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Factors Contributing to Analgesic Self Medication among Adult Patients

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ABSTRACT

Despite the Ministry of Health creating awareness of dangers of analgesic self- medication, still Ugandans take painkillers alongside antibiotics without prescription. The aim of this study was to determine the factors contributing to analgesic self-medication among adult patients attending Bweramule Health Center III, Ntoroko District. A quantitative cross-sectional study was carried out among 90 patients selected by simple random sampling among those that had taken a pain killer drug and interviewed by researcher administered questionnaire. Results of the study revealed 47(52%) who took left over analgesics from what was prescribed for others, 56(62.2%) reported that their Friends and family members are the ones that gives me painkillers, 52(57.8%) followed advertisement about painkiller drugs, 50(55.5%) did self-medication with even other drugs and 56 (62.2%) believed that if the disease was minor. Most 37(41.1%) reported they could move a distance of 5-10 kilometers seeking for prescription in hospital/health Centre, 67(74.4%) analgesics are usually out of stock in health facilities, 71(78.9%) reported doctors where always absent to prescribe for them, 59(65.6%) who reported that health workers at their facilities did not mistreat patients and 78(86.7%) reported that there was long waiting time at facilities to get prescribed analgesics. In conclusion, both individual related factors as well as facility related factors influenced self-medication with analgesics.

Keyword: Adult Patients, Self-medication, Analgesics, Ministry of health, Bweramule Health Center III.

INTRODUCTION

Analgesics are type of drugs taken to control or reduce pain, fever, headache and menstrual crumps [1].Therefore, self-medication on analgesic drugs could mean taking these drugs without a clear diagnosed indication and prescription from a qualified health worker [2]. Analgesics are among medications most frequently used in self-medication i.e. a headache, cough, fever, and pain are the most common consequences of practicing self-medication of analgesics [3]. Globally, it is estimated that the most commonly used classes of medicine for self- medication purpose were analgesics 64.6%, this has been due to the fact that most of these drugs are easily accessible over the counter in most parts of the world [4]. Analgesic self-medication varies across various countries from 38.5% in countries strict on analgesic over the counter control to 92% in pharmaceutically liberal countries [5]. Analgesic self-medication is higher in low and middle income countries with 80% of medicines are procured without being prescribed [6]. In Africa, research studies have indicated that more than 71.2% of patients do self-medication with various types of medicines; analgesics are among the leading self-medicated drugs alongside antibiotics and traditional medicines[7]. In sub Saharan Africa, a meta-analytical study on analgesic self-medication reviewed 1381 articles on self-medication from 13Sub Saharan African countries, findings revealed that 70% of population self-medicate on analgesics without any prescription [8] had found more 88% users in some sub Saharan African countries like Ethiopia. In Tanzania, Shitindi et al., [9, 10] revealed pain killer self-medication practices in more than 60% of population studied, reasons being due to inaccessibility of these drugs in health care. In Uganda, it is estimated that 67% of the self-medication used among the general population are analgesics [11]. A recent study revealed analgesic self-medication rate being high (71%) even among Ugandan elites as reported by Niwandinda et al., [11] in her study conducted in Mbarara university community. In a few areas where influencing factors to analgesic drugs self-medication have been studied, socio-economic patients characteristics as well as health related factors have been reported to influence the practice of analgesic self-medication [12]. However in most areas, though many people using self-medication including analgesics, why people do not seek proper prescription from aqualifies health care gives before taking these medications remains largely un researched [13].This is a reason for the researcher doing this research study at Bweramure HC III. Despite the Ministry of Health putting creating awareness of dangers of analgesic self-medication, still Ugandans take painkillers alongside antibiotics without prescription [11].

In Bweramule sub county, 3 drug shops were visited that is Kirodi's drug shop, Legacy Drug shop and Masindi Drug shop where records from these drug shops revealed among drugs bought by clients in these places, analgesics were the most drugs dispensed and a total of 615 patients that visited the three drug shops in the whole of January 2022, 455(74%) had been dispensed analgesics whereas in February 2022, a total of 694 clients visited the three drugs shops where 538(77.5%) were dispensed analgesics. These self-medication practices are 8.75% higher than 67% reported by Ocan et al., (2014) and also 4% higher than 71% reported by Niwandinda et al., [11]. Analgesics are taken with prescription, however self-medication with them results into fatal errors like hypertension, gastro intestinal problems, breathing difficulties, which could be fetal to the self-medicating person [14]. Rathod et al [15] reported more dangers of analgesic self-medication including interfering with disease symptoms hindering proper diagnosis and treatment by health worker. In order to prevent the above challenges related to analgesic self-medication, this study aims to identify factors contributing to analgesic self-medication among adult patients attending Bweramule Health Centre III, Ntoroko District. The study aimed to determine the factors contributing to analgesic self-medication among adult patients attending Bweramule Health Centre III, Ntoroko District.

