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Assessment of Knowledge, Attitude and Practices on Adverse Drug Reaction Reporting among Community Pharmacists at Rubaga Division

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ABSTRACT

Drugs can treat diseases, reduce symptoms, and enhance patients' health and quality of life. However, taking a drug is not always as easy as just swallowing a pill. This is because drugs have some unwanted effects. Adverse Drug Reactions (ADRs) are one of the leading causes of morbidity and mortality and contribute to excessive health care costs. To assess knowledge, attitude, and practice of health care providers on adverse drug reporting among community pharmacists, Gondar, Ethiopia. Community-based cross-sectional study designs were used from March to May. The sampling method was a survey from community pharmacists. Self-administered questioner was used, and the collected data was entered SPSS version 20 software for analysis. The study included 85 community pharmacists to assess the knowledge, attitudes, and practices of adverse drug reaction reporting. From a total 85 community pharmacists, 70(82.4%) of the respondents were able to differentiate ADR from side effects. Out of 85 respondents, 75(88.2%) and 74(87.1%) knew the availability of the national reporting system and ADR reporting form in Ethiopia respectively. Moderate reporting of ADR by community pharmacists was identified in this study. Training sessions to clarify the role of various community pharmacists in ADR reporting will hopefully fill the observed gap in knowledge and practices. The community pharmacy should formulate strategies to enhance the detection and reporting of ADRs.

Keyword: Drug, Drug reaction, Community pharmacists, Adverse drug reaction.

INTRODUCTION

Drugs can improve a patient's health and quality of life while treating diseases and reducing their symptoms. But sometimes it's not as simple as just swallowing a tablet to take a medicine. This is due to the adverse effects that some medications produce [1-3]. Any medication carries the risk of unexpected consequences, which are referred to as Adverse Drug Reactions (ADRs) when they are dangerous [4] ADR is defined as a harmful and unanticipated response to a medicine that occurs at levels routinely employed in man for disease prevention, diagnosis, or treatment, or for the change of physiological function [5]. An ADR is described by the WHO as any harmful, unexpected, or unwanted impact of a medicine that happens at dosages used for treatment, prophylaxis, or diagnosis (WHO & WHO Collaborating Centre for International Drug Monitoring (CCIDM), 2002). ADRs are a common issue that patients in both the hospital and community setting must deal with. The majority of ADRs are moderate, and many go away when the medicine is stopped or the dose is altered. Some gradually disappear as the body becomes used to the medication. Some ADRs are more severe and linger longer than others. Despite the fact that some ADRs are minor and can be rapidly cured, others can result in death or lifelong disability [4]. In 1968, the WHO launched Pharmacovigilance (PV), an international program for assessing the safety of pharmaceuticals, which the WHO describes as "the science and action of Identifying, assessing, understanding and preventing adverse events or other potential problems associated with the use of a medicinal product. These are all observational, non-randomized, scientific and data collection activities related to the identification, assessment and prevention of such adverse events [6]. As of June 2014, the program had 118 full members and 29 associate members under the direction of the Uppsala Monitoring Center (UMC).

Due to the limited number of participants, the controlled environment in which the trials are conducted, and the brief trial duration, clinical information on a pharmaceutical product during the development period (period I - II and III) is often insufficient. This makes PV important [6]. In addition to assisting in the early detection of adverse reactions, PV practices also help in the identification of risk factors and mechanisms behind adverse reactions [4]. PV plays a critical role in quantifying previously known ADRs, identifying unrecognized ADRs, assessing drug effectiveness in real-life settings, and reducing mortality and injury associated with ADRs [7]. The scope of PV thus includes product quality, drug mistakes, including therapeutic ineffectiveness and previously known or unknown. ADRs [8].Most of the world's PV systems rely on spontaneous reporting systems, where ADR reports are submitted voluntarily by health care professionals, and then entered into a database that is regularly evaluated for signal generation. The WHO database is built on spontaneous reporting, which is regarded as the main PV system method for identifying ADRs after marketing [4]. Adverse Reactions (ADRs) are reported by all healthcare professionals, including physicians, pharmacists, nurse practitioners and other healthcare professionals. All healthcare providers play a role in balancing the benefits and risks of a particular medication. [9]. Additionally, healthcare practitioners not affiliated with the government system should report unfavorable responses [4]. Unfortunately, the spontaneous ADR reporting system has a number of flaws, the most glaring of which is the phenomenon of underreporting of ADRs by healthcare providers. There were many barriers preventing health care professionals from reporting adverse drug reactions, as noted in the literature, some of which include lack of knowledge diminishing the importance of ADR reporting. The reasons behind underreporting were not well documented in developing countries despite it having been proposed early in developed countries [10].

