



## Knowledge and Awareness about Drug Food Interaction among Dental Students in Tertiary Care Teaching Hospital

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### [Original Article](#)

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### ABSTRACT

Drug-food interactions (DFIs) are a critical yet often overlooked aspect of patient care that can significantly impact the efficacy and safety of pharmacological treatments. These interactions occur when certain foods or beverages alter the absorption, metabolism, or excretion of drugs, leading to either diminished therapeutic effects or adverse reactions. For healthcare professionals, understanding the complex nature of DFIs is essential to optimizing patient outcomes. This knowledge allows for the identification of high-risk drug-food combinations and the implementation of preventive strategies, such as dietary modifications or timing adjustments of medication administration. The awareness of DFIs is particularly important in polypharmacy settings, where patients are frequently prescribed multiple medications. The growing prevalence of chronic conditions and the increasing use of both prescription and over-the-counter medications necessitate ongoing education and collaboration among healthcare providers to minimize the risks associated with DFIs. This paper explores the mechanisms underlying DFIs, highlights common drug-food interactions, and discusses the role of healthcare professionals in managing these risks to ensure safe and effective pharmacotherapy for patients.

**Aim:** To assess the knowledge and awareness of students regarding drug-food interaction

#### Objectives

- 1) To determine the knowledge and awareness regarding drug-food interaction among undergraduate dental students based on gender.
- 2) To determine the knowledge and awareness regarding drug-food interaction among undergraduate dental students based on year of study.

**Method:** A cross-sectional survey was conducted among 300 dental students, comprising 83 males (27.7%) and 217 females (72.3%), including 87 first-year BDS students, 60 second-year BDS students, 67 third-year BDS students, 35 fourth-year BDS students, and 51 interns. The survey included 13 questions exploring the



awareness, and perceptions, Of dental students on Drug-food interactions. Responses were analysed based on gender and year of study using chi-square tests to identify statistically significant differences.

**Keywords:** Drug Food Interaction, Diabetes, Depression, Hypertension, Health Care Professionals,

## Introduction

As healthcare professionals, ensuring the safe and effective use of medications is a top priority. However, the complex interplay between medications and food can significantly impact patient outcomes. Drug-food interactions (DFIs) occur when food or nutrients affect the pharmacokinetics or pharmacodynamics of medications, potentially leading to adverse reactions, reduced efficacy, or increased toxicity.

With the increasing complexity of medication regimens and the growing use of herbal supplements and nutraceuticals, the risk of DFIs has never been greater. Healthcare professionals, including physicians, pharmacists, and nurses, play a critical role in identifying and managing DFIs to optimise patient care.

Despite their importance, DFIs often remain unrecognised and untreated. A lack of awareness, inadequate education, and insufficient resources can hinder healthcare professionals' ability to provide optimal care. This article aims to review the current state of knowledge on DFIs, highlight the importance of DFIs among healthcare professionals, and provide practical strategies for identifying and managing DFIs in clinical practice.

By addressing the complexities of DFIs and promoting interprofessional collaboration, we can improve patient outcomes, reduce adverse events, and enhance the overall quality of care.

## Methodology

A) **Study design and area:** A cross-sectional study was carried out at the tertiary care teaching hospital khammam.

B) **Study population:** The health care students including those of I years, II years, III years, IV

years, and Interns who responded to the offline paper print questionnaire survey.

C) **Study Instrument:** A self-administered questionnaire was designed based on knowledge and awareness and had a total of 13 questions through offline forms pro link. Each participant has to fill in their demographic data like Name, age, and year of study. Participant has to select one option from the answers provided against questions. The questions were based on knowledge and awareness of drug-food interactions among dental students.

D) **Pilot Study:** A pilot study was conducted on a group of students to assess the validity and reliability of the study.

E) **Sampling Method:** The sampling method used is the convenience method.

F) **Inclusion Criteria:** The students who were interested in the study and who were willing to participate.

G) **Exclusion Criteria:** students who are not willing to participate are excluded.

H) **Organising the study:** The purpose of the study was explained in a short note participants were asked to select one option from the answers provided against the questions.

I) **Statistical Analysis:** Data from the filled questionnaire was collected in a tabular form in an Excel worksheet and evaluated for analysis. The analysis was performed by SPSS version 29.

