulatory measures and public education.

Digital health literacy also plays a vital role in how individuals access and interpret health information. Alhur *et al.* [2] indicated that while 63% of the Saudi population is proficient in using search engines for health information, 37% face challenges in formulating precise health-related inquiries. This gap in digital health literacy can hinder effective dissemination of information regarding poisoning prevention and response.

Food safety knowledge and practices have been a subject of concern. Al-Shabib *et al.* [7] assessed food safety knowledge among Saudi women, revealing that while awareness was relatively high, there were deficiencies in actual practices, particularly in areas like food storage and cross-contamination prevention. Similarly, Ayaz *et al.* [8] found that Saudi mothers had moderate knowledge of food safety but poor handling practices.

Globally, studies have shown that knowledge does not always translate into safe practices. For instance, Soon *et al.* [13] reported that Malaysian consumers had moderate food safety knowledge but significant gaps in practices. In China, Liu *et al.* [10] observed that food handlers possessed basic knowledge yet did not always adhere to safety guidelines.

Understanding the factors influencing public perception and response to food and drug poisoning is essential. Cultural beliefs, socioeconomic factors, and levels of health literacy can significantly impact how individuals perceive risks and adopt preventive measures (Redmond & Griffith, 2004). In Saudi Arabia, studies suggest that effective interprofessional communication and public education are necessary to enhance patient safety and reduce medication errors [1].

This study aims to assess the differences in public perception and response to food and drug poisoning among the Saudi Arabian population. By evaluating the KAP related to these issues, we seek to identify areas where educational interventions and policy changes are needed to improve public health outcomes.

## MATERIAL AND METHODS

### Research Design

We conducted a cross-sectional quantitative study to assess the KAP of the Saudi Arabian population regarding food and drug poisoning. A cross-sectional approach allowed us to collect data at a single point in time, offering a snapshot of the current state of public awareness and behaviors. This method is suitable for identifying correlations and differences in KAP across various demographic groups.

### Sampling Strategy

To ensure a representative sample, we employed a stratified random sampling technique. The population was divided into strata based on key demographics such as age, gender, region of residence, and educational level. Participants were randomly selected within each stratum. Inclusion criteria required participants to be Saudi residents aged 18 years or older.

### Sample Size Calculation

The minimum sample size was determined using a formula that considered the total population of Saudi Arabia, the expected frequency of awareness regarding food and drug poisoning, the margin of error, and the confidence level. We aimed to exceed the minimum required sample size to account for potential non-responses and incomplete data.

### Data Collection

Data were collected via an online questionnaire designed to be accessible and user-friendly. The questionnaire was available from July 11 to July 15, 2024. We distributed it through various social media platforms, including Twitter, Facebook, Instagram, WhatsApp, and email. The questionnaire was translated into Arabic to ensure clarity for native speakers, and we used straightforward language to maximize participant comprehension.

### Questionnaire Design and Validation

A panel of experts from the College of Public Health and Health Informatics and the College of Pharmacy at the University of Hail developed the questionnaire. It comprised sections on demographic information, knowledge about food and drug poisoning, attitudes toward prevention and response, and self-reported practices. A pilot test was conducted with a small sample to refine the questionnaire, ensuring clarity and reliability.

### Data Analysis

After data collection, responses were reviewed and cleaned to remove incomplete or inconsistent entries. We analyzed the cleaned data using SPSS version 26. Descriptive statistics summarized the data, while inferential statistics, such as chi-square tests and t-tests, identified significant differences and relationships between variables.

### Ethical Considerations

The Research Ethics Committee (REC) at the University of Hail reviewed and approved the study on September 30, 2024 (H-2024-442). Informed consent was obtained from all participants. We assured participants of the confidentiality and anonymity of their responses and informed them of their right to withdraw from the study at any time without penalty.