MATERIALS AND METHODS

Study area
The study was conducted among community pharmacies in Rubaga Division, lies in the westernpart of the city of Kampala, bordering Wakiso District to the west and south of the Division.

Study design and period
A descriptive community based cross-sectional study [11] was conducted from January to April 2023.

Study population
Source population - All community pharmacists who were working in Rubaga Division of Uganda at the time of the study were the population source.

Study Population
The study population included all community pharmacists who provided their informed permission.

Sampling procedure and determination of the sample size

The number of pharmacists included in the study was calculated using a single population proportion formula. [12];

$$N = \frac{Z^2 P(1-P)}{d^2} + 10\% \ for \ non-response$$

Where;

N = minimal necessary sample size

z = percentage point of the normal distribution corresponding to the level of significance (for 5% significance level, Z =1.96)
p = anticipated percentage of pharmacists who are knowledgeable on ADRs reporting; p is figured to be 50%.
d = standard error considered to be 5%

Inclusion and Exclusion criteria
Inclusion Criterion-Licensed pharmacists having a minimum of a year's worth of dispensing experience who are employed as dispensers at the relevant pharmacies.
Exclusion criterion – Pharmacists not willing to participate in the study or on leave during thestudy. Non-pharmacy qualified personnel engaging in dispensing in the community pharmaciesand qualified pharmacists with the dispensing experience of less than one year.

Data collection instrument and data collection –
An English-language version of the self-assessment questionnaire was used to collect data, and it was cross-referenced with numerous research on community pharmacists' KAPs (Knowledge, Attitudes, and Practices) on ADR reporting [13].
Prior to the start of the study, the questionnaire was tested by randomly assigning it to at least 10 pharmacists at any five community pharmacies that weren't included in the study.
There were 45 questions spread across 5 parts of the questionnaire.

The first section had 10 questions that asked about sociodemographics and ongoing schooling.
ADR reporting knowledge was evaluated using 10 questions in the second section, and general awareness of ADR reporting was evaluated using an additional 10 questions.
The third section of the survey consisted of 5 questions that evaluated respondents' practices regarding ADR reporting.
Ten questions made up the fourth section, which evaluated respondents' attitudes about ADR reporting.
The participants' Likert scores were used to measure their attitude level, with each item scoring 5 points on a scale from 1 (strong disagreement) to 5 (strong agreement). The reasons for not reporting adverse reactions were captured in the final 8 questions.

Data Processing and Analysis

A code number was assigned to each questionnaire and this code number was used to identify the questionnaire. Data entry, clean-up and analysis were performed using SPSS Version 20. To show how the results and independent variables were distributed, the frequency distribution was employed. To gauge the degree of knowledge, a knowledge score was developed, with one point awarded for each correct response and zero for each incorrect response. Using the original Bloom's cutoff values (60–80%), participants were ranked based on their overall knowledge scores [14]. In light of the various knowledge levels, the score ranges were as follows:

i. Good Knowledge-80-10% of the possible score

ii. Moderate knowledge 60-79% of the maximum score

iii. Less than 60% of the maximum score – Poor knowledge

Although descriptive statistical findings were presented in the form of texts, graphs, diagrams, and tables, the analytical form of the results was presented in the text in the form of odds ratios. A multivariable binary logistic regression model (Chi-square and logistic regression tests) was fitted, and adjusted odds ratios with 95% confidence intervals were computed to determine the strength of association between each variable and KAP of community pharmacists on ADR variables with a P-value.