## Results

A total of 300 students took part with a female of 72.3% and a male of 27.7%. The age of participants ranges from 19 -26. In this study, females have more knowledge than males. I years have more knowledge than followed by III followed by II followed by Interns followed by IV year students.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	300	18	26	21.89	1.805
Valid N (listwise)	300				

Year of Study					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1	87	29.0	29.0	29.0
	2	60	20.0	20.0	49.0
	3	67	22.3	22.3	71.3
	4	35	11.7	11.7	83.0
	5	51	17.0	17.0	100.0
	Total	300	100.0	100.0	

Gender					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	1	217	72.3	72.3	72.3
	2	83	27.7	27.7	99.7
	Total	300	100.0	100.0	100.0

**Q1**

Gender				Q1				Total
				1	2	3	4	
1	Year of study	1	Count	23	18	14	17	72
			% of Total	10.6%	8.3%	6.5%	7.9%	33.3%
		2	Count	11	13	9	9	42
			% of Total	5.1%	6.0%	4.2%	4.2%	19.4%
		3	Count	14	17	6	18	55
			% of Total	6.5%	7.9%	2.8%	8.3%	25.5%
		4	Count	2	5	3	6	16
			% of Total	0.9%	2.3%	1.4%	2.8%	7.4%
	5	Count	10	8	6	7	31	
		% of Total	4.6%	3.7%	2.8%	3.2%	14.4%	
	Total		Count	60	61	38	57	216
		% of Total		27.8%	28.2%	17.6%	26.4%	100.0%
2	Year of study	1	Count	4	7	1	3	15
			% of Total	4.8%	8.4%	1.2%	3.6%	18.1%
		2	Count	3	9	1	5	18
			% of Total	3.6%	10.8%	1.2%	6.0%	21.7%
		3	Count	3	2	5	2	12
			% of Total	3.6%	2.4%	6.0%	2.4%	14.5%
		4	Count	6	7	2	4	19

			% of Total	7.2%	8.4%	2.4%	4.8%	22.9%
		5	Count	2	10	4	3	19
			% of Total	2.4%	12.0%	4.8%	3.6%	22.9%
	Total		Count	18	35	13	17	83
			% of Total	21.7%	42.2%	15.7%	20.5%	100.0%
11	Year of study	5	Count				1	1
			% of Total				100.0%	100.0%
	Total		Count				1	1
			% of Total				100.0%	100.0%
Total	Year of study	1	Count	27	25	15	20	87
			% of Total	9.0%	8.3%	5.0%	6.7%	29.0%
		2	Count	14	22	10	14	60
			% of Total	4.7%	7.3%	3.3%	4.7%	20.0%
		3	Count	17	19	11	20	67
			% of Total	5.7%	6.3%	3.7%	6.7%	22.3%
		4	Count	8	12	5	10	35
			% of Total	2.7%	4.0%	1.7%	3.3%	11.7%
		5	Count	12	18	10	11	51
			% of Total	4.0%	6.0%	3.3%	3.7%	17.0%
	Total		Count	78	96	51	75	300
			% of Total	26.0%	32.0%	17.0%	25.0%	100.0%

P-value 0.850

## Q2

Gender				Q2				Total
				1	2	3	4	
1	Year of study	1	Count	18	23	15	16	72
			% of Total	8.3%	10.6%	6.9%	7.4%	33.3%
		2	Count	11	7	12	12	42
			% of Total	5.1%	3.2%	5.6%	5.6%	19.4%
		3	Count	12	22	14	7	55
			% of Total	5.6%	10.2%	6.5%	3.2%	25.5%
		4	Count	6	3	1	6	16
			% of Total	2.8%	1.4%	0.5%	2.8%	7.4%
		5	Count	3	9	9	10	31
			% of Total	1.4%	4.2%	4.2%	4.6%	14.4%
	Total		Count	50	64	51	51	216
			% of Total	23.1%	29.6%	23.6%	23.6%	100.0%
2	Year of study	1	Count	2	6	4	3	15
			% of Total	2.4%	7.2%	4.8%	3.6%	18.1%
		2	Count	0	7	4	7	18
			% of Total	0.0%	8.4%	4.8%	8.4%	21.7%
		3	Count	3	4	2	3	12