METHODOLOGY

Study Design

A descriptive cross-sectional study design using quantitative research approach was employed for this study. This design was employed because data on factors contributing to self-medication of pain killers was collected at a specified period of time.

Area of Study

The study was carried out at Bweramule health center III in Ntoroko district. The facility offers both inpatient and outpatient services. It offers ANC services and immunization in addition to general medicine and minor surgeries. The facility is located 436.9Km from kampala through Hoima Kyenjojo road. It is located in Ntoroko district western Uganda at latitude 0°59'17"N and longitude 30°13'29"E. The study area was chosen based on survey which revealed that most patients came to the facility after self-medication. Most common drugs taken before patients reported to the facility being analgesics like paracetamol, ibuprofen and declofenac tablets.

Study Population

The study included adult patients seeking health care at Bweramule Health Centre III. These have been seen to practice a lot of self-medication especially in catchment areas of Bweramule Health Centre III. Drugs reported to be used were analgesics, however what influences them to take analgesics without expert prescription largely unknown hence could be assessed from these patients.

Sample Size Determination

The required sample size was determined using Slovin's [16] formula with precision of +/-10% at a confidence level of 90%. The formula has been preferred because the target population is less than 10000. The formula is given by the expression below.

n= N/1+N (E) 2

Where;

n = Number of respondents.

N=Target population,

N=900 (Bweramule) health centerIII receives approximately 900 patients per month according to the registrar.)

E = Fixed error, E= 0.05 Therefore;

n = 900/1+900(0.1)2 n= 900/ 1+9

n=900/ 10

n = 90; therefore 90 respondents were recruited for the study for the period of one month.

Sampling Method

The patients were selected by simple random sampling. In this procedure, codes of "1" and "0" were assigned on small chits of paper and placed in a box. A patient will be allowed to pick only one paper at random without replacing. All the patients who will pick a "1" were considered for the study while those who picked a "0" will not be considered as a sample for the study. This was done until the researcher will get the targeted study population. Correct your English.

Inclusion Criteria

Adult patients attending Bweramule health center III who will consent to participate in the study were included.

Exclusion Criteria

Adolescents below 18 years, adults unable to consent and those who were very sick and admitted were excluded in the study.

Data Collection Methods

The researcher got an introductory letter from Research Ethics Committee of Kampala International University School of Nursing that introduced him to in- charge Bweramule HC III who permitted collection of data. Research assistant was trained to help fill in the responses of study participants. A consent form was read for adult patients

who took part in this research study. Any question that was found unanswered; the researcher sought clarity from participants in order to get fully filled questionnaires without missing data. After a research assistant has fully filled the respondent responses in the questionnaires, they were checked for completeness, and stored in an envelope for analysis and presentation.

Data Analysis

Data obtained was recorded and checked for completeness then compiled, coded and analyzed using SPSS version 20.0 and statistical results was transferred to Microsoft Excel where they were converted to frequency tables, charts and graphs in order to make meaningful presentations.

Ethical Considerations

The researcher obtained an introductory letter from the research ethics committee, School of nursing sciences, Kampala International University Western campus which he presented to in-charge Bweramule HC III for authorization of data collection. The respondents were explained the purpose, potential risks involved and assured of confidentiality of their responses and request them to participate voluntarily by signing informed consent. This was done prior to data collection. The participants were assured that all the information they gave was confidential and their participation are very important.

Participants will be informed that there are no risks involved in this study.