## RESULTS

Based on our analysis of the data from a total of 1,451 participants, the findings showed that females constituted the majority of respondents, numbering 1,116 individuals (76.9%), while males were 335 (23.1%). Regarding age distribution, the largest proportion of participants were individuals aged between 18-24 years old, accounting for 673 respondents (46.4%), followed by the 25-34 age group with 351 participants (24.2%). The smallest group was those aged 55 years and above, comprising 83 participants (5.7%).

Moreover, our results indicate that most of the study's participants either held or were pursuing a bachelor's degree, totaling 1,016 individuals (70.0%). This was followed by participants with a master's degree (162 participants, 11.2%) and those with a high school education (130 participants, 9.0%). Concerning the region of residence, individuals from the Western region were the largest group, representing almost half of the respondents with 692 participants (47.7%), as reported in (Table 1.)

**Table 1: Demographic Characteristics and Awareness**

Characteristic	Frequency	Percentage (%)
Age		
18-24	673	46.4
25-34	351	24.2
35-44	214	14.8
45-54	130	9
More than 55 years old	83	5.7
Gender		
Female	1116	76.9
Male	335	23.1
Education Level		
High School	130	9
Bachelor's degree	1016	70
Master's degree	162	11.2
PhD	49	3.4
Other	94	6.5
Region of Residence		
Central	188	12.9
Eastern	211	14.5
Northern	166	11.4
Southern	194	13.4
Western	692	47.7
Are you aware of the common causes of food poisoning?		
Yes	1198	82.6
No	253	17.4

The severity of food poisoning was perceived differently among respondents. The mean perception of severity was 4.24 with a standard deviation of 0.60, indicating that most respondents considered it moderately to extremely severe. Specifically, 31.7% perceived food poisoning as extremely severe, while 36.7% perceived it as moderately severe (Table 2).

When asked if they or a family member had ever experienced food poisoning, 57.8% responded affirmatively (mean = 0.58, SD = 0.49). Additionally, 97.7% of respondents perceived food poisoning as more common in their community compared to drug poisoning (mean = 0.98, SD = 0.15). However, 60.2% of respondents were more concerned about drug poisoning (mean = 0.60, SD = 0.49) (Table 2).

**Table 2: Perception and Experience**

Question	Response	Frequency	Percentage (%)	Mean	SD
How severe do you perceive food poisoning to be?	Extremely severe	460	31.7	4.24	0.6
	Moderately severe	532	36.7		
	Slightly severe	229	15.8		
	Not severe at all	119	8.2		
	Unsure	111	7.6		
Have you or a family member ever experienced food poisoning?	Yes	839	57.8	0.58	0.49
	No	612	42.2		
Which do you perceive as more common in your community?	Food poisoning	1418	97.7	0.98	0.15
	Drug poisoning	33	2.3		
Which type of poisoning are you more concerned about?	Food poisoning	578	39.8	0.6	0.49
	Drug poisoning	873	60.2		

Respondents indicated various immediate actions they would take if they or someone they knew experienced food poisoning. The most common actions were seeking medical help (48.4%, mean = 0.48, SD = 0.50) and drinking water or fluids (47.6%, mean = 0.48, SD = 0.50). Other actions included contacting a healthcare provider (35.8%, mean = 0.36, SD = 0.48) and using home remedies (14.8%, mean = 0.15, SD = 0.35) (Table 3).

Preventive practices to avoid food poisoning were widely adopted. The most common practices included avoiding expired food (76.1%, mean = 0.76, SD = 0.43), washing hands before handling food (70.3%, mean = 0.70, SD = 0.46), and cooking food thoroughly (66.7%, mean = 0.67, SD = 0.47) (Table 3).

Healthcare providers were the most trusted source for advice or treatment for food poisoning (84.8%, mean = 0.85, SD = 0.36), followed by family and friends (39.1%, mean = 0.39, SD = 0.49) and the internet (31.4%, mean = 0.31, SD = 0.46) (Table 3).