Ethical considerations

The Ethics and Research Review Committee of the School of Pharmacy at Kampala International University Western Campus provided ethical permission. Before participating in the study, participants were given information about its goals, how they were chosen for participation, and their right to withdraw at any time. This information was provided to them in order to obtain their consent. They were also confident that their data collected in the study would remain confidential. The data collection tools were stripped of all information that could be used to determine a research respondents identify, such as their name.

RESULTS

85% of the 103 surveys were properly completed and returned to the researcher, yielding an 82.5% response rate.

Socio-demographic characteristics of respondents

Pie Chart Count of type of pharmacy
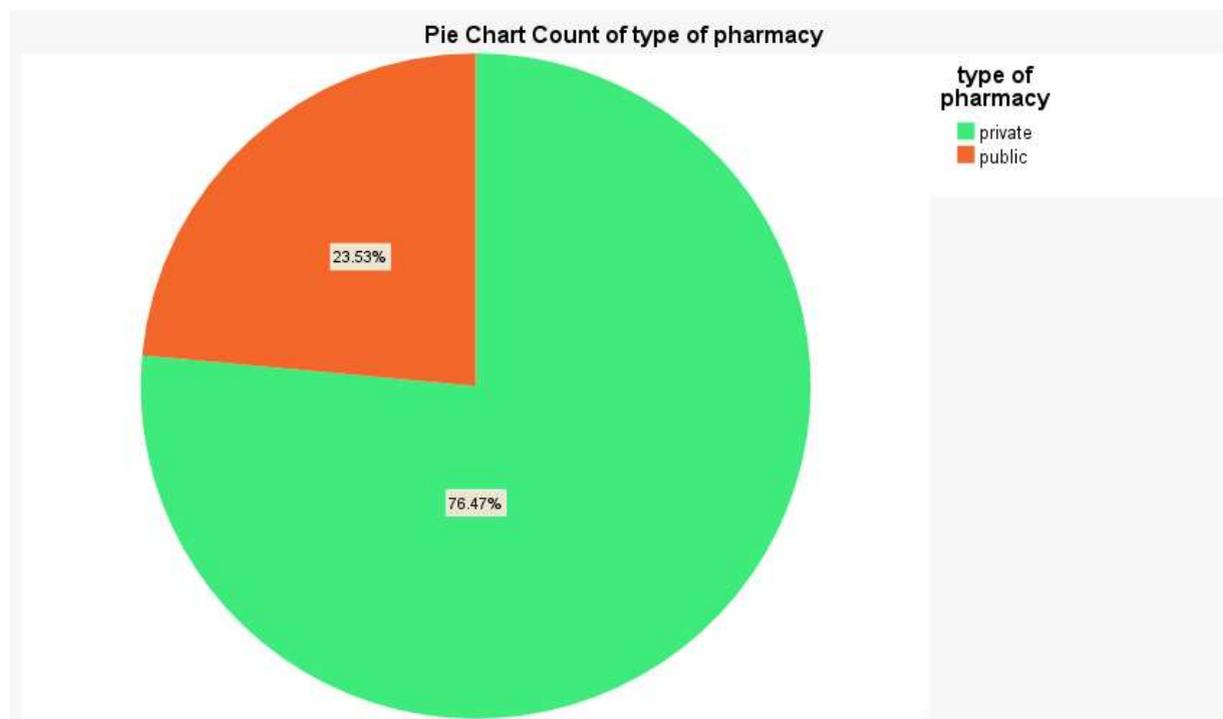
Of the 85 pharmacists surveyed, 65 came from private community pharmacies (76.5%), and 20 came from public community pharmacies (23.5%). The demographics of the participants are shown in Table 1.