RESULTS

Table 1 Showing Demographic Characteristics of Respondents
Individual Factors Affecting Self-medication with Analgesics n=90

Character	Variables	Frequency (f)	Percent (%)
Age	18-27	12	13.3
	28-37	12	13.3
	38-47	30	33.3
	48 and above	36	40
Level of education	None	5	5.5
	Secondary	35	38.9
	Primary	43	47.8
	Tertiary	7	7.8
Residence	Urban	23	25.6
	Rural	67	74.4
Marital status	Single	37	41.1
	Married	53	58.9
Religion	Muslim	5	5.5
	Catholic	35	38.9
	Protestant	39	43.3
	Others specify	11	12.2

From the table 1 above, findings of this research study revealed most 36(40%) of respondents were aged above 48 years, whereas the least 12(13.3%) were aged 18-27. It was also found that majority 43(47.7%) of respondents had at least had primary education and the minority 5(5.5%) had not got any formal education. Most 67(74.4%) of the study respondents resided in rural residence whereas the least 23(25.5%) lived in urban settings. It was also found that the most 53(58.8%) were married and the least 37 (41.1%) were singles. More so, the 39(43.3%) were protestant whereas the Muslims formed the least of the population studied with 5(5.5%).

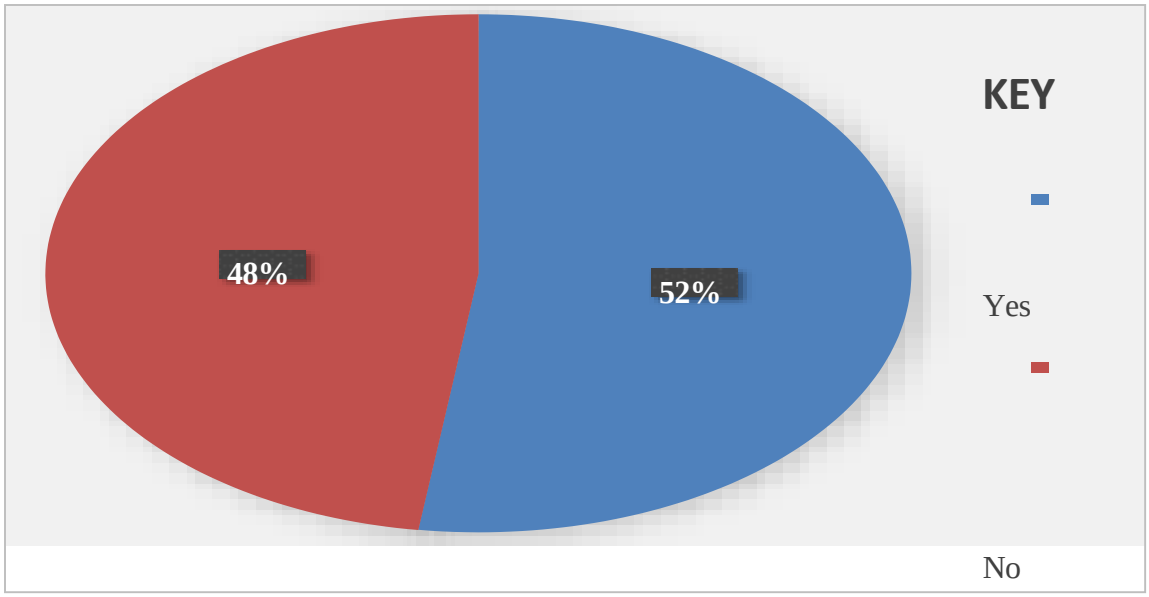

Figure 1 Showing Whether the Respondents Took Analgesic Left Over from Other People. n=90

From figure 1 above, findings of this research study revealed most 47(52%) of the study respondents who reported that they took left over analgesics from what was prescribed and the least 43(48%) did not take left over analgesics.

Table 2 Showing the Individual Related Factors that Contributed to Analgesic Self-Medication n=90

Other individual related factors	**Responses**	**Frequency (n)**	**Percent (%)**
Friends and family members are the ones that give me painkillers	Yes	56	62.2
	No	34	37.8
I follow advertisements in community and televisions	Yes	52	57.8
	No	38	42.2
I am too busy to schedule time and go to hospital for proper prescriptions	Yes	66	73.3
	No	24	26.7
I buy and take because it's cheaper and I can afford it that way	Yes	26	28.9
	No	64	71.1
Self-medication with painkillers have no side effects that are harmful	Yes	13	14.4
	No	77	85.6
I after all use even use other drugs myself without self-prescription	Yes	50	55.5
	No	40	44.5
If the disease is minor, I just take analgesics that don't need me to go to a doctor	Yes	56	62.2
	No	34	37.8
I know the dose that is sufficient for me for painkillers	Yes	55	61.1
	No	35	38.9
I don't seek for prescription, I read on leaflet of the drug	Yes	6	6.7
	No	84	93.3