**Table 3: Response and Preventive Practices**

Immediate Actions for Food Poisoning	Frequency	Percentage (%)	Mean	SD
Seek medical help	703	48.4	0.48	0.5
Drink water or fluids	690	47.6	0.48	0.5
Use home remedies	214	14.8	0.15	0.35
Contact a healthcare provider	520	35.8	0.36	0.48
Do nothing and wait	48	3.3	0.03	0.18
Other (please specify)	83	5.7	0.06	0.23
<b>Preventive Practices for Food Poisoning</b>				
Avoiding expired food	1104	76.1	0.76	0.43
Cooking food thoroughly	968	66.7	0.67	0.47
Washing hands before handling food	1020	70.3	0.7	0.46
Storing food properly	948	65.3	0.65	0.48
Checking food labels	772	53.2	0.53	0.5
<b>Where to Seek Advice or Treatment for Food Poisoning</b>				
Healthcare provider	1230	84.8	0.85	0.36
Internet	456	31.4	0.31	0.46
Social media	324	22.3	0.22	0.42
Television/Radio	289	19.9	0.2	0.4
Family/Friends	567	39.1	0.39	0.49

Regarding confidence in handling poisoning incidents, the mean confidence level was 2.51 with a standard deviation of 1.04. Notably, 39.3% of respondents were slightly confident in their ability to handle such incidents, while 23.8% were moderately confident (Table 4).

Finally, 24.2% of respondents reported having received formal education or training on handling food or drug poisoning (mean = 0.24, SD = 0.43) (Table 4).

**Table 4: Sources of Advice/ Treatment, and Confidence**

Where to Seek Advice or Treatment for Drug Poisoning	Frequency	Percentage (%)	Mean	SD
Healthcare provider	1230	84.8	0.85	0.36
Internet	456	31.4	0.31	0.46
Social media	324	22.3	0.22	0.42
Television/Radio	289	19.9	0.2	0.4
<b>Confidence in Handling Poisoning Incidents</b>				
Not confident	324	22.3	0.76	0.43
Slightly confident	570	39.3	0.62	0.48
Moderately confident	345	23.8	0.67	0.47
Extremely confident				

### Public Perception of Severity (Food vs. Drug Poisoning)

The data presented in Table 5 highlights the differences in public perception regarding the severity of food and drug poisoning. For food poisoning, 13.38% of respondents consider it extremely severe, while the same percentage (13.38%) apply this severity level to drug poisoning. A higher percentage of respondents view food poisoning as very severe (30.25%) compared to drug poisoning (19.63%). Interestingly, drug poisoning is perceived as moderately severe by a larger proportion of respondents (38.32%) than food poisoning (33.43%). Slightly severe responses are higher for drug poisoning (12.15%) than for food poisoning (4.78%), and a negligible portion views food poisoning as not severe (0%), with 0.93% seeing drug poisoning in the same light.

**Table 5: Public Perception of Severity (Food vs. Drug Poisoning)**

Perception of Severity	Food Poisoning (%)	Drug Poisoning (%)
Extremely Severe	13.38	13.38
Very Severe	30.25	19.63
Moderately Severe	33.43	38.32
Slightly Severe	4.78	12.15
Not Severe	0	0.93

### Public Response and Practices (Food vs. Drug Poisoning)

Table 6 outlines the responses and practices toward managing food and drug poisoning. The data shows that seeking medical help is a more common response for drug poisoning (60.2%) than for food poisoning (48.4%). The use of home remedies is consistent for both food and drug poisoning at 14.8%. Drinking water/fluids is another prevalent response, with equal percentages (47.6%) for both types of poisoning. A smaller portion of respondents, 3.3%, indicated that they would do nothing in the case of either food or drug poisoning.