Table 1: Socio-demographic characteristics of community pharmacists working at communitypharmacies in Rubaga Division, Uganda (n=85)

Variables	Categories	Frequency
Type of pharmacy	Private	65(76.5%)
	Public	20(23.5%)
Age (years)	20-29	22(25.9%)
	30-39	45(52.9%)
	40-49	17(20.0%)
	50-59	1(1.2%)
Sex	Male	48(57.1%)
	Female	36(42.9%)
Level of education	Pharmacist	85(100%)
	Druggist	0(0%)
	Nurse	0(0%)
Working hours per day	>9 hours	41(48.2%)
	<9	44(51.8%)
Experience	>8 years	28(32.9%)
	<8 years	57(67.1%)
Patient load	0-19	10(11.8%)
	20-29	8(9.4%)
	30-39	13(15.3%)
	40-49	23(27.1%)
	50-59	7(8.2%)
	>60	24(28.2%)
Have you been introduced to ADR monitoring or pharmacovigilance in your undergraduate study?	Yes	70(84.3%)
	No	15(15.7%)
Have you ever participated in any seminar/ training which included topic on ADRs reporting?	Yes	72(84.7%)
	No	13(15.3%)

Most of the respondents 48(57.1%) were males and were falling in the age group of 30-39. The result also indicated that most of the respondents 70(84.3%) had been introduced to pharmacovigillance in their undergraduate study and 72(84.7%) from the respondents had taken on-the-job ADR training seminar.

Figure 1: A pie-chart showing the working hours of the respondents

Pie Chart Count of working hours

working hours
■ above 9
■ below 9

50.59%   49.41%

Figure 2: A bar graph showing average number of patients
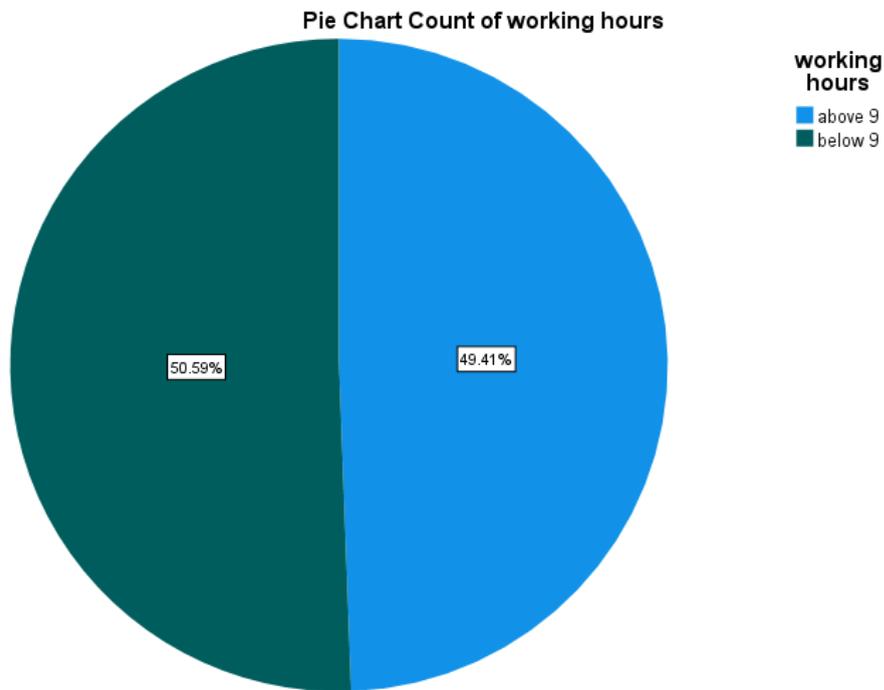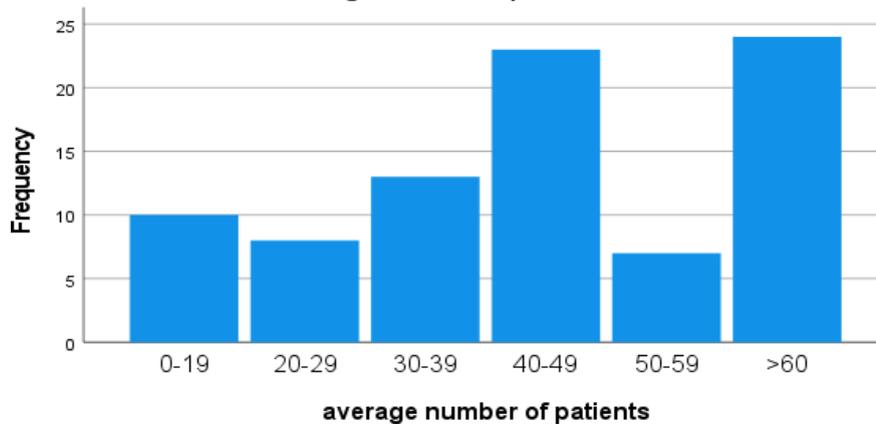

