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Knowledge, Attitude, and Practice Toward Over-the-Counter Medication Use; Among Selected Students at Sokoine University of Agriculture

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Abstract

Every day, we are practicing self-medication (SM) with over-the-counter (OTC) drugs within the frame of self-care for our wellbeing. This study aimed to assess knowledge, attitude, and practices on OTC medication use among selected students at Sokoine University of Agriculture (SUA) in the College of Veterinary Medicine and Biomedical Sciences (CVMBS). A cross-sectional study was carried out at CVMBS, in Morogoro included veterinary students and non-veterinary students. A simple random sampling technique was used to select samples and the data were collected using a self-administered questionnaire with structured and open-ended questions. Data entry, cleaning, and analysis were done using Statistical Package for Social Sciences (SPSS). The study revealed that the majority of the students 100 (64%) practice SM. Fever 69 (80.2%), emergency illness 46.0%, healthy facility

charges 16.0%, distance to the health facility 12.0%, taking a long time of waiting for 11.0%, the proximity of the pharmacy shop 5.0%, no medicine in the health facilities 4.0%, 3.0% emergency illness and health facility charges, and emergency illness and takes a long time of waiting for 3.0%. The most commonly used OTC for SM in this study was painkillers (35%) and antibiotics (30%). The study revealed that community pharmacies were the major source of medicines for those who practiced SM with OTC drugs 67.0%, followed by medicines from relatives/friends 21.0%. The study also showed that there is optimal knowledge among CVMBS students, also study showed that most students have a negative attitude about SM where 38.0% strongly disagree and 37.0% disagree that SM can be practiced for all medicines. Malpractices were observed such as using remains from previous illnesses and using expired medications.

Keywords: SM, Veterinary and non-veterinary students, OTC, SUA, CVBMS

1. Introduction

Over-the-counter (OTC) medications also identified as non-prescription medication are referred to as drugs or medicines that one buys without a prescription from a registered medical practitioner to the consumer (Manohar et al., 2015). They include pain relievers like ibuprofen, acetaminophen, cough suppressants such as dextromethorphan, and antihistamines like loratadine. These drugs are usually located on shelves in pharmacies and grocery stores. Students are anticipated to have a clear understanding, knowledge, and practice of OTC medication in order to have a safe usage of OTC drugs (Bekele et al., 2020). OTC drugs are selected by a regulatory agency to ensure that they are safe and effective when used without a physician's care (Sharma et al., 2017). SM is normally practiced when using OTC drugs, whereas SM is referred to as obtaining and consuming drugs or medicines without the advice from a physician for diagnosis, prescription, or surveillance of treatment. The World Health Organization (WHO, 1991) refers to SM as the selection and administration of drugs by an individual to treat a self-diagnosed illness or symptoms. The state of mind of individuals towards OTC indicate utilize is that they buy drugs from the restorative stores without doctors medicine, they deliver their determination which may provoke encourage infection complications that leading calculate for this off base demeanor is money-related issues, individuals attempt of spare their cash and now not to go to a doctor for their treatment. The hone of SM is the biggest well-being issue and is exceptionally common in taught individuals than in ignorant people (Rashid, 2015). The hone of SM is the biggest well-being issue and is exceptionally common in taught individuals than in uneducated individuals. They do not know that the standard utilization of OTC drugs for SM can harm their wellbeing and increment the medicate response which leads the clients to clinic crisis. The hone of SM is exceptionally common in creating nations and driving cause of passing and numerous other wellbeing issues in created nations (Angamo & Wabe, 2012). Despite SM with OTC drugs being common worldwide the frequency seems to be higher in developing countries like Tanzania, it is very common to see SM practice and which an emerging challenge to the health care provider. SM with OTC drugs behavior varies significantly with several socioeconomic characteristics, some of them are educational level which means when they have poor knowledge there socioeconomic status, access to medical information, awareness about health, exposure to

advertisements and perception of illnesses, accessibility to medicine and health care facilities, and health sector reforms among others (Gyawali et al., 2015). SM may cause poisonous quality and nearly every day has a few kinds of side effects that cannot be overlooked whereas favoring medication for particular courses (Sarahroodi et al., 2010). We believe this is the first study conducted in Tanzania on Veterinary students to assess knowledge, attitude, and practices on OTC medication. Therefore, it is the aim of this study to assess knowledge, attitude, and practices on OTC drugs among selected students at CVMBS.

2. Methodology

This study was a cross-sectional study design, conducted at CVBMS, SUA to students who are studying pharmacology that; Bachelor in Veterinary Medicine, and Bachelor in Laboratory Science. It was six months study, starting from February to July 2021.