			% of Total	3.6%	4.8%	2.4%	3.6%	14.5%
		4	Count	5	5	2	7	19
			% of Total	6.0%	6.0%	2.4%	8.4%	22.9%
		5	Count	2	7	9	1	19
			% of Total	2.4%	8.4%	10.8%	1.2%	22.9%
	Total		Count	12	29	21	21	83
			% of Total	14.5%	34.9%	25.3%	25.3%	100.0%
11	Year of study	5	Count		1			1
			% of Total		100.0%			100.0%
	Total		Count		1			1
			% of Total		100.0%			100.0%
Total	Year of study	1	Count	20	29	19	19	87
			% of Total	6.7%	9.7%	6.3%	6.3%	29.0%
		2	Count	11	14	16	19	60
			% of Total	3.7%	4.7%	5.3%	6.3%	20.0%
		3	Count	15	26	16	10	67
			% of Total	5.0%	8.7%	5.3%	3.3%	22.3%
		4	Count	11	8	3	13	35
			% of Total	3.7%	2.7%	1.0%	4.3%	11.7%
		5	Count	5	17	18	11	51
			% of Total	1.7%	5.7%	6.0%	3.7%	17.0%
	Total		Count	62	94	72	72	300
			% of Total	20.7%	31.3%	24.0%	24.0%	100.0%

P-value 0.114

### Q3

Gender			Q3				Total	
			1	2	3	4		
1	Year of study	1	Count	15	25	15	17	72
			% of Total	6.9%	11.6%	6.9%	7.9%	33.3%
		2	Count	12	14	8	8	42
			% of Total	5.6%	6.5%	3.7%	3.7%	19.4%
		3	Count	11	16	16	12	55
			% of Total	5.1%	7.4%	7.4%	5.6%	25.5%
		4	Count	1	10	3	2	16
			% of Total	0.5%	4.6%	1.4%	0.9%	7.4%
		5	Count	9	11	5	6	31
			% of Total	4.2%	5.1%	2.3%	2.8%	14.4%
	Total		Count	48	76	47	45	216
			% of Total	22.2%	35.2%	21.8%	20.8%	100.0%
2	Year of study	1	Count	4	6	2	3	15
			% of Total	4.8%	7.2%	2.4%	3.6%	18.1%

		2	Count	4	5	4	5	18
			% of Total	4.8%	6.0%	4.8%	6.0%	21.7%
		3	Count	4	4	4	0	12
			% of Total	4.8%	4.8%	4.8%	0.0%	14.5%
		4	Count	3	8	3	5	19
			% of Total	3.6%	9.6%	3.6%	6.0%	22.9%
		5	Count	1	12	2	4	19
			% of Total	1.2%	14.5%	2.4%	4.8%	22.9%
	Total		Count	16	35	15	17	83
			% of Total	19.3%	42.2%	18.1%	20.5%	100.0%
11	Year of study	5	Count	1				1
			% of Total	100.0%				100.0%
	Total		Count	1				1
			% of Total	100.0%				100.0%
Total	Year of study	1	Count	19	31	17	20	87
			% of Total	6.3%	10.3%	5.7%	6.7%	29.0%
		2	Count	16	19	12	13	60
			% of Total	5.3%	6.3%	4.0%	4.3%	20.0%
		3	Count	15	20	20	12	67
			% of Total	5.0%	6.7%	6.7%	4.0%	22.3%
		4	Count	4	18	6	7	35
			% of Total	1.3%	6.0%	2.0%	2.3%	11.7%
		5	Count	11	23	7	10	51
			% of Total	3.7%	7.7%	2.3%	3.3%	17.0%
	Total		Count	65	111	62	62	300
			% of Total	21.7%	37.0%	20.7%	20.7%	100.0%

P-value 0.579

Q4

Gender			Q4				Total	
			1	2	3	4		
1	Year of study	1	Count	21	26	10	15	72
			% of Total	9.7%	12.0%	4.6%	6.9%	33.3%
		2	Count	7	13	8	14	42
			% of Total	3.2%	6.0%	3.7%	6.5%	19.4%
		3	Count	7	22	12	14	55
			% of Total	3.2%	10.2%	5.6%	6.5%	25.5%
		4	Count	2	7	3	4	16
			% of Total	0.9%	3.2%	1.4%	1.9%	7.4%
		5	Count	12	8	6	5	31
			% of Total	5.6%	3.7%	2.8%	2.3%	14.4%
	Total		Count	49	76	39	52	216