average number of patients

Figure 2: A bar graph showing average number of patients

The respondents' mean knowledge score was 8.4, with a range of 0 to 10 (SD=0.8707) (percent mean score=84.0%) of the 10 knowledge questions. The majority of the respondents 50 (58.8%) had a good knowledge score greater than the mean. 25(29.4%) had moderate knowledge and 10(11.8%) had poor knowledge. According to Table 2, roughly 75 (88.2%) of the respondents were aware of the national ADR monitoring system's existence, and 74 (87.1%) were aware of the ADR reporting form. According to the respondents' responses about which profession they believe should disclose ADRs, 65 (76.5%) of them stated that only pharmacists should do so, whereas just 12 (14.1%) thought that doctors, pharmacists, and nurses should report. Only 27 respondents, or 31.8%, agreed that traditional medical practitioners, in addition to doctors, pharmacists, and nurses, should report adverse drug reactions.

Table 2: Knowledge of Rubaga Division Pharmacists in RUBAGA DIVISION, Uganda, towards ADRreporting (n==85)

Variable	Category	Frequency
Do you think that adverse drug reaction is the same as with side effect?	Yes	70(82.4)
	No	15(17.6)
Do you know the term pharmacovigillance?	Yes	76(89.4)
	No	9(10.6%)
Do you know about the existence of national ADR reporting system?	Yes	75(88.2)
	No	10(11.8)
Do you know about the ADRreporting form?	Yes	74(87.1)
	No	11(12.9)
Do you think ADRs are well documented at the time the drug is marketed?	Yes	60(71.4)
	No	24(28.6)
Where are the reports for ADRs supposed to be sent?	MOH NPC(NDA)WHO	21(24.7)
	PSU	65(76.5)
	Others	4(4.7%)
		0(0.0%)
		0(0.0%)
Which profession is obligated to disclose possible ADR cases?	Doctors	47(55.3)
	Pharmacy professionNurses	65(76.5)
	Traditional medicine practitionerOthers	49(57.6)
		27(31.8)
		0(0.0%)

What reactions should be reported?	due to conventional	51(60.7%)
	due to herbal medicines	48(57.1%)
	Those due to cosmetics	49(58.3%)
	due to medical devices	53(63.1%)
	Those due to vaccines and bloodproducts	43(51.2%)

Who, in your opinion, is largely in charge of reminding and following up with patients of the negative effects of prescribed medications?	Pharmacy professionals	68(80.0%)
	Physicians	22(25.9)
	NursesOthers	14(16.5%)
Who do you think is responsible for monitoring ADR in Uganda?	MOH NPC(NDA)JMS	16(18.8%)
	NMS	71(83.5%)
	Others	7(8.2%)
		0(0.0%)
		1(1.2%)

According to Table 3, the majority of respondents, 67 (78.8%), strongly agreed that ADR should be reported frequently. The majority of respondents (82, or 96.5%) agreed and strongly agreed that it is crucial to report medication safety to the public, patients (78, or 91.8%), and the healthcare system (72, or 84.7%). The majority of the respondents, or 73 (85.9%), concur with the statement that "there should be a need to be sure that ADR is related to the drug before reporting." ADR reporting should not be voluntary, according to almost 47 (55.3%) of the respondents, and almost all of the participants thought community pharmacists might help with ADR reporting.

