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Factors Associated with Healthcare-Seeking Behavior among Health Profession Students in Selected Universities in Southwestern Uganda

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Abstract

Introduction: Health professional students (HPS) tend to seek informal health care associated with self-medication (SM). Therefore, this study investigated the factors associated with healthcare-seeking behavior (HSB) among HPS. **Methods:** The study employed a cross-sectional design. Four hundred (400) HPS from two universities Bishop Stuart University (BSU) and Kampala International University Western Campus (KIU)] in southwestern Uganda were selected using a convenience sampling method. Data was collected using a Google form containing structured questions. The link to the questionnaire was sent to prospective participants via WhatsApp platform or email between September and November 2021. Ethical clearance was obtained from Mbarara university Research Ethics committee. Data were entered into SPSS software and analyzed using descriptive chi-square statistics, and logistic regression. HSB was considered formal or appropriate if the participant usually sought healthcare from a health worker. **Results:** A total of 400 HPS were enrolled, 60.3% were males, the mean age of the participants was 23.06 (SD = 2.74) years. Fifty-seven percent (57.5%) of the participants consulted a health worker when ill in the last 12 months (had formal HSB). Most participants' main reason for seeking health care was to treat the underlying illness (73.3%). About sixty-nine percent (68.6%) of the participants treated themselves during the most recent illness or health problem. Most of the participants searched the internet for health-related information when ill at some point. (Sometimes = 35.8%, Always = 27%, Often = 16%).The academic year of HPS ($P < 0.001$), access to health facilities ($P = 0.018$), being too busy ($P = 0.028$), and minor illnesses ($P < 0.001$) were significantly associated with

healthcare-seeking behavior. The lower academic years 1 & 2 (OR = 0.453, P < 0.001, 95% CI = 0.296 - 0.695) and easy access to the health facility (OR = 0.447 P < 0.001, 95% CI = 0.287 - 0.696) were predictors of formal HSB, being too busy (OR = 1.620, P = 0.049, 95% CI = 1.002 - 2.621) and having a minor illness (OR = 2.465, P< 0.001, 95% CI = 1.597 - 3.803) were predictors of informal healthcare seeking behavior. **Conclusion:** Our study findings indicate that a larger proportion of the participants sought formal health advice upon getting ill although others resorted to self-medication. Accessibility to health facilities and lower academic years predicted formal healthcare-seeking behavior while minor illnesses and being too busy predicted informal HSB among health profession students. Health training institutions should have easily accessible student-friendly healthcare facilities to promote formal healthcare seeking behavior.

Subject Areas

Health Policy

Keywords

Factors, Healthcare-Seeking Behavior, Health Profession Students

1. Introduction

Health as defined by the World Health Organization (WHO) is a state of "complete well-being, physically, socially, and mentally, and not merely the absence of disease or infirmity" [1]. On the other hand, health-seeking behaviors are activities undertaken by individuals who perceive themselves to have a health problem or to be ill as they attempt to find an appropriate remedy [2].

Health seeking behavior (HSB) among health professional students (HPS) is important in maintaining a health profile of the future health workforce capable of providing proper healthcare to the public, and acting as role models for patients and the public in general. However, HPS delay seeking health care, they diagnose and treat themselves given their knowledge of diseases and medicines [3].

Refusing or delaying seeking proper diagnosis and treatment can result in poor prognosis or increased mortality [4]. Self-prescription as one of the HSB is of great concern to the health professions because it is an indicator of personal health negligence. It leads to delayed diagnosis, improper treatment, and worse health outcomes [5]. Some diseases that would require timely follow-ups may become complicated because of self-treatment [6] [7].

In addition, poor HSB has been associated with SM resulting in wrong prescriptions with consequences such as drug side effects or treatment failure [3]. For example, a study conducted on drug interactions related to SM showed that out of 103 cases, 73 cases (71%) were serious, 53 were hospitalized, 6 were life-threatening adverse drug reactions, and 3 deaths [8].

Previous studies indicate that health profession students have informal HSB.

For instance, studies conducted in Nigeria found that 37.5% of students consulted their peers in health-related disciplines [4]: students generally bought drugs when sick and only visited the hospital if they faced unbearable pain [9]. In addition, a recent a meta-analysis found over 92.7% prevalence of SM among medical students [10].