The study revealed from the table 2 above that most 56(62.2%) of respondents that did self-medication reported that their Friends and family members are the ones that gives me painkillers whereas 34(37.8%) did not have family members and friends who gave them self-medication analgesics. It was also found that most 52(57.8%) of respondents that did self-medication followed advertisement about painkiller drugs within their communities on

televisions and radios whereas the least 38(42.2%) of those who did self-medication with painkillers had not followed advertisement on these painkillers. Almost three quarters 66(73.3%) of those that had done self-medication with painkillers reported that they had busy schedule hence could not go to heath facility for prescription unless they are seriously sick whereas the least of these 24(26.7%) of self-medicated patients with analgesics reported that to have not been too busy to seek expertise health advise on analgesic drugs use. 64(71.1%) of those who did self-medication reported that self-medicated painkillers were not cheaper whereas others 26(28.9%) reported that the analgesic drugs they self-medicated with were cheaper than seeking health care personnel prescription. Findings also revealed more than three quarters 77(85.6%) of those that self-medicated who reported that the analgesics they used for self-medication had side effects whereas the least 13(14.4%) reported to know that the self- medicated analgesics did not have any serious side effect on them. More so, more than a half of those that had doe self-medication with painkillers 50(55.5%) reported that they also did self-medication with even other drugs whereas the least 40(44.5%) did not do self-medication with other non-analgesic drugs. Nearly to two thirds 56(62.2%) of those that self-medicated with painkillers believed that if the disease was minor, they did not need painkiller prescription and the least of these 34(37.8%) were contrary to refusal of seeking prescription basing on whether the illness was minor or major illness. More than a half 55(61.1%) did self-medication because they believed that they knew the dose of painkiller that is sufficient for them whereas the least 35(38.9%) reported that they did not do self-medication because they believed to know the dose sufficient for them. Of these that did self-medication with analgesics, majority 84(93.3%) reported that they did not read on prescription to know the dose and indication whereas the least 6(6.7%) reported that they read leaflets for directions on painkillers they self-medicated with.

Hospital Factors that Influenced Analgesic Self-Medication.

From figure 2 below, findings revealed most 37(41.1%) of patients that had done self-medication who reported that they needed a hospital/health center for prescribing them analgesics, they could move a distance of 5-10 kilometers seeking for this service whereas the least 11(12.2%) reported that they needed to walk less than 1 kilometer to get a health expert in a health facility to prescribe for them painkillers.

Figure 2 Showing distance covered by a respondent to reach a facility with a qualified prescriber