2.1 Sample Size Determination

The sample size was calculated based on the following formula; $n= Z^2 P (100-P)/ d^2$; then add 10% for anticipated subjects who would refuse to participate in the study and for the null and void questionnaires. n= required sample size Z=1.96 (at 95% confidence interval) P=Prevalence of self-medication d^2=Margin of error Proportion =93% (Prevalence in Netherlands; Fisherman et al. 2011). Therefore, $n=1.962 \times 93(100-93)/ 52 =75.4$ Add 10%=25.5+75.4 =100 Hence, 100 students were involved in this study.

2.2 Data Collections

The survey was in two parts. The first portion contained questions on statistical data of the respondents such as age, gender, and marital status. The moment portion contained questions on center issues which stayed on socio-economic variables UC Health-seeking ruler behavior, names and sources of drugs used for self-medication, type of ailment treated through self-medication, and factors influencing self-medication practices and strategies that may help reduce self-medication practices among the respondents

2.3 Data Analysis

To analyze the data, clear insights markers such as recurrence, rate, and cruelness were connected, and the outcomes were displayed within the frame of tables and writings. A P-value of <0.05 was taken to declare statistical significance.

3. Results

A total of 100 questionnaires were distributed to be filled by the study participants, whereby the response rate was 100%, 45 (45%) were male, and 74 (74%) were within the age group of 21-25 (Table 1).

Table 1. Sociodemographic characteristics of respondents (n=100)

Group	Sub-group	Frequency (N)	Percentage (%)
Gender	Male	45	45
	Female	55	55
Age	17–21	11	11
	21–25	74	74
	25–29	15	15

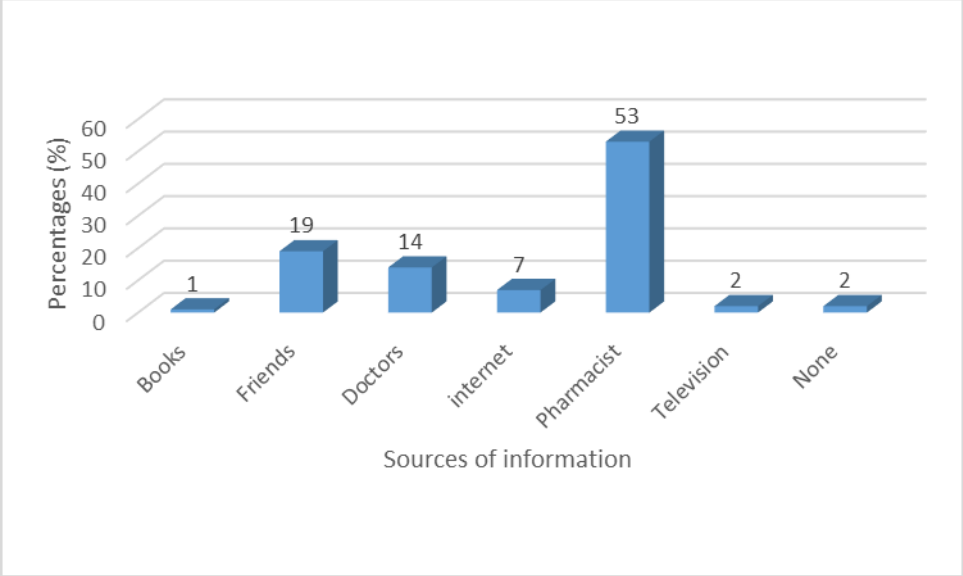

Figure1. Source of information used for SM

3.1 Knowledge of OTC Medications

About 59 (59%) of the study participants seem to have a better understanding of drug safety and use of the OTC drugs. Fifty (50%) support the fact that caution must be taken during pregnancy when using OTC. Among the participants, 58 (58%) stated that OTC drugs must not be consumed when expired. (Table 2).

3.2 Attitude towards OTC Medications

Of the study respondents, 80 (80%) agree and 20 (20%) do not agree with the cheaper and more convenient usage of OTC drugs. Sharing of OTC drugs was mentioned by 80 (80%) of the participants. Based on the treatment of minor ailments such as the common cold the participant's responses showed that 70 (70%) agree and 18 (18%) do not agree. (Table 2).

3.3 The Practice of OTC Medication

Most of the participants 64 (64%) seem to have been practiced once with OTC drugs.

(Table 2). Additionally, 55 (55 %) of the respondents stated they read instructions directed on the drug labels on how to use the drug before using while 37 (37 %) do not read it and 8 (8%) reported they did not know (Table 2). Moreover, around 35 (35%) of the participants stated not to check the expiration date of the medication they are taking.