The reasons for the informal HSB among medical students included; the perception of illnesses being minor, embarrassment or fear of judgment, laziness, visiting health facilities not necessary, hospital hours not being feasible, concerns of confidentiality, and transportation problems [11]. On the other hand, convenience, unavailability of needed services, long queues, poor customer care, lack of trust in the service, waiting to see if the health problem would resolve, and lack of relevant information were the factors among university students in Uganda [12].

However, available literature evidence indicates that most studies have been conducted in Asian countries among medical students leaving out nurses and pharmacists [11] [13]. Most of the other studies targeted all university students [11] [14] [15] [16] [17]. There is a dearth of information regarding SM and factors associated with HSB in Ugandan health training university students.

This study, therefore, aimed at finding out the HSB and associated factors among university HPS. Knowledge of this will guide policymakers in African health training institutions to provide appropriate services that address students' healthcare needs.

2. Methodology

2.1. Study Design, Setting, and Population

This study employed a cross-sectional study design. It was conducted among HPS in two universities from Bishop Stuart University (BSU) and Kampala international university western campus (KIU) in southwestern Uganda, between September and November 2021. The study included all students pursuing bachelorette degrees in medicine and surgery, nursing, and pharmacy; diplomas in pharmacy, clinical medicine, nursing, and midwifery; or certificates in nursing, midwifery, and had access to social media (WhatsApp platform) or email.

2.2. Sample Size and Sampling Method

A sample size of 422 participants was determined using Cochran's formula;

$$n_0 = \frac{Z^2 pq}{e^2},$$

where n_0 is the sample size, Z is the abscissa of the normal curve that cuts off an area α at the tails (1.96), p (the proportion of participants with proper/good health seeking behaviors) was estimated at 50%, e is the desired level of precision set at 0.05% or 95% confidence interval and $q = 1 - p$ [18]. A sample size of 384 was obtained and the 10% non-response rate factored in to yield 422 participants. However, 400 participants responded yielding a 94.9% response rate. The

convenience sampling method was used to obtain the study participants. Convenience sampling involves using the most conveniently available people as study participants [19].

3. Study Variables

3.1. Dependent Variable: Healthcare-Seeking Behavior (HSB)

HSB was this study's main outcome of interest. This was assessed using three different questions namely, "*What do you normally do when you are ill*?", "*What was the reason for visiting the health care facility during the recent visit*?", *and* "*Did youself-medicate during the last time you were sick*?" According to this study, HSB was considered formal or appropriate if the participant usually sought healthcare from a health worker in the last 12 months [14]. Informal HSB was considered any other response it illness other than seeking care from a health worker, ie self-medication and consulting a traditional practitioner. Additional questions were "*How often do you search the internet for health-related information?*", and "*Do you take further actions after searching the internet*?" Accordingly, participants were asked what they did when they experience a health problem, (1 = Consult a physician or health worker, 2 = Consult a traditional practitioner, 3 = Self-medication) if they self-medicated during the last illness, (1 = Yes, 2 = No). Reason for the recent visit to a health facility (1 = routine medical checkup, 2 = to treat existing illness), how often they searched health-related information on the internet, and if they took further action after the internet. These two items were measured using a Likert scale with answer options such as 1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = always.

3.2. Independent Variables

Demographic characteristics: Seven items were constructed to measure to assess demographic factors, including sex, age, religion, marital status, academic year, program, course studied, and name of the institution.

Barriers to health seeking behavior: Seven items were constructed to assess factors that hindered seeking healthcare such as: Inadequate upkeep for health care, being too busy, delays at the health facility and long procedures, medical environment, lack of health insurance policy, the price of drugs being high, failure to get a medical note from admin, and the illness/disease is minor.

Facilitators to health seeking behavior: Five items were constructed to assess factors that promoted HSB including: Ability to pay for medical bills, access to the healthcare facilities, an encouraging medical environment (quick services, privacy and confidentiality), being encouraged by their friend or networks, and the nature of the illness. Participants were allowed to tick the items that influenced their behavior.