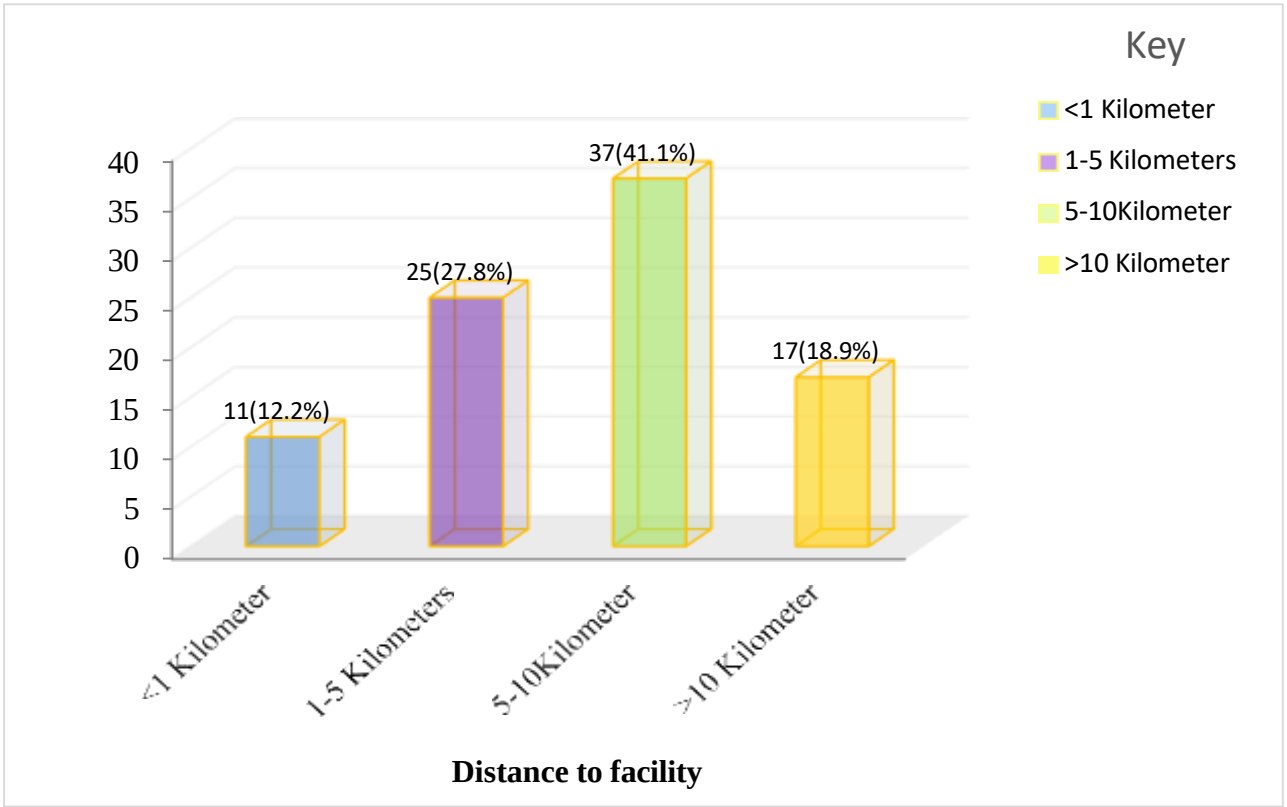

Table 3: Shows other health care related factors contributing to analgesic self-medication

n=90

Facility related factor	Responses	Frequency	Percent
In hospitals, analgesics are usually out of stock	Yes	67	74.4
	No	23	25.6
At the facilities, doctors are often absent	Yes	71	78.9
	No	19	21.1
Health workers mistreat patients and I don't want their experience	Yes	31	34.4
	No	59	65.6
The waiting time at hospital is too long	Yes	78	86.7
	No	12	13.3
Hospitals overcharges for prescribed analgesics	Yes	16	17.8
	No	74	82.2

The research study findings from table 3 above revealed almost three quarters 67(74.4%) of respondents that had done self-medication who reported that in hospitals, analgesics are usually out of stock and the least 23(25.6%) reported analgesics not being out of stock in hospitals. It was also found out that majority 71(78.9%) reported that doctors were always absent whereas the least 19(21.1%) reported not to have found doctors absent for their prescription. The study also revealed almost two thirds 59(65.6%) who reported that health workers at their facilities did not mistreat patients hence their reason for self- medication was not out of fear of health workers whereas the least 31(34.4%) reported fear of health workers who mistreat patients at health facilities hence they opted for self-medication with analgesics. More so, it was found that majority 78(86.7%) reported that there was long waiting time at facilities where they could get analgesics on prescription whereas the least 12(13.3%) did not do this out of fear for long waiting hours at the health facilities. Finally, it was also reported by most 74(82.2%) of the patients who had done self-medication that hospitals did not overcharge for analgesic dispensing and prescription whereas the least 16(17.8%) reported that the charges for analgesics in hospitals where they could get them prescribed was high hence, they opted to buy in other sources under prescription.