			% of Total	22.7%	35.2%	18.1%	24.1%	100.0%
2	Year of study	1	Count	1	4	5	5	15
			% of Total	1.2%	4.8%	6.0%	6.0%	18.1%
		2	Count	2	3	4	9	18
			% of Total	2.4%	3.6%	4.8%	10.8%	21.7%
		3	Count	2	5	2	3	12
			% of Total	2.4%	6.0%	2.4%	3.6%	14.5%
		4	Count	4	7	3	5	19
			% of Total	4.8%	8.4%	3.6%	6.0%	22.9%
		5	Count	7	8	0	4	19
			% of Total	8.4%	9.6%	0.0%	4.8%	22.9%
	Total		Count	16	27	14	26	83
			% of Total	19.3%	32.5%	16.9%	31.3%	100.0%
11	Year of study	5	Count		1			1
			% of Total		100.0%			100.0%
	Total		Count		1			1
			% of Total		100.0%			100.0%
Total	Year of study	1	Count	22	30	15	20	87
			% of Total	7.3%	10.0%	5.0%	6.7%	29.0%
		2	Count	9	16	12	23	60
			% of Total	3.0%	5.3%	4.0%	7.7%	20.0%
		3	Count	9	27	14	17	67
			% of Total	3.0%	9.0%	4.7%	5.7%	22.3%
		4	Count	6	14	6	9	35
			% of Total	2.0%	4.7%	2.0%	3.0%	11.7%
		5	Count	19	17	6	9	51
			% of Total	6.3%	5.7%	2.0%	3.0%	17.0%
	Total		Count	65	104	53	78	300
			% of Total	21.7%	34.7%	17.7%	26.0%	100.0%

P-value 0.288

Q5

Gender			Q5				Total	
			1	2	3	4		
1	Year of study	1	Count	13	17	21	21	72
			% of Total	6.0%	7.9%	9.7%	9.7%	33.3%
		2	Count	8	14	10	10	42
			% of Total	3.7%	6.5%	4.6%	4.6%	19.4%
		3	Count	5	26	11	13	55
			% of Total	2.3%	12.0%	5.1%	6.0%	25.5%
		4	Count	0	6	4	6	16
			% of Total	0.0%	2.8%	1.9%	2.8%	7.4%
		5	Count	8	11	8	4	31

			% of Total	3.7%	5.1%	3.7%	1.9%	14.4%
	Total		Count	34	74	54	54	216
			% of Total	15.7%	34.3%	25.0%	25.0%	100.0%
2	Year of study	1	Count	1	7	4	3	15
			% of Total	1.2%	8.4%	4.8%	3.6%	18.1%
		2	Count	6	8	2	2	18
			% of Total	7.2%	9.6%	2.4%	2.4%	21.7%
		3	Count	3	4	5	0	12
			% of Total	3.6%	4.8%	6.0%	0.0%	14.5%
		4	Count	5	6	4	4	19
			% of Total	6.0%	7.2%	4.8%	4.8%	22.9%
		5	Count	4	4	7	4	19
			% of Total	4.8%	4.8%	8.4%	4.8%	22.9%
	Total		Count	19	29	22	13	83
			% of Total	22.9%	34.9%	26.5%	15.7%	100.0%
11	Year of study	5	Count		1			1
			% of Total		100.0%			100.0%
	Total		Count		1			1
			% of Total		100.0%			100.0%
Total	Year of study	1	Count	14	24	25	24	87
			% of Total	4.7%	8.0%	8.3%	8.0%	29.0%
		2	Count	14	22	12	12	60
			% of Total	4.7%	7.3%	4.0%	4.0%	20.0%
		3	Count	8	30	16	13	67
			% of Total	2.7%	10.0%	5.3%	4.3%	22.3%
		4	Count	5	12	8	10	35
			% of Total	1.7%	4.0%	2.7%	3.3%	11.7%
		5	Count	12	16	15	8	51
			% of Total	4.0%	5.3%	5.0%	2.7%	17.0%
	Total		Count	53	104	76	67	300
			% of Total	17.7%	34.7%	25.3%	22.3%	100.0%

P-value 0.181

**Q6**

Gender			Q6			Total	
			1	2	11		
1	Year of study	1	Count	41	31		72
			% of Total	19.0%	14.4%		33.3%
		2	Count	19	23		42
			% of Total	8.8%	10.6%		19.4%
		3	Count	29	26		55
			% of Total	13.4%	12.0%		25.5%