3.3. Data Collection Procedure

The principal investigator transformed the questionnaire into a Google survey tool

with a link. The questionnaire was pretested online with 10 participants from Mbarara University and adjustments were made by removing unnecessary questions and adding relevant ones based on the literature. The link to the survey was then sent to the class representatives who eventually shared it with the rest of the students or provided their contacts to the researchers for direct messaging. The link was sent to the students, allowing them to gain access to the online survey. The link was set to only allow one response from everyone and to only submit when all questions were answered. Upon the completion of the tool, the participants submitted their completed surveys directly to the researcher's email. (**Figure 1**)

3.4. Data Management, Quality Control, and Analysis

Data were downloaded from the researcher's email in form of a spreadsheet, cleaned, coded, and exported to IBM statistical package for social sciences for analysis. Analysis was done at the univariate level for the demographic characteristics and HSB. At bivariate, demographic characteristics and factors thought to influence HSB were cross-tabulated to obtain the association between the independent variables and HSB using Chi-square statistics and p-value. This is a nonparametric test used for testing hypotheses about the proportion of cases that fall into different categories. It is used for comparison between observed and expected results. At the multivariate level, only statistically significant variables at the bivariate level were entered into the model for logistic regression. Logistic regression predicts the likelihood of a dependent variable by analyzing its relationship with independent variables by using odds ratios which are an index of relative risk [19].

3.5. Ethical Considerations

Ethical approval was obtained from the Mbarara University Research ethics committee under reference number (MUREC-2021-209). Permission to conduct the study was sought from the Deans of students at the respective universities (BSU and KIU). After permission was granted, the researchers used the student leaders and class representatives to access students in their respective programs across their years of study. Details of the study and consent information were included on the first page of the Google form to allow informed consent. Participants consented by clicking or tapping on an icon labeled "Yes" at the bottom of the face page. All data were treated as confidential and only assessed by the research team.

4. Results

Four hundred (400) HPS were enrolled and considered for data analysis. The majority were males (60.3%). The mean age of HPS was 23.06 (SD) = 2.74) years (**Table 1**). 86.5% HPS were Christians (346), and the majority were single (92%). One hundred forty HPS were in the first year of study (35.0%). About 58% of the HPS pursued a bachelor's degree, the nursing course had more participants than other courses (42.0%) (**Table 1**).

Table 1. Demographic characteristics.

Variable	Frequency (%)
Gender	
Male	241 (60.3)
Females	159 (39.8)
Age	
≤24 yrs	318 (79.5)
≥25 yrs	20.5 (82)
Religion	
Christians	346 (86.5)
Other denominations	54 (13.5)
Marital status	
Single	368 (92.0)
Married/engaged	31 (7.8)
Nun	1 (0.3)
Academic year	
Year one	140 (35.0)
Year three	117 (29.3)
Year two	97 (24.3)
Year four	45 (11.3)
Year five	1 (0.3)
Program	
Bachelors	232 (58.0)
Diploma	100 (25.0)
Certificate	68 (17.0)
Course	
Nursing	168 (42.0)
Medicine and Surgery	97 (24.3)
Clinical medicine	86 (21.5)
Pharmacy	31 (7.8)
Midwifery	18 (4.5)
Institution	
KIU	293 (73.3)
BSU	107 (26.8)

KIU = Kampala International University, BSU = Bishop Stuart University; % = percentage.

4.1. Healthcare-Seeking Behaviors among Health Professional Students

More than half of the participants (57.5%) consulted a physician or health worker as the first action taken when ill (formal HSB) and the rest self-medicated, none

consulted a traditional practitioner. Close to three quarters of the participants mentioned seeking treatment of the underlying illness as a reason for the recent visit to the health facility (73.3%) and the rest visited for routine medical check-ups. More than half (68.6%) self-medicated to treat their recent health problems. (Table 2). The majority mentioned that they sometimes searched the internet 143 (35.8%) for health information and also took further action to seek care 141 (35.3%). (Figure 1, Figure 2)

4.2. Factors Associated with Health-Seeking Behavior among Health Professional Students

Biographic characteristics; gender, age, religion, marital status, academic year, program studied, course studied, institution and factors that influence HSB were cross tabulated with HSB to obtain their association using p-values. Academic year ($p < 0.001$) was significantly associated with health-seeking behaviors. In addition, being too busy ($p = 0.028$), having minor illnesses ($p < 0.001$), and having access to health facilities ($p = 0.018$) were significantly associated with HSB.