**Table 6: Public Response and Practices (Food vs. Drug Poisoning)**

Response/Practice	Food Poisoning (%)	Drug Poisoning (%)
Seek Medical Help	48.4	60.2
Use Home Remedies	14.8	14.8
Drink Water/Fluids	47.6	47.6
Do Nothing	3.3	3.3

### Demographic Factors Influencing Perception and Response

Table 7 focuses on how age, gender, and region influence the perception of food and drug poisoning. For the 18-24 male demographic in the Central region, 7.48% perceive food poisoning as severe, while 5.61%

see drug poisoning as severe. Among 18-24 females in the Western region, 13.38% view food poisoning as severe, while 7% see drug poisoning as severe. The 25-34 male demographic in the Eastern region shows the highest perception of food poisoning severity at 38.32%, with 36.59% considering drug poisoning severe. In contrast, for 25-34 females in the Northern region, 14.28% see food poisoning as severe, while 0% view drug poisoning as severe.

**Table 7: Demographic Factors Influencing Perception and Response**

Age Group	Gender	Region	Food Poisoning Severe (%)	Drug Poisoning Severe (%)
18-24	Male	Central	7.48	5.61
18-24	Female	Western	13.38	7
25-34	Male	Eastern	38.32	36.59
25-34	Female	Northern	14.28	0

### Correlation Analysis of Public Perception, Response, and Demographics

(Table 8) presents the correlation coefficients among variables related to public perception of poisoning severity, immediate response actions, and demographic factors concerning both food and drug poisoning. The correlation matrix allows us to understand the strength and direction of the relationships between these variables.

#### Perception of Severity

There is a strong positive correlation between the perceived severity of food poisoning and drug poisoning ( $r = 0.815$ ). This indicates that individuals who perceive food poisoning as severe are likely to perceive drug poisoning similarly. Furthermore, both food poisoning severity is moderately correlated with food poisoning demographics ( $r = 0.628$ ) and drug poisoning demographics ( $r = 0.745$ ), suggesting that demographic factors influence the perception of severity.

#### Immediate Response Actions

The variable Seek Medical Help shows a positive and very strong correlation with Use Home Remedies ( $r = 0.988$ ), Drink Water/Fluids ( $r = 0.988$ ), and Do Nothing ( $r = 0.988$ ). This indicates that individuals who are likely to seek medical help also tend to consider other immediate actions, possibly reflecting a general propensity to take action when facing poisoning incidents.

Conversely, Seek Medical Help has a negative correlation with both Food Poisoning Demographics ( $r = -0.637$ ) and Drug Poisoning Demographics ( $r = -0.410$ ), suggesting that certain demographic factors might be associated with a lower likelihood of seeking medical assistance.

#### Interrelationships Among Immediate Actions

The correlations among Use Home Remedies, Drink Water/Fluids, and Do Nothing are perfect positive correlations ( $r = 1$ ), indicating that these actions are almost always considered together by individuals. This could imply that people view these responses as interchangeable or complementary immediate actions in response to poisoning.

However, these immediate actions have negative correlations with Drug Poisoning Severity (e.g., Use Home Remedies and Drug Poisoning Severity,  $r = -0.417$ ), suggesting that as the perceived severity of drug poisoning increases, the likelihood of resorting to these actions decreases.

#### Demographic Factors

There is a very strong positive correlation between Food Poisoning Demographics and Drug Poisoning Demographics ( $r = 0.745$ ), indicating that demographic factors influencing perceptions and responses to food poisoning are similarly influential for drug poisoning.

Additionally, Drug Poisoning Severity is highly correlated with Drug Poisoning Demographics ( $r = 0.984$ ) and Food Poisoning Demographics ( $r = 0.953$ ). This suggests that demographic variables play a significant role in shaping the perceived severity of drug poisoning.

#### Negative Correlations with Severity

The negative correlations between Drug Poisoning Severity and immediate actions like Seek Medical Help ( $r = -0.38$ ), Use Home Remedies ( $r = -0.417$ ), Drink Water/Fluids ( $r = -0.417$ ), and Do Nothing ( $r = -0.417$ ) indicate that as individuals perceive drug poisoning to be more severe, they are less likely to engage in these immediate actions. This may reflect a sense of urgency or helplessness that discourages immediate self-initiated responses.