		4	Count	8	8		16
			% of Total	3.7%	3.7%		7.4%
		5	Count	11	20		31
			% of Total	5.1%	9.3%		14.4%
	Total		Count	108	108		216
			% of Total	50.0%	50.0%		100.0%
2	Year of study	1	Count	12	3	0	15
			% of Total	14.5%	3.6%	0.0%	18.1%
		2	Count	13	4	1	18
			% of Total	15.7%	4.8%	1.2%	21.7%
		3	Count	7	5	0	12
			% of Total	8.4%	6.0%	0.0%	14.5%
		4	Count	10	9	0	19
			% of Total	12.0%	10.8%	0.0%	22.9%
		5	Count	9	10	0	19
			% of Total	10.8%	12.0%	0.0%	22.9%
	Total		Count	51	31	1	83
			% of Total	61.4%	37.3%	1.2%	100.0%
11	Year of study	5	Count	1			1
			% of Total	100.0%			100.0%
	Total		Count	1			1
			% of Total	100.0%			100.0%
Total	Year of study	1	Count	53	34	0	87
			% of Total	17.7%	11.3%	0.0%	29.0%
		2	Count	32	27	1	60
			% of Total	10.7%	9.0%	0.3%	20.0%
		3	Count	36	31	0	67
			% of Total	12.0%	10.3%	0.0%	22.3%
		4	Count	18	17	0	35
			% of Total	6.0%	5.7%	0.0%	11.7%
		5	Count	21	30	0	51
			% of Total	7.0%	10.0%	0.0%	17.0%
	Total		Count	160	139	1	300
			% of Total	53.3%	46.3%	0.3%	100.0%

P-value 0.337

Q7

Gender			Q7				Total	
			1	2	11	22		
1	Year of study	1	Count	36	36	0	0	72
			% of Total	16.7%	16.7%	0.0%	0.0%	33.3%
		2	Count	15	26	1	0	42
			% of Total	6.9%	12.0%	0.5%	0.0%	19.4%

		3	Count	32	23	0	0	55
			% of Total	14.8%	10.6%	0.0%	0.0%	25.5%
		4	Count	10	5	0	1	16
			% of Total	4.6%	2.3%	0.0%	0.5%	7.4%
		5	Count	15	16	0	0	31
			% of Total	6.9%	7.4%	0.0%	0.0%	14.4%
	Total		Count	108	106	1	1	216
			% of Total	50.0%	49.1%	0.5%	0.5%	100.0%
2	Year of study	1	Count	8	7			15
			% of Total	9.6%	8.4%			18.1%
		2	Count	4	14			18
			% of Total	4.8%	16.9%			21.7%
		3	Count	10	2			12
			% of Total	12.0%	2.4%			14.5%
		4	Count	3	16			19
			% of Total	3.6%	19.3%			22.9%
		5	Count	13	6			19
			% of Total	15.7%	7.2%			22.9%
	Total		Count	38	45			83
			% of Total	45.8%	54.2%			100.0%
11	Year of study	5	Count	1				1
			% of Total	100.0%				100.0%
	Total		Count	1				1
			% of Total	100.0%				100.0%
Total	Year of study	1	Count	44	43	0	0	87
			% of Total	14.7%	14.3%	0.0%	0.0%	29.0%
		2	Count	19	40	1	0	60
			% of Total	6.3%	13.3%	0.3%	0.0%	20.0%
		3	Count	42	25	0	0	67
			% of Total	14.0%	8.3%	0.0%	0.0%	22.3%
		4	Count	13	21	0	1	35
			% of Total	4.3%	7.0%	0.0%	0.3%	11.7%
		5	Count	29	22	0	0	51
			% of Total	9.7%	7.3%	0.0%	0.0%	17.0%
	Total		Count	147	151	1	1	300
			% of Total	49.0%	50.3%	0.3%	0.3%	100.0%

P-value 0.030\*

**Q8**

Gender			Q8				Total	
			1	2	3	4		
1	Year of study	1	Count	19	25	15	13	72
			% of Total	8.8%	11.6%	6.9%	6.0%	33.3%