Other variables include inadequate upkeep, delays at the health facility, an unfavorable medical environment, lack of insurance policy, prices of drugs being high, failure to get a medical note from administration, bills being paid for, encouraging medical environment, and encouragement by another person were not significantly associated with HSB. (Table 3)

4.3. Predictors of Healthcare-Seeking Behavior among Health Professional Students

Four variables were included in the model using the enter method and were adjusted for the institution. These factors were significantly associated with HSB. Participants in lower classes in years 1 and 2 were less likely to have informal

Table 2. Healthcare seeking behavior.

Action	n(%)
The first action usually taken when not feeling well	
Consult a physician/health worker	230 (57.5)
Self-medication	170 (42.5)
Reason for the recent visit to the healthcare facility	
Routine medical Checkup	107 (26.8)
Seek care/treatment (was sick)	293 (73.3)
Practiced self-medication to treat recent health problems	
Yes	274 (68.5)
No	126 (31.5)

Note: % Percentage, n = frequency; *Formal HSB was considered as seeking care from a physician/health worker while informal HSB was considered as self-medication, consulting a friend or traditional practitioner.

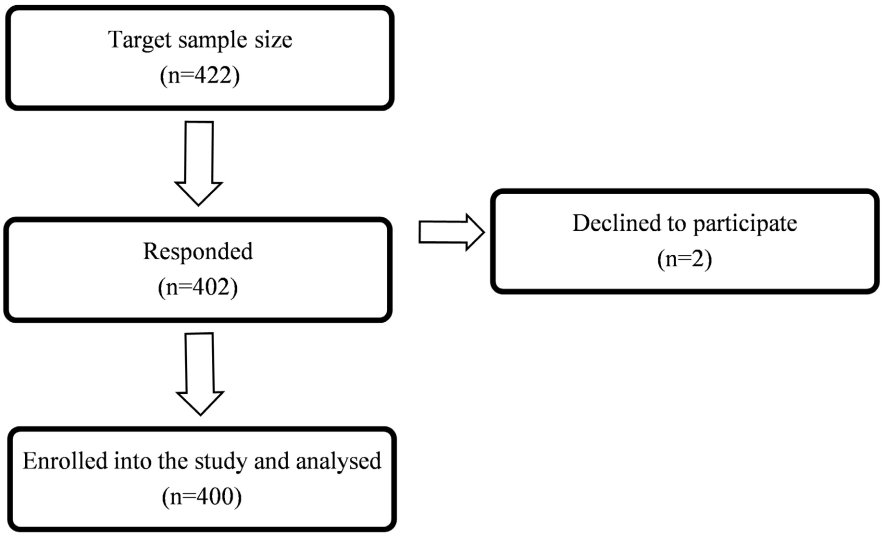

Figure 1. Study flowchart.

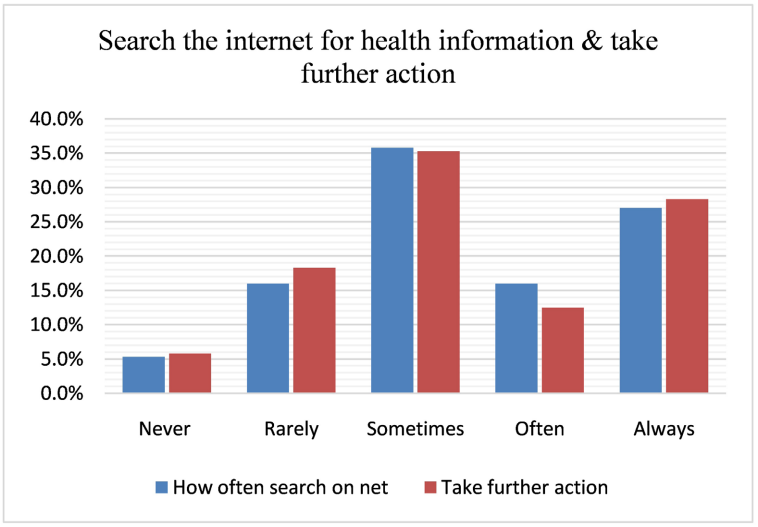

Figure 2. How often participants searched the internet for health information and took further action.

Table 3. Factors associated with health-seeking behavior among health professional students.