Table 3: Attitudes of Community Pharmacist in Rubaga Division Uganda

Variables	Categories	Frequency
ADRs should be reported regularly	Strongly agreeAgree	67(78.8%)
	Neither agree nor disagreeDisagree	16(18.8%)
	Strongly disagree	1(1.2%)
		1(1.2%)
		0(0%)
ADRs reporting is importantto the public	Strongly agreeAgree	42(49.4%)
	Neither agree nor disagreeDisagree	41(48.2%)
	Strongly disagree	2(2.4%)
		0(0%)
		0(0%)
Reporting drug safety is important for the patient	Strongly agreeAgree	49(57.6%)
	Neither agree nor disagree	29(34.1%)
		5(5.9%)
		0(0%)
	Disagree Strongly disagree	2(2.4%)

Reporting drug safety is important for the health caresystem	Strongly agree	39(46.4%)
	Neither agree nor disagree	33(39.3%)
		8(9.5%)
	Strongly disagree	4(4.8%)
		0(0%)
There is need to be sure that anADR is related to the drug before reporting	Strongly agree	32(37.6%)
	Neither agree nor disagree	41(48.2%)
		1(1.2%)
	Strongly disagree	8(9.4%)
		3(3.5%)
Only ADRs of prescription drugs need to be reported	Strongly agree	7(8.2%)
	Neither agree nor disagree	8(9.4%)
		8(9.4%)
	Strongly disagree	37(43.5%)
		25(29.4%)
Only ADRs that cause persistent disability need to bereported	Strongly agree	7(8.2%)
	Neither agree nor disagree	4(4.7%)
		3(3.5%)
	Strongly disagree	32(37.6%)
		39(45.9%)
Reporting of ADRs should bevoluntary	Strongly agree	7(8.3%)
	Neither agree nor disagree	21(25%)
		9(10.7%)
	Strongly disagree	39(46.4%)
		8(9.5%)
The detection and reporting of ADRs can be helped by community pharmacists.	Strongly agree	55(64.7%)
	Neither agree nor disagree	24(28.2%)
		4(4.7%)
	Strongly disagree	2(2.4%)
		0(0%)
	Reasons for not reporting	
Need to be certain of the association between the drugand ADR	Strongly agree	31(36.9%)
	Neither agree nor disagree	38(45.2%)
		4(4.8%)
	Strongly disagree	8(9.5%)
		3(3.6%)
Reporting ADR is breach ofpatient confidentiality	Strongly agree	3(3.6%)
	Neither agree nor disagree	9(10.7%)
		4(4.8%)
	Strongly disagree	48(57.1%)
		20(23.8%)
One report makes no reference	Strongly agree	5(5.9%)
	Neither agree nor disagree	14(16.5%)
		13(15.3%)
	Strongly disagree	35(41.2%)
		18(21.2%)

Reporting form is not available	Strongly agree	9(10.8%)
	Neither agree nor disagree	8(9.6%)
		13(15.7%)
	Strongly disagree	32(38.6%)
		21(25.3%)
There is no national ADR reporting system	Strongly agree	4(4.7%)
	Neither agree nor disagree	9(10.6%)
		4(4.7%)
	Strongly disagree	24(28.2%)
		44(51.8%)
Reporting is not useful to thepatient	Strongly agree	5(6%)
	Neither agree nor disagree	3(3.6%)
		6(7.1%)
	Strongly disagree	27(32.1%)
		43(51.2%)
Reporting creates an additional workload	Strongly agree	6(7.2%)
	Neither agree nor disagree	17(20.5%)
		17(20.5%)
	Disagree	29(43.9%)
	Strongly disagree	14(16.9%)
Lack of motivation for Reporting	Strongly agree	9(10.8%)
	Agree	30(36.1%)
	Neither agree nor disagree	16(19.3%)
	Disagree	18(21.7%)
	Strongly disagree	10(12%)

According to Table 4, 41 (48% of the participants) have dealt with a patient who had an ADR within the previous 12 months in their dispensing practice. A handful (7.5%) of the respondents who reported seeing patients with ADRs in the previous 12 months did so with more than four ADRs. 30 (75%) of the 41 participants who had experienced ADRs in the previous 12 months had ever reported them, while the remaining 10 (25%) had never done so.

In terms of the locations where the participants reported the ADR they encountered, the majority, 22 (62.9%), had reported to the NDA, while 11.4% had reported to the Head of the Pharmacy.