		2	Count	10	12	8	12	42
			% of Total	4.6%	5.6%	3.7%	5.6%	19.4%
		3	Count	14	20	13	8	55
			% of Total	6.5%	9.3%	6.0%	3.7%	25.5%
		4	Count	2	5	3	6	16
			% of Total	0.9%	2.3%	1.4%	2.8%	7.4%
		5	Count	8	16	3	4	31
			% of Total	3.7%	7.4%	1.4%	1.9%	14.4%
	Total		Count	53	78	42	43	216
			% of Total	24.5%	36.1%	19.4%	19.9%	100.0%
2	Year of study	1	Count	5	6	2	2	15
			% of Total	6.0%	7.2%	2.4%	2.4%	18.1%
		2	Count	4	10	3	1	18
			% of Total	4.8%	12.0%	3.6%	1.2%	21.7%
		3	Count	0	4	6	2	12
			% of Total	0.0%	4.8%	7.2%	2.4%	14.5%
		4	Count	5	6	5	3	19
			% of Total	6.0%	7.2%	6.0%	3.6%	22.9%
		5	Count	6	8	2	3	19
			% of Total	7.2%	9.6%	2.4%	3.6%	22.9%
	Total		Count	20	34	18	11	83
			% of Total	24.1%	41.0%	21.7%	13.3%	100.0%
11	Year of study	5	Count		1			1
			% of Total		100.0%			100.0%
	Total		Count		1			1
			% of Total		100.0%			100.0%
Total	Year of study	1	Count	24	31	17	15	87
			% of Total	8.0%	10.3%	5.7%	5.0%	29.0%
		2	Count	14	22	11	13	60
			% of Total	4.7%	7.3%	3.7%	4.3%	20.0%
		3	Count	14	24	19	10	67
			% of Total	4.7%	8.0%	6.3%	3.3%	22.3%
		4	Count	7	11	8	9	35
			% of Total	2.3%	3.7%	2.7%	3.0%	11.7%
		5	Count	14	25	5	7	51
			% of Total	4.7%	8.3%	1.7%	2.3%	17.0%
	Total		Count	73	113	60	54	300
			% of Total	24.3%	37.7%	20.0%	18.0%	100.0%

**P-value 0.461**

**Q9**

Gender				Q9		Total
				1	2	
1	Year of study	1	Count	37	35	72
			% of Total	17.1%	16.2%	33.3%
		2	Count	17	25	42
			% of Total	7.9%	11.6%	19.4%
		3	Count	26	29	55
			% of Total	12.0%	13.4%	25.5%
		4	Count	5	11	16
			% of Total	2.3%	5.1%	7.4%
		5	Count	17	14	31
			% of Total	7.9%	6.5%	14.4%
	Total		Count	102	114	216
			% of Total	47.2%	52.8%	100.0%
2	Year of study	1	Count	5	10	15
			% of Total	6.0%	12.0%	18.1%
		2	Count	8	10	18
			% of Total	9.6%	12.0%	21.7%
		3	Count	4	8	12
			% of Total	4.8%	9.6%	14.5%
		4	Count	9	10	19
			% of Total	10.8%	12.0%	22.9%
		5	Count	9	10	19
			% of Total	10.8%	12.0%	22.9%
	Total		Count	35	48	83
			% of Total	42.2%	57.8%	100.0%
11	Year of study	5	Count		1	1
			% of Total		100.0%	100.0%
	Total		Count		1	1
			% of Total		100.0%	100.0%
Total	Year of study	1	Count	42	45	87
			% of Total	14.0%	15.0%	29.0%
		2	Count	25	35	60
			% of Total	8.3%	11.7%	20.0%
		3	Count	30	37	67
			% of Total	10.0%	12.3%	22.3%
		4	Count	14	21	35
			% of Total	4.7%	7.0%	11.7%
		5	Count	26	25	51
			% of Total	8.7%	8.3%	17.0%
	Total		Count	137	163	300
			% of Total	45.7%	54.3%	100.0%

**P-value 0.459**

**Q10**

Gender				Q10			Total
				1	2	21	
1	Year of study	1	Count	31	41		72
			% of Total	14.4%	19.0%		33.3%
		2	Count	19	23		42
			% of Total	8.8%	10.6%		19.4%
		3	Count	22	33		55
			% of Total	10.2%	15.3%		25.5%
		4	Count	6	10		16
			% of Total	2.8%	4.6%		7.4%
		5	Count	13	18		31
			% of Total	6.0%	8.3%		14.4%
	Total		Count	91	125		216
			% of Total	42.1%	57.9%		100.0%
2	Year of study	1	Count	6	9	0	15
			% of Total	7.2%	10.8%	0.0%	18.1%
		2	Count	11	7	0	18
			% of Total	13.3%	8.4%	0.0%	21.7%
		3	Count	7	5	0	12
			% of Total	8.4%	6.0%	0.0%	14.5%
		4	Count	8	10	1	19
			% of Total	9.6%	12.0%	1.2%	22.9%
		5	Count	8	11	0	19
			% of Total	9.6%	13.3%	0.0%	22.9%
	Total		Count	40	42	1	83
			% of Total	48.2%	50.6%	1.2%	100.0%
11	Year of study	5	Count		1		1
			% of Total		100.0%		100.0%
	Total		Count		1		1
			% of Total		100.0%		100.0%
Total	Year of study	1	Count	37	50	0	87
			% of Total	12.3%	16.7%	0.0%	29.0%
		2	Count	30	30	0	60
			% of Total	10.0%	10.0%	0.0%	20.0%
		3	Count	29	38	0	67
			% of Total	9.7%	12.7%	0.0%	22.3%
		4	Count	14	20	1	35
			% of Total	4.7%	6.7%	0.3%	11.7%
		5	Count	21	30	0	51
			% of Total	7.0%	10.0%	0.0%	17.0%
	Total		Count	131	168	1	300
			% of Total	43.7%	56.0%	0.3%	100.0%