Variables	Healthcare seeking behavior (HSB)		P-value
	Formal n (%)	Informal n (%)	
Gender			
Male	140 (60.9)	101 (59.4)	0.768
Females	90 (39.1)	69 (40.6)	
Age			
≤24 yrs	189 (82.2)	129 (75.9)	
≥25 yrs	41 (17.8)	41 (24.1)	0.123

Continued

Religion			
Christians	197 (85.7)	149 (87.6)	0.564
Other denominations	33 (14.3)	21 (12.4)	
Marital status			
Single	214 (93.0)	154 (90.6)	0.395
Married/engaged	16 (7.0)	15 (8.8)	
Nun	0 (0)	1 (0.6)	
Academic year			
Year 1 or 2	155 (67.4)	82 (48.2)	0.000
Years 3, 4 and 5	75 (32.6)	88 (51.8)	
Program of study			
Bachelors	124 (53.9)	108 (63.5)	0.054
Diploma/Certificate	106 (46.1)	62 (36.5)	
Course of study			
Nursing and Midwifery	115 (50.0)	71 (41.8)	0.103
Medicine and surgery, Pharmacy, Clinical medicine	115 (50.0)	99 (58.2)	
Institution			
BSU	60 (26.1)	47 (27.6)	0.727
KIU	170 (73.9)	123 (72.4)	
Factors that hinder formal healthcare-seeking behavior			
Inadequate upkeep for healthcare			
Yes	136 (59.1)	101 (59.4)	0.955
No	94 (40.9)	69 (40.6)	
Being too busy			
Yes	53 (23.0)	56 (32.9)	0.028
No	176 (77.0)	114 (67.1)	
Delays at the health facility and long procedures			
Yes	119 (51.7)	89 (52.4)	0.903
No	111 (48.3)	81 (47.6)	
The medical environment is not favorable			
Yes	68 (29.7)	45 (26.5)	0.480
No	161 (70.3)	125 (73.5)	
Lack of Health insurance policy			
Yes	105 (45.7)	63 (37.1)	0.085
No	125 (54.3)	107 (62.9)	

Continued

The price of drugs is high			
Yes	129 (56.1)	88 (51.8)	0.391
No	101 (43.9)	82 (48.2)	
Failure to get a medical note from the admin			
Yes	53 (23.0)	30 (17.6)	0.188
No	177 (77.0)	140 (82.4)	
The illness/disease is minor			
Yes	79 (34.3)	94 (55.3)	0.000
No	151 (65.7)	76 (44.7)	
Factors that promote formal healthcare-seeking behavior			
Bills are/were paid for			
Yes	69 (30.0)	66 (38.8)	0.065
No	161 (70.0)	104 (61.2)	
Accessing the health care facility is/was easy			
Yes	137 (59.6)	81 (47.6)	0.018
No	93 (40.4)	89 (52.4)	
The medical environment was encouraging/motivating			
Yes	94 (40.9)	62 (36.5)	0.373
No	136 (59.1)	108 (63.5)	
Someone encouraged me			
Yes	67 (29.1)	53 (31.2)	0.659
No	163 (70.9)	117 (68.8)	
The illness needed/if it will need quick attention			
Yes	161 (70.0)	116 (68.2)	0.705
No	69 (30.0)	54 (31.8)	

HSB than participants in higher classes (year 3, 4 and 5) of the academic year (OR = 0.454, P < 0.001, 95% CI = 0.296 - 0.696). Participants who mentioned being too busy were more likely to have informal HSB than those who never mentioned it. (OR = 1.622, P = 0.049, 95% CI = 1.002 - 2.624).

Participants who mentioned minor illnesses were 2 times more likely to have informal HSB than those that did not. (OR = 2.461, P < 0.001, 95% CI = 1.592 - 3.804). Participants who mentioned easy access to the health facility were less likely to have informal HSB than those who never mentioned it as a factor. (OR = 0.447, P < 0.001, 95% CI = 0.287 - 0.696). (Table 4)

Table 4. Predictors of healthcare seeking behavior among health profession students.