DISCUSSION

Findings of this research study revealed that, most 36(40%) of respondents were aged above 48 years. This could be because this age bracket is associated with many pains like symptoms such as, back pains and others which could trigger them to use analgesics without prescription. These findings agree with those of Oumer et al., [17] which indicated that self-medication is common among Africans aged above 50 years due to multiple pains like symptoms with age. However, they are contrary to those of Kawuma et al., [18] in in their submission on subisaharan Africa, found analgesic self-medication more so in youth >35 years than adults. It was also found that majority 43(47.7%) of participants at least had primary education. This could be as a result of universal primary education which avails free education to all Ugandans. These could have low knowledge on analgesic drug dangers and health seeking behaviors hence could carry out self-medication out of ignorance of its dangers. These findings are contrary to those of Kawuma et al., [18] which revealed self-medication to be more common among those with secondary and tertiary education levels. Most 67(74.4%) of participants resided in rural residence whereas the least 23(25.5%) lived in urban settings. This could be due to the fact that the research study was carried out within a rural area where health care facilities may be scares. These findings agree with those of Opoku et al., [19] which found pain killer self-medication common in rural areas where there are limited health facilities. More so; the majority 39(43.3%) were protestant. This could be a normal distribution of religious affiliations among the people surrounding Bweramule HC III, hence their self-medication behaviors with analgesics would be largely shaped by the protestant beliefs on painkillers and other analgesic drugs although there is no clear studies showing how belonging to protestant faith contributes to analgesic self-medication use. These findings are contrary to Abdi and Extension,[20] study in Bingham University Teaching Hospital (BHUTH), Jos which found no relationship with marital status and religious faith on analgesic self-medication. The findings of this research study revealed most 47(52%) of the study participants who reported that they took left over analgesics from what was prescribed for others. This could be due to poor analgesic drug compliancy hence the remainder being by other family member without prescription. These findings are similarly to Kifle et al [21]who also found poor drug dose compliancy as influencing factor to self-medication analgesic use as the remainder was taken by other family members when they got pain. The study revealed from the table 2 above that most 56(62.2%) of participants that did self-medication reported that their Friends and family members are the

ones that gives me painkillers. This could be shaped by African traditions and beliefs where care for the sick starts with family members trying with all in their knowledge before, they take the sick person to the health care. These could not know the drug rights of analgesics given to their patients hence give under doses, over doses or even contraindicated analgesics. These findings are similarly to those of Badzi et al., [1] which revealed 64% of analgesic elf medicating users due to influence of friends. However, they disagree with [22] study which found lesser friends' influence on analgesic self-medication. It was also found that most 52(57.8%) of participants that did self-medication followed advertisement about painkiller drugs within their communities on televisions and radios. This could be due to laxity on marketing of pharmacological product in the country, whereas some of these analgesic drug advertisements are informative, others could be persuasive leading to self- medications in community members. These findings agree with [21] whose study found free advertisement of analgesics in community as influence t analgesic self-medication. Almost three quarters 66(73.3%) of those that had done self-medication with painkillers reported that they had busy schedule hence could not go to heath facility for prescription unless they are seriously sick. This could indicate social economic life where most Ugandans work for hand to mouth hence missing work to seek appropriate health care could mean loss of financial and survival resources which could force people to do self-medication as they keep their schedules of work. These findings are in agreement with those of Chindhalore et al.,[4] which revealed did self-medication with analgesic drugs due to busy schedules of work. Findings also revealed more than three quarters 77(85.6%) of those that self- medicated who reported that the analgesics they used for self-medication had side effects. This could be through health talks about rational drug use as well as cautions they get from health care givers hence could have hindered them from doing self-medication. These findings disagree with those of [23] which found out that 26.4% who reported harsh conditions and negative attitude portrayed by health workers to them as patents promoting self-medication. Moreso, it was found that majority 78(86.7%) reported that there was long waiting time at facilities where they could get analgesics on prescription. This could be done to large numbers as well as health workers who have already been reported that at times, they are not present hence may need to be waited for by patients seeking pain relief, since pain is uncomfortable, many could opt for self- medication than to wait for long. These findings are similar to those of Alduraibi et al [24] which found harsh conditions like long waiting time at health facilities contributing to analgesic self-medication. Finally, it was also reported by most 74(82.2%) of the patients who had done self- medication that hospitals did not overcharge for analgesic dispensing and prescription. This could be because most of analgesics are provided by the government hence could even be accessed in hospitals/ government health facilities at free cost hence could result into lesser self-medication since they can be prescribed in health facilities at affordable cost. These findings are similarly those of Aldurai and Altowayan [24]which revealed only 2%and 12.1% of self-medication analgesic users who had done it because of wanting to save money hence they buy just few in their easy reach. However, they disagree with those of Dowell et al., [25] which found a higher proportion of population using analgesics on pain medication because they did not have enough money to see the doctor for consultation and prescription.