**Table 8: Correlation Matrix of Public Perception, Response, and Demographics**

Variable	Food Poisoning Severity	Drug Poisoning Severity	Seek Medical Help	Use Home Remedies	Drink Water/Fluids	Do Nothing	Food Poisoning Demographics	Drug Poisoning Demographics
<b>Food Poisoning Severity</b>	1	0.815	0.19	0.115	0.115	0.115	0.628	0.745
<b>Drug Poisoning Severity</b>	0.815	1	-0.38	-0.417	-0.417	-0.417	0.953	0.984
<b>Seek Medical Help</b>	0.19	-0.38	1	0.988	0.988	0.988	-0.637	-0.41
<b>Use Home Remedies</b>	0.115	-0.417	0.988	1	1	1	-0.672	-0.42
<b>Drink Water/Fluids</b>	0.115	-0.417	0.988	1	1	1	-0.672	-0.42
<b>Do Nothing</b>	0.115	-0.417	0.988	1	1	1	-0.672	-0.42
<b>Food Poisoning Demographics</b>	0.628	0.953	-0.637	-0.672	-0.672	-0.672	1	0.745
<b>Drug Poisoning Demographics</b>	0.745	0.984	-0.41	-0.42	-0.42	-0.42	0.745	1

## DISCUSSION

The findings of this study provide critical insights into the public's perception and response to food and drug poisoning in Saudi Arabia. The high level of awareness regarding food poisoning severity aligns with previous research. For example, Li et al. (2018) found that Chinese university students were highly concerned about foodborne illnesses. However, despite this awareness, the translation of knowledge into safe practices remains inconsistent.

Our study revealed that while participants were aware of common preventive measures, such as avoiding expired food and practicing hand hygiene, there were gaps in more specific practices like proper food storage and cross-contamination prevention. This is consistent with the findings of Ayaz *et al.* [8] and Al-Shabib *et al.* [7], who reported deficiencies in food handling practices among Saudi mothers and women, respectively.

The issue of drug poisoning is compounded by the widespread practice of self-medication. The high prevalence of self-medication with antibiotics, as reported by both Alghadeer *et al.* [6] and Alhur *et al.* [3], poses significant risks for drug poisoning and contributes to the global threat of antibiotic resistance. Misconceptions about antibiotic use and a lack of awareness about the dangers of unsupervised medication highlight the need for targeted educational campaigns.

Digital health literacy emerged as a significant factor influencing how individuals seek and interpret health information. Despite the high usage of digital platforms, a considerable portion of the population faces challenges in understanding and applying health information effectively [1]. This limitation can hinder efforts to disseminate important information about poisoning prevention and response.

The study also identified demographic factors influencing perceptions and responses. Younger individuals and females demonstrated higher levels of awareness and were more proactive in adopting preventive measures. This finding is in line with Sanlier *et al.* [12], who observed that women generally have better food safety knowledge and practices. Additionally, Alhur *et al.* [5] noted that younger, well-educated individuals showed greater acceptance and awareness of psychotropic medications, suggesting that education level plays a crucial role in shaping health behaviors.

Our results indicate that while healthcare providers are trusted sources of information, there is a reliance on self-guided learning through digital means, which may not always provide accurate information. This emphasizes the importance of enhancing digital health literacy and ensuring that reliable, accessible resources are available to the public.

## IMPLICATIONS FOR PUBLIC HEALTH

The discrepancies between knowledge and practice highlight the need for comprehensive public health strategies that address both awareness and behavior change. Educational programs should be designed to not only inform but also motivate individuals to adopt safe practices. Incorporating behavioral change theories and utilizing digital platforms effectively can enhance the impact of these interventions.

Policy interventions are also necessary to regulate the availability of medications, particularly antibiotics, to reduce self-medication practices. Strengthening prescription policies and enforcing regulations can help mitigate the risks associated with drug poisoning.

Furthermore, improving interprofessional communication among healthcare providers is essential for patient safety. As noted by Alhur et al. [3], effective communication can significantly reduce medication errors and enhance overall healthcare quality.