Table 4: Practice of Community Pharmacist in Rubaga Division, Uganda (n=85)

Variation	Category	Frequency
Have you ever encountered patients with ADRs in your pharmacy practice, in the last 12 months?	Yes	41(48.2%)
	No	44(51.8%)
How many patients with ADR did you see during the 12 months?	One Two Three Greater than four	19(47.5%) 8(20%) 10(25%) 4(7.5%)
Have you ever reported theadverse reaction?	Yes	30(75%)
	No	10(25%)
To whom did you report?	The head of the pharmacyManufacturers NDAMOH	11(31.4%) 3(8.6%) 22(62.9%) 0(0%)
How often do you give adviceto your patients on possible adverse effects of drugs you dispensed?	Usually Sometimes Rarelynever	29(46%) 30(47.6%) 3(4.8%) 1(1.6%)

Table 5 shows the relationships between respondents' knowledge of ADR reporting and their sex, age, experience, patient load, and on-the-job training in ADRs. ADR awareness was higher among respondents in the 30-39 age group (82.2%) than among those in the 20-29 age group (50%) (P-value = 0.000*).

In comparison to those with more than 8 years of experience, those with less than 8 years of experience were more knowledgeable (78.4%) (P-value=0.000*).

Furthermore, it was shown that respondents who had taken part in on-the-job training for ADRs monitoring and reporting knew more about ADRs reporting (81.9%) than those who hadn't (53.8%); P value = 0.000).

Table 5: ADRs reporting knowledge by some characteristics of the respondents of Rubaga Division

Characteristics of the respondents		Knowledge level		p-value	OR(95% CI)
		Good	Poor and moderate		
Sex	Male	31	18	0.342	**1.6(0.586, 2.456**
	Female	19	17		
Age group	20-29	11	11		
	30-39	37 (82.2%)	8	0.000*	**1.8(0.432, 2.456)**
	40-49	12	5		
	50-59	1	0		
Experience	>8years	17	11	0.000	**0.9(.375,1.345**
	<8years	43 (78.4%)	14		

		)			
Patient load	0-19	6	4	0.162	**1.4(1.392, 1.903)**
	20-29	5	3		
	30-39	11	2		
	40-49	16	7		
	50-59	6	1		
	>60	17	7		
On-job-training	Yes	59	13	0.000*	**1.9(.835,1.497)**
	No	**7**	**6**		

The study's findings demonstrated that as age rises, more dispensers are reporting ADR. However, the results of the logistic regression revealed that respondents' ADR reporting practices were not substantially correlated with age.

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Table 6: ADRs reporting attitude by some characteristics of the respondents of Rubaga Division

Characteristics of the respondents		Attitude level		p-value	OR (95%CI)
		Good	Poor		
Sex	Male	40	9	0.271	1.402(1.343-.652)
	Female	21	15		
Age group	20-29	16	6	0.0029	1.0263(.187-.871)
	30-39	33	1		
	40-49	12	2		
	50-59	1	5		
			0		
Experience	>8	17	1	0.0100	1.612(.627-1.903)
	<8	40	1		
			1		
			7		
Patient load	0-19	8	6	0.4662	0.416(.216,1.034)
	20-29	7	1		
	30-39	11	2		
	40-49	19	4		
	50-59	7	0		
	>60	21	3		
On-job-training	Yes	69	3	0.0001	1.712(.0621,1.52)
	No	11	2		

The survey's findings on pharmacists' attitudes on ADR reporting show that most of them are supportive of the practice of ADR reporting.39 (46.4%) and 33(39.3%) Strongly agreed and agreed respectively that adverse drug reaction monitoring is beneficial to public health care system. Male respondents exhibited a higher attitude compared to females, this is indicated with 1.402(1.343-.652) times greater. In addition, the respondents with the experience less than eight (OR 1.612(.627-1.903), had a reasonably higher attitude than those with working experience more than eight

Table 7: Determinants of ADRs reporting practice among pharmacists in Rubaga Division