Table 2. Knowledge, attitude, and practice of respondents towards OTC medication use

No	Characteristics		Percentages
1	OTC medications are cheaper and more convenient to use	Yes	80
		No	20
		Do not know	0
2	Do the OTC drugs treat minor ailments such as common cold	Yes	70
		No	18
		Do not know	12
3	Sharing of OTC medications with others.	Yes	80
		No	20
		Do not know	0
5	OTC medications use are safer and more effective	Yes	59
		No	32
		Do not know	9
6	Check the OTC medication's expiry date.	Yes	58
		No	23
		Do not know	19
7	Caution should be taken mostly when using OTC medications during pregnancy	Yes	50
		No	18
		Do not know	32
8	Reported at least once practiced SM with OTC medications	Yes	64
		No	16
		Do not know	20
9	Check instructions on the use of OTC medications	Yes	55
		No	37
		Do not know	8

Among the respondents, the majority of the students took painkillers (35%); followed by antibiotics (30%), and antihistamines, antidiarrheal, and antacids (10%) (Figure 4). The majority of the respondents are self-medicated due to emergency illness (46%) and taking a long time to wait for a doctor (17%) (Figure 3). When the respondents were asked about the source of OTC drugs used for self-medication they mentioned pharmacies (67%) and relatives

and friends (21%) (Figure 2). When asked about the source of information used for self-medication only (14%) of respondents mentioned doctors and (53%) mentioned the pharmacist (Figure 1). Fever and headache, cough and the common cold, and abdominal cramps were the most prevalent ailments treated by self-medication with the prevalence of 45, 30, and 15%, respectively (Figure 5).