**P-value 0.979**

**Q11**

Gender				Q11		Total
				1	2	
1	Year of study	1	Count	51	21	72
			% of Total	23.6%	9.7%	33.3%
		2	Count	15	27	42
			% of Total	6.9%	12.5%	19.4%
		3	Count	27	28	55
			% of Total	12.5%	13.0%	25.5%
		4	Count	13	3	16
			% of Total	6.0%	1.4%	7.4%
		5	Count	15	16	31
			% of Total	6.9%	7.4%	14.4%
	Total		Count	121	95	216
			% of Total	56.0%	44.0%	100.0%
2	Year of study	1	Count	4	11	15
			% of Total	4.8%	13.3%	18.1%
		2	Count	13	5	18
			% of Total	15.7%	6.0%	21.7%
		3	Count	4	8	12
			% of Total	4.8%	9.6%	14.5%
		4	Count	6	13	19
			% of Total	7.2%	15.7%	22.9%
		5	Count	6	13	19
			% of Total	7.2%	15.7%	22.9%
	Total		Count	33	50	83
			% of Total	39.8%	60.2%	100.0%
11	Year of study	5	Count	1		1
			% of Total	100.0%		100.0%
	Total		Count	1		1
			% of Total	100.0%		100.0%
Total	Year of study	1	Count	55	32	87
			% of Total	18.3%	10.7%	29.0%
		2	Count	28	32	60
			% of Total	9.3%	10.7%	20.0%
		3	Count	31	36	67
			% of Total	10.3%	12.0%	22.3%
		4	Count	19	16	35
			% of Total	6.3%	5.3%	11.7%
		5	Count	22	29	51
			% of Total	7.3%	9.7%	17.0%
	Total		Count	155	145	300
			% of Total	51.7%	48.3%	100.0%

**P-value 0.001\***

**Q12**

Gender				Q12				Total
				1	2	3	4	
1	Year of study	1	Count	18	22	18	14	72
			% of Total	8.3%	10.2%	8.3%	6.5%	33.3%
		2	Count	8	16	3	15	42
			% of Total	3.7%	7.4%	1.4%	6.9%	19.4%
		3	Count	10	18	14	13	55
			% of Total	4.6%	8.3%	6.5%	6.0%	25.5%
		4	Count	5	6	4	1	16
			% of Total	2.3%	2.8%	1.9%	0.5%	7.4%
		5	Count	11	7	10	3	31
			% of Total	5.1%	3.2%	4.6%	1.4%	14.4%
	Total		Count	52	69	49	46	216
			% of Total	24.1%	31.9%	22.7%	21.3%	100.0%
2	Year of study	1	Count	3	3	7	2	15
			% of Total	3.6%	3.6%	8.4%	2.4%	18.1%
		2	Count	4	4	8	2	18
			% of Total	4.8%	4.8%	9.6%	2.4%	21.7%
		3	Count	2	6	2	2	12
			% of Total	2.4%	7.2%	2.4%	2.4%	14.5%
		4	Count	3	5	2	9	19
			% of Total	3.6%	6.0%	2.4%	10.8%	22.9%
		5	Count	4	2	11	2	19
			% of Total	4.8%	2.4%	13.3%	2.4%	22.9%
	Total		Count	16	20	30	17	83
			% of Total	19.3%	24.1%	36.1%	20.5%	100.0%
11	Year of study	5	Count			1		1
			% of Total			100.0%		100.0%
	Total		Count			1		1
			% of Total			100.0%		100.0%
Total	Year of study	1	Count	21	25	25	16	87
			% of Total	7.0%	8.3%	8.3%	5.3%	29.0%
		2	Count	12	20	11	17	60
			% of Total	4.0%	6.7%	3.7%	5.7%	20.0%
		3	Count	12	24	16	15	67
			% of Total	4.0%	8.0%	5.3%	5.0%	22.3%
		4	Count	8	11	6	10	35
			% of Total	2.7%	3.7%	2.0%	3.3%	11.7%
		5	Count	15	9	22	5	51
			% of Total	5.0%	3.0%	7.3%	1.7%	17.0%
	Total		Count	68	89	80	63	300
			% of Total	22.7%	29.7%	26.7%	21.0%	100.0%