Variables	ADR reporting practice		OR(95%CI0	AOR(95%CI)
	YES	*NO*		
Age				
20-29	18	4	1.00	1.00
30-39	37	84	.434(.425,.714)	.376(.132,1.621)
40-49	13	0	.053(.009,.606)	.162(0.182,1.832)
50-59	1		Ref	
Experience				
>8	19	9	1.00	1.00
<8	41	15	.312(.144,.708)	.391(.208,1.802)
Patient load				
0-19	7	3	1.00	1.00
20-29	69	24	4.234(1.543,12.345)	.323(.325,1.437)
30-39	17	4	2.779(.638,9.710)	.236(.0621,1.782)
40-49				
50-59	5	2	Ref	

> 6 0	2 1	3	5.734(.824,11.72 5)	.397(.065,1. 543)

The results of the multivariate model revealed that the risks of having a higher practice score were 0.434 (95% CI: 0.425, 0.714) times higher among pharmacists belonging to the age group 30-39 years, when compared with pharmacists in 40-49 50-59 ranges of age in years. The results in table 7, indicate that respondents in age group 20-29 had no significant correlation with ADR reporting practice (**OR, 1.00**) and respondents with less than 8years experience had a higher ADR reporting practice. The risks of having a higher practice score were 4.234 (95% CI: 1.543, 12.345) and 5.734(.824, 11.725) times higher among pharmacists working with an average patient load of 30-39 and >60 respectively compared with 0-19 and 20-29 patient load.

DISCUSSION

The finding of this study showed that 72(84.7%) of the participants had attended on-job ADR monitoring and reporting pieces of training. This demonstrates that the majority of pharmacists employed by community pharmacies have received the necessary training in ADR monitoring and reporting. Additionally, it was discovered that having on-the-job ADR monitoring training was substantially related to having good ADR reporting expertise (P-value: 0.000). Studies in various countries have demonstrated the value of on-the-job ADR tracking and reporting training in increasing ADR reporting. For instance, a research conducted in Saudi Arabia recommended that community pharmacists be given the necessary training to understand the significance of ADR reporting in order to expand their involvement in ensuring safe pharmaceutical usage by keeping track of and reporting adverse reactions [15]. The results of this investigation also revealed that 41(48.2%) of the participants had dealt with patients who had ADR in the previous year of which 38(92.7%) encountered one to three patients with ADRs and only 3(7.3%) encountered patients with 4 and above. This indicates a high likelihood of patients experiencing adverse drug reactions (ADRs) in community pharmacies, which would lead to an increased rate of Adverse Drug Reaction reporting if pharmacists are educated on the significance of reporting ADRs and are provided with the necessary tools and information on ADR reporting. In another similar study in Ethiopia that looked at the awareness, attitudes, and practice of health care professionals in hospitals on ADR tracking and reporting, 56% of participants said they had seen patients with adverse reactions in the past 12 months [16-18]. This suggests that the likelihood of seeing patients with adverse reactions in community pharmacies may be at least as high as or higher than the likelihood of meeting patients with adverse reactions at a public health facility. This suggests that the work that is being done to encourage ADR reporting at public health facilities should be done at community pharmacies to increase the rate of ADR reporting, and that pharmacists at community pharmacies play an important role in monitoring and reporting ADRs.

In this study, 22 (62.9%) of the 41 respondents who claimed to have experienced ADR have reported their experiences to the appropriate/responsible organization, the NDA. This was very different from that which was done in Ethiopia, where only 28(16.2%) of the 173 that reported the ADRs submitted to FMHACA [16]. Pharmacists' attitude is thought to be the most important factor in reporting adverse drug reactions (ADRs), so a good attitude may promote timely reporting of adverse drug reactions. In this study, the pharmacists' attitude towards reporting adverse drug reactions was very positive. The majority of pharmacists agreed that reporting adverse drug reactions is a part of their duties, which is in line with the findings from the look alike studies [17,19-22].

CONCLUSION

It can be inferred from this research that pharmacists working in community pharmacies in Rubaga Division have good awareness of ADR reporting. Given their high level of knowledge, most dispensers had favorable attitudes toward ADR reporting. Although most pharmacists showed positive attitudes towards ADR reporting, their practice were still insufficient though moderate. The majority of respondents said that one reason why people don't report is a lack of motivation.

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