CONCLUSION

These research study findings revealed that both individual related factors and health facility related factors influenced analgesic self-medication practices among adult patients. The individual factors that positively influenced analgesics self-medication with included undermining minor illnesses, taking drugs left by their family members as well some being too busy to seek prescribed analgesics. That negatively influencing self-medication includes awareness of side effects of these analgesics as well as most being unaware of their doses. The facility related factors that influenced analgesic self-medication positively included analgesics being out of stock in facilities at times, health workers being absent at times as well as long distances covered by some patients to access prescribed analgesic drugs from a health facility than buying over the counter. Whereas those that negatively influenced analgesics self-medication were positive attitudes portrayed by health workers to patients as well as analgesics not being expensive in health facilities which could encourage seeking prescribed analgesic drugs.

REFERENCES

1. Badzi, C.D., Ackumey, M.M.: Factors influencing use of analgesics among construction workers in the Ga-Eastmunicipality of the Greater Accra region, Ghana. Ghana Med. J. 51, 156–163 (2017)
2. Queremel Milani, D.A., Davis, D.D.: Pain Management Medications. In: StatPearls. StatPearls Publishing, Treasure Island (FL) (2024)
3. Zewdie, S., Andargie, A., Kassahun, H.: Self-Medication Practices among Undergraduate University Students in Northeast Ethiopia. Risk Manag. Healthc. Policy. 13, 1375–1381 (2020). https://doi.org/10.2147/RMHP.S266329
4. Chindhalore, C.A., Dakhale, G.N., Giradkar, A.B.: Comparison of self-medication practices with analgesics among undergraduate medical and paramedical students of a tertiary care teaching institute in Central India – A questionnaire-based study. J. Educ. Health Promot. 9, 309 (2020). https://doi.org/10.4103/jehp.jehp_378_20
5. Elghazaly, A., Alsahali, S., Farooqui, M., Ibrahim, N., Alshammari, M., Almutairi, A., Almutairi, M., Almutairi,

W.: A Cross-Sectional Study to Investigate the Prevalence of Self-Medication of Non-Opioid Analgesics Among Medical Students at Qassim University, Saudi Arabia. Patient Prefer. Adherence. 17, 1371–1379 (2023). https://doi.org/10.2147/PPA.S407693