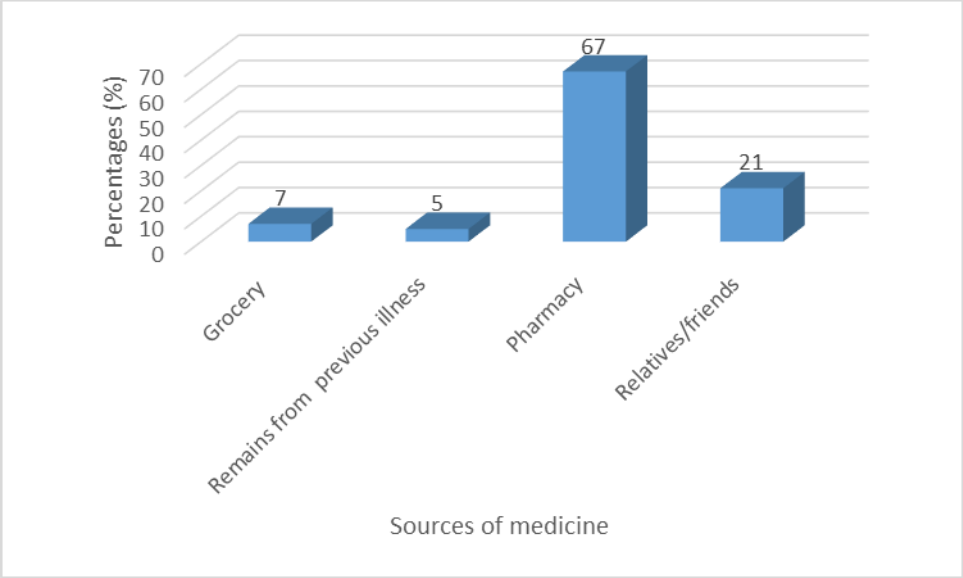

Figure 2. Source of OTC drugs used for SM

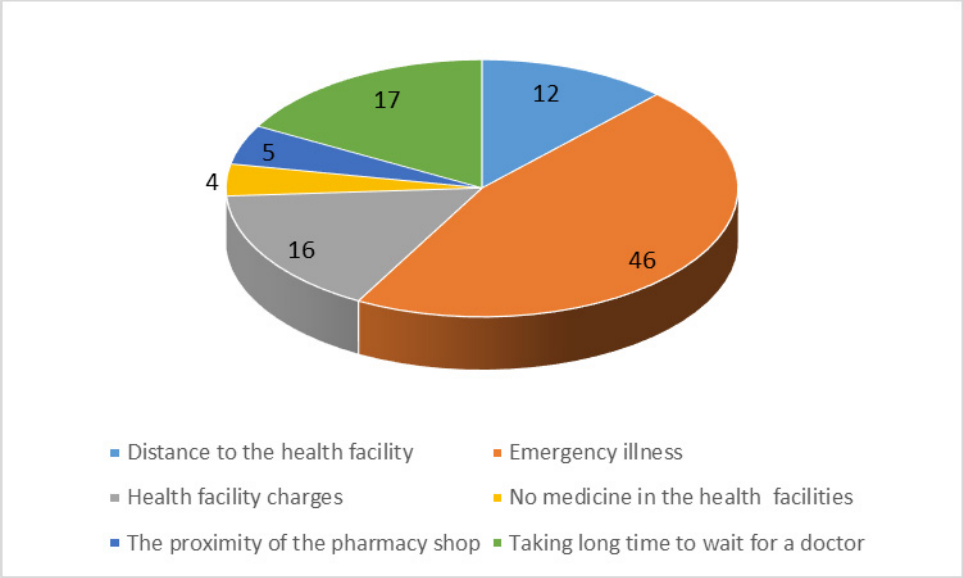

Figure 3. Reasons for choosing OTC drugs for SM

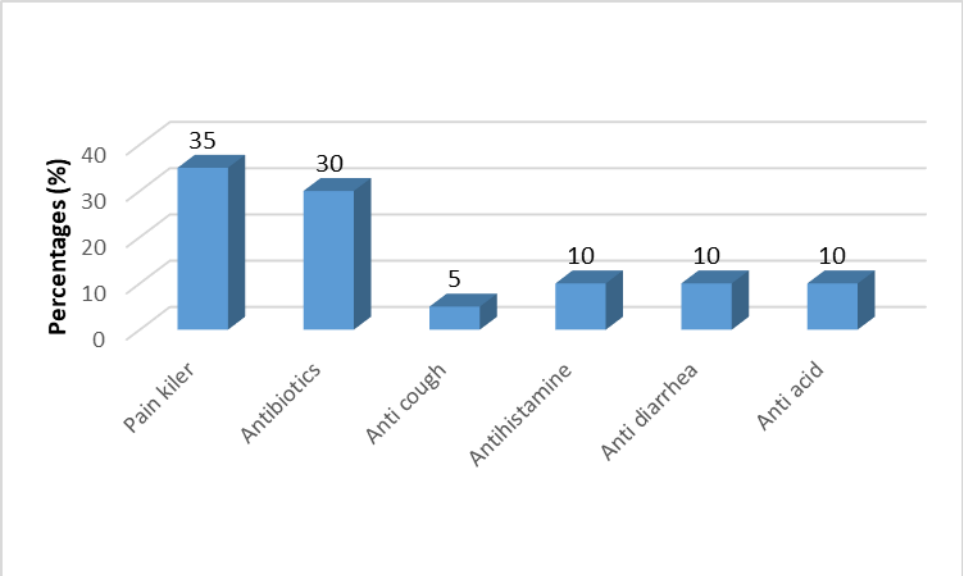

Figure 4. Most commonly used drugs during SM

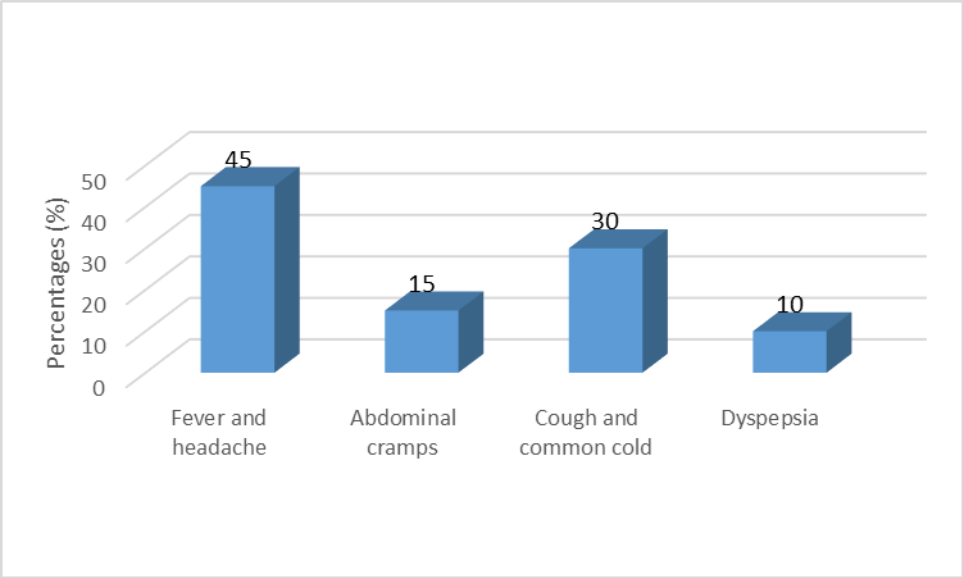

Figure 5. Illnesses to be treated with OTC during SM

4. Discussion

This study aimed to assess knowledge, attitude, and practices on OTC medication use among selected students at CVMBS. In the current study, there is a high prevalence of the practice of SM (64%) using OTC drugs among the respondents, though revealed that there is optimal knowledge (59%) concerning OTC drug use among respondents. The obtained result is in contrast with the previous results performed in Pakistan, Serbia, and India where the frequency of SM was higher at 76%, 79.9%, and 78.6% respectively (Zafar et al., 2008; Kumar et al., 2013; Lukovic et al., 2014). SM, when well adopted can positively reduce severe pain, and minimize the cost of treatment and doctor contact period (James et al., 2006). In the present study, the common diseases which caused the participants to use OTC drugs were

fever/headache 45%, cough, and common cold 30%. These results were similar to other studies studied in Addis Ababa and an previous study performed by Gondar (Abay et al., 2010; Beyene et al., 2017).

A study performed in Jordan on students, similarly stated that headache (81.9%) was the reason for SM (Alshogran et al., 2018; Zebenigus et al., 2017). In this study, the most frequently used OTC drugs by participants were painkillers 35% followed by antibiotics 30%. Similar results were also obtained from Addis Ababa, Gondar, and Mekelle which indicated that paracetamol and other anti-pain drugs were often used as OTC drugs (Abay et al., 2010; Gutema et al., 2011; Beyene et al., 2017). A different study on medical students in Bahrain showed that 6% of the participants were using antibiotics for SM (James et al., 2006). Likewise, this rate was reported to be 17.2% in Ethiopia (Gutema et al., 2011), 38.9% in Serbia (Lukovic et al., 2014), and 19.9% in Palestine (Sawalha, 2008), and 34% in India (Badiger et al., 2012). Using antibiotics for self-medication is much less common in developing than in developed countries [Grigoryan et al., 2006]. In a study by Aljinovic et al. (1977) in Croatia, the investigators found that antibiotic use for SM was higher among healthcare workers than in the general population which supports our observation.