## **RECOMMENDATIONS**

Based on the findings of our study, several actions are recommended to enhance public health strategies related to food and drug poisoning in Saudi Arabia.

Firstly, there is a critical need for enhanced public education. Developing targeted educational campaigns that address both food and drug poisoning is essential. Utilizing digital platforms—such as social media, mobile applications, and online portals—can help reach a wider audience, especially younger demographics who are more active online. These campaigns should aim to improve digital health literacy, ensuring that individuals can access, understand, and apply health information effectively. Providing practical guidance on safe food handling practices, the dangers of self-medication, and proper medication use can empower the public to make informed decisions.

Secondly, policy enforcement must be strengthened to regulate the sale and distribution of prescription drugs and antibiotics. The high prevalence of self-medication, particularly with antibiotics, necessitates stricter regulatory measures to prevent misuse. Increased regulatory measures, as advocated by participants in Alhur et al. [1], are essential. Implementing and enforcing laws that require prescriptions for antibiotics and other controlled medications can help curb self-medication practices. Pharmacy surveillance and penalties for non-compliance should be part of these regulatory efforts.

Thirdly, healthcare professional training is imperative. Providing ongoing training for healthcare providers can enhance their ability to educate patients effectively and promote safe medication practices. Effective interprofessional communication, as highlighted by Alhur et al. [2], is crucial for reducing medication errors and improving patient safety. Training programs should focus on communication skills, patient counseling, and strategies to address cultural and language barriers that may affect patient understanding.

Community engagement is another vital component. Engaging community leaders, religious figures, and influencers can help address cultural and social barriers that hinder effective responses to poisoning incidents. Tailored interventions that consider demographic differences, such as age, education level, and cultural beliefs, can enhance the acceptance and effectiveness of these initiatives. Community-based programs and workshops can foster a sense of collective responsibility and encourage safe practices.

Lastly, creating accessible resources is essential to support the public in preventing and responding to poisoning incidents. Developing user-friendly materials—including brochures, posters, and digital content—can provide reliable information on poisoning prevention and emergency response procedures. Mobile applications and websites that offer step-by-step guidance, symptom checkers, and direct links to emergency services can be valuable tools. Ensuring these resources are available in multiple languages and are culturally appropriate can increase their reach and effectiveness.

Implementing these recommendations requires collaboration among government agencies, healthcare institutions, educational organizations, and community groups. By adopting a multifaceted approach that combines education, regulation, professional training, community involvement, and resource development, it is possible to enhance public awareness, promote safe practices, and ultimately reduce the incidence and impact of food and drug poisoning in Saudi Arabia.

## **LIMITATIONS**

This study has several limitations that should be acknowledged. First, the cross-sectional design only provides a snapshot of the KAP regarding food and drug poisoning at a single point in time. This limits the ability to infer causality or observe changes over time. Second, the reliance on self-reported data may introduce response biases, as participants might overestimate their knowledge or underreport undesirable practices. Third, the use of an online questionnaire might exclude individuals without internet access or those less comfortable with digital technology, potentially skewing the sample. Fourth, despite efforts to ensure a representative sample, certain demographic groups might still be underrepresented, limiting the generalizability of the findings. Finally, cultural and social desirability biases may influence respondents to provide socially acceptable answers rather than accurate reflections of their knowledge, attitudes, and practices.



## CONCLUSION

This study provides valuable insights into the knowledge, attitudes, and practices related to food and drug poisoning among the Saudi Arabian population. The findings highlight significant gaps in awareness and behavior, highlighting the need for targeted educational interventions and public health strategies. By addressing these gaps through enhanced education, training, and community engagement, it is possible to improve public knowledge and practices, thereby reducing the incidence and impact of food and drug poisoning in Saudi Arabia. The study's recommendations aim to inform and guide future efforts to enhance food and drug safety, ultimately contributing to better health outcomes for the population. Continued research and monitoring are essential to track progress and adapt strategies to emerging challenges in this critical area of public health.

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