6. Araia, Z.Z., Gebregziabher, N.K., Mesfun, A.B.: Self medication practice and associated factors among students of Asmara College of Health Sciences, Eritrea: a cross sectional study. J. Pharm. Policy Pract. 12, 3 (2019). https://doi.org/10.1186/s40545-019-0165-2
7. Saha, A., Marma, K.K.S., Rashid, A., Tarannum, N., Das, S., Chowdhury, T., Afrin, N., Chakraborty, P., Emran, M., Mehedi, H.M.H., Hussain, M.I., Barua, A., Mistry, S.K.: Risk factors associated with self-medication among the indigenous communities of Chittagong Hill Tracts, Bangladesh. PLOS ONE. 17, e0269622 (2022). https://doi.org/10.1371/journal.pone.0269622
8. Seam, M.O.R., Bhatta, R., Saha, B.L., Das, A., Hossain, M.M., Uddin, S.M.N., Karmakar, P., Choudhuri, M.S.K., Sattar, M.M.: Assessing the Perceptions and Practice of Self-Medication among Bangladeshi Undergraduate Pharmacy Students. Pharmacy. 6, 6 (2018). https://doi.org/10.3390/pharmacy6010006
9. Shitindi, L., Issa, O., Poyongo, B.P., Horumpende, P.G., Kagashe, G.A., Sangeda, R.Z.: Comparison of knowledge, attitude, practice and predictors of self-medication with antibiotics among medical and non-medical students in Tanzania. Front. Pharmacol. 14, 1301561 (2024). https://doi.org/10.3389/fphar.2023.1301561
10. Chuwa, B.B., Njau, L.A., Msigwa, K.I., Shao, E.: Prevalence and factors associated with self medication with antibiotics among university students in Moshi Kilimanjaro Tanzania. Afr. Health Sci. 21, 633–639 (2021). https://doi.org/10.4314/ahs.v21i2.19
11. Niwandinda, F., Lukyamuzi, E.J., Ainebyona, C., Ssebunya, V.N., Murungi, G., Atukunda, E.C.: Patterns and Practices of Self-Medication Among Students Enrolled at Mbarara University of Science and Technology in Uganda. Integr. Pharm. Res. Pract. 9, 41–48 (2020). https://doi.org/10.2147/IPRP.S237940
12. Babatunde, O.A., Fadare, J.O., Ojo, O.J., Durowade, K.A., Atoyebi, O.A., Ajayi, P.O., Olaniyan, T.: Self-medication among health workers in a tertiary institution in South-West Nigeria. Pan Afr. Med. J. 24, 312 (2016). https://doi.org/10.11604/pamj.2016.24.312.8146
13. Ocan, M., Bwanga, F., Bbosa, G.S., Bagenda, D., Waako, P., Ogwal-Okeng, J., Obua, C.: Patterns and Predictors of Self-Medication in Northern Uganda. PLOS ONE. 9, e92323 (2014). https://doi.org/10.1371/journal.pone.0092323
14. Doomra, R., Goyal, A.: NSAIDs and self-medication: A serious concern. J. Fam. Med. Prim. Care. 9, 2183–2185 (2020). https://doi.org/10.4103/jfmpc.jfmpc_201_20
15. Rathod, P., Sharma, S., Ukey, U., Sonpimpale, B., Ughade, S., Narlawar, U., Gaikwad, S., Nair, P., Masram, P., Pandey, S.: Prevalence, Pattern, and Reasons for Self-Medication: A Community-Based Cross-Sectional Study from Central India. Cureus. 15, e33917. https://doi.org/10.7759/cureus.33917
16. Slovin's Formula: What is it and When do I use it?, https://www.statisticshowto.com/probability-and-statistics/how-to-use-slovins-formula/
17. Oumer, A., Ale, A., Hamza, A., Dagne, I.: Extent and Correlates of Self-Medication Practice among Community-Dwelling Adults in Eastern Ethiopia. BioMed Res. Int. 2023, 4726010 (2023). https://doi.org/10.1155/2023/4726010
18. Kawuma, R., Chimukuche, R.S., Francis, S.C., Seeley, J., Weiss, H.A.: Knowledge, use (misuse) and perceptions of over-the-counter analgesics in sub-Saharan Africa: a scoping review. Glob. Health Action. 14, 1955476 (2021). https://doi.org/10.1080/16549716.2021.1955476
19. Opoku, R., Dwumfour-Asare, B., Agrey-Bluwey, L., Appiah, N.E., Ackah, M., Acquah, F., Asenso, P.F., Issaka, A.-A.: Prevalence of self-medication in Ghana: a systematic review and meta-analysis. BMJ Open. 13, e064627 (2023). https://doi.org/10.1136/bmjopen-2022-064627
20. Abdi, M., Extension, K.P.: Determinants of Analgesic Self-Medication among Adult Patients Seeking Care at Bweramule Health Centre III, Ntoroko District, Uganda. 10, 132–145 (2023)
21. Kifle, D., Azale, T., Gelaw, Y.A., Melsew, Y.A.: Maternal health care service seeking behaviors and associated factors among women in rural Haramaya District, Eastern Ethiopia: a triangulated community-based cross-sectional study. Reprod. Health. 14, 6 (2017). https://doi.org/10.1186/s12978-016-0270-5
22. Mensah GA, Roth GA, Fuster V. The Global Burden of Cardiovascular Diseases and Risk Factors: 2020 and Beyond. J Am Coll Cardiol. 2019 Nov 19;74(20):2529-2532. doi: 10.1016/j.jacc.2019.10.009. PMID: 31727292.
23. Sisay M, Mengistu G, Edessa D. Epidemiology of self-medication in Ethiopia: a systematic review and meta-analysis of observational studies. BMC Pharmacol Toxicol. 2018 Sep 10;19(1):56. doi: 10.1186/s40360-018-0248-8. PMID: 30201045; PMCID: PMC6131789.
24. Alduraibi, R.K., Altowayan, W.M.: A cross-sectional survey: knowledge, attitudes, and practices of self-medication in medical and pharmacy students. BMC Health Serv. Res. 22, 352 (2022).

https://doi.org/10.1186/s12913-022-07704-0
25. Dowell, D.: CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022. MMWR Recomm. Rep. 71, (2022). https://doi.org/10.15585/mmwr.rr7103a1

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