**P-value 0.089**

**Q13**

Gender				Q13		Total
				1	2	
1	Year of study	1	Count	20	52	72
			% of Total	9.3%	24.1%	33.3%
		2	Count	22	20	42
			% of Total	10.2%	9.3%	19.4%
		3	Count	20	35	55
			% of Total	9.3%	16.2%	25.5%
		4	Count	7	9	16
			% of Total	3.2%	4.2%	7.4%
		5	Count	16	15	31
			% of Total	7.4%	6.9%	14.4%
	Total		Count	85	131	216
			% of Total	39.4%	60.6%	100.0%
2	Year of study	1	Count	14	1	15
			% of Total	16.9%	1.2%	18.1%
		2	Count	11	7	18
			% of Total	13.3%	8.4%	21.7%
		3	Count	4	8	12
			% of Total	4.8%	9.6%	14.5%
		4	Count	4	15	19
			% of Total	4.8%	18.1%	22.9%
		5	Count	14	5	19
			% of Total	16.9%	6.0%	22.9%
	Total		Count	47	36	83
			% of Total	56.6%	43.4%	100.0%
11	Year of study	5	Count		1	1
			% of Total		100.0%	100.0%
	Total		Count		1	1
			% of Total		100.0%	100.0%
Total	Year of study	1	Count	34	53	87
			% of Total	11.3%	17.7%	29.0%
		2	Count	33	27	60
			% of Total	11.0%	9.0%	20.0%
		3	Count	24	43	67
			% of Total	8.0%	14.3%	22.3%
		4	Count	11	24	35
			% of Total	3.7%	8.0%	11.7%
		5	Count	30	21	51
			% of Total	10.0%	7.0%	17.0%
	Total		Count	132	168	300
			% of Total	44.0%	56.0%	100.0%

**P-value 0.054\***

### Discussion

Drug-food interactions (DFIs) are a critical concern in healthcare, as they can significantly impact patient outcomes. As healthcare professionals, it is essential to recognise the importance of DFIs and take steps to identify and manage them.

### Importance of DFIs

DFIs can lead to adverse reactions, reduced efficacy, or increased toxicity of medications. This can result in:

1. Adverse reactions: DFIs can cause gastrointestinal upset, allergic reactions, or cardiovascular events.
2. Reduced efficacy: DFIs can reduce the efficacy of medications, leading to treatment failure or disease progression.
3. Increased toxicity: DFIs can increase the toxicity of medications, leading to adverse reactions or organ damage.

### Factors Contributing to DFIs

Several factors contribute to DFIs, including:

1. Patient-related factors: Age, sex, body weight, and medical conditions can affect DFIs.
2. Medication-related factors: Medication type, dosage, and formulation can impact DFIs.
3. Food-related factors: Food type, amount, and timing can influence DFIs.

### Strategies for Managing DFIs

To manage DFIs, healthcare professionals can

1. **Educate patients:** Provide patients with information on potential DFIs and guidance on dietary management.
2. **Use medication labels:** Include DFI information on medication labels.
3. **Utilise clinical decision support:** Integrate DFI information into clinical decision support systems.
4. **Collaborate with other healthcare professionals:** Work with other healthcare professionals to identify and manage DFIs.

Healthcare professionals play a crucial role in managing DFIs:

1. **Pharmacists:** Provide patient education and counselling on DFIs.
2. **Physicians:** Consider DFIs when prescribing medications.
3. **Nurses:** Monitor patients for signs of DFIs and provide education on dietary management.

### Conclusion

DFIs are a critical concern in healthcare, and healthcare professionals must work together to identify and manage them. By providing patient education, using medication labels, and collaborating with other healthcare professionals, we can reduce the risk of adverse reactions and optimise patient outcomes.

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