In the current study, the most common reasons for using OTC medications for self-medication were; emergency illness 46%, taking a long time to wait for a doctor 17%, and health facility charges 16%. Alike results were also published in Saudi Arabia (Al Essa et al., 2019); Pakistan (Malik et al., 2019). Based on sharing medications (80%) of the participant agreed on sharing OTC drugs with others. These data are online with the study by medical and pharmacy students at Gondar which indicate that even health professionals agreed on sharing OTC drugs with others (Bekele et al., 2020). This was of concern since health professionals have the role to advise the other on the proper use and the impact of drug sharing. On the other hand, drug sharing has many adverse effects such as clinical diagnosis complications, delay in care-seeking, and drug resistance (Mayhorn et al., 2009; Dimitrov, 2013; Makowka et al., 2015).

Approximately 23% of the respondents in this study stated that they rarely or never check the expiry date of the OTC medications they took. This finding was higher than a similar study conducted in Asmara, Eritrea in which 7.5% of the study participants reported that they never checked expiry dates (Tesfamariam et al., 2019). This may be of concern since the hone of not checking the expiry date for drugs may lead to the amassing of those terminated medicines within the family and the numerous hindering impacts of medications [Annear et al., 2008]. This study found out that most of the respondents who practiced SM with OTC drugs, 67.0% bought their medicines from a pharmacy; with 5.0% left from a previous illness, and 21.0% got them from friends/relatives. These findings were similar to findings conducted in Pakistan by Zafar et al. (2008) and in Tanzania by Kagashe et al. (2010).

The observation in general, there is a lack of adherence to regulations in the selling of medications by most of the pharmacies (53%) which tolerate people to access medications without any prescription. This could be a result of the authority's‟ laxity in enforcing the restrictions to the pharmacies, Zafar et al. (2007). This provides an opportunity for people to access any medications regardless of their illnesses and the implications associated with the

medications. Consequently, they expose themselves to resistance and other implications of inappropriate use of medications.

5. Conclusion

Therefore, the study revealed that there is a high prevalence of counter practices about 64 (64%). Thus proving awareness and education regarding the impacts of over-the-counter drugs on university students is very vital. It is vital to raise mindfulness around this issue and progress students' demeanors and hones through the planning and usage of preventive programs. The programs seem to include organizing mindfulness campaigns within the media and education courses on the right utilization of medication and the results of SM with OTC drugs or any other.

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