Variables	OR (95% C.I)	P-value	AOR (95% C.I)	P-value
Academic year	0.453 (0.296 - 0.695)	0.000	0.454 (0.296 - 0.696)	0.000
Being too busy	1.62 (1.002 - 2.621)	0.049	1.622 (1.002 - 2.624)	0.049
The illness being minor	2.465 (1.597 - 3.803)	0.000	2.461 (1.592 - 3.804)	0.000
Ease access to the health facility	0.447 (0.287 - 0.696)	0.000	0.447 (0.287 - 0.696)	0.000

5. Discussion

This study aimed to investigate the factors associated with health seeking behaviors of health profession students. We found that the more than half sought health care from physician or trained personnel as their first action to illness (57.5%). This could be because HPS can easily access the health facilities where they train from. This is justified by easy access to health facilities being associated with formal healthcare seeking behavior in this study. This is also in agreement with findings from a study among medical students in a teaching hospital in Nepal where 65% visited a health facility during the last sickness This was fairly a good indicator for more than half of the participants to seek formal healthcare [11]. However, these findings vary from those among university students in Lebanon out of whom 61.9% sought help from family members and friends while 35.7% sought health care from a physician or health facility [14].

Regarding the recent visit to the health facility, this study found out that the majority visited the facility to get treatment for an already existing illness. This implies that even among HPS, routine medical checkups and primary health care could be lacking. It's not clear whether they already knew their general health status or whether the majority had checked prior. This finding relates to a study on Preventive healthcare uptake in Nigeria, which revealed that less than 40% of people visited the hospital when they had less serious conditions [20].

This study found that more than half of the participants self-medicated during the recent illness. This wasn't unusual as many studies report the same behavior among health workers and HPS. For example in a study among medical students in Western Nepal, it was found that SM was practiced by 83.3% of respondents [21], while among doctors and nurses in Pakistan, SM was high in both groups; 100% among doctors and 99.7% among nurses. This could be because of experience and knowledge of common illnesses and treatments which may however not be the case with students [22].

The study also found the frequent use of the Internet by the participants to obtain health-related information. This is an expected finding, especially in this 21st century where the internet is accessed by almost every elite. The internet provides free access to information thus it is expected to be utilized. Other studies have also expressed similar findings of university students searching the in-

ternet for information related to their health [23] [24]. However, it poses a risk of dependence on such information further deviating from formal healthcare seeking behavior.

This study also found that four of the factors mentioned by participants; academic year, being too busy, minor illness, and access to health facilities were significantly associated with HSB. These factors are similar to those found in other studies, for example in a study in Uganda among university students, barriers to healthcare-seeking were long queues, poor customer care, lack of trust in the service, waiting to see if the health problem would resolve and lack of relevant information [12]. While among medical students in Nepal, 28% did not seek care thinking that the illness was minor [11].

In this study, the ease to access the health facility and being in a lower academic year promoted formal healthcare seeking. Easy accessibility to healthcare facilities like short distances from home, quick transport means, and quick health services encourage people to visit the facilities for healthcare. Other studies report accessibility and transportation as barriers to seeking medical help [11] [14] [25]. Being in a lower academic year could prompt students to seek formal medical care for fear of complications unlike the higher academic years (years 3, 4, and 5) who could be well versed with common illnesses and treatments thus feeling no need to seek formal healthcare. A study by Gyawali *et al.* revealed that knowledge about SM among medical students increased with an increase in education level [26].

On the other hand, minor illnesses and being too busy prompted participants not to seek formal healthcare. Other studies have reported a similar finding where participants did not seek care because they believed the sicknesses were minor [11]. This can be explained by the concept of perceived severity in the health beliefs model which stresses that the severity of the illness will trigger health-seeking action. Perceived barriers to seeking care would discourage an individual from seeking care, while easy access would promote it [27].

Additionally, participants being too busy to seek healthcare is surprising and could imply negligence in their personal lives. However, it could also be linked to the stressful and hectic nature of medical courses and the illness being less severe thus they post ponded to seek care as the illness resolved. Related findings were reported in different in a study about barriers to seeking medical care among medical students [28].

6. Conclusion

This study found that a bigger proportion of participants sought formal health advice upon getting ill. However, most participants visited a health facility for curative rather than preventive purposes, practiced SM and sought health information from the Internet. Easy access to health facilities and lower academic years were predictor of formal healthcare seeking behavior while minor illnesses and being too busy were predictors of informal HSB among health profession students.

Recommendations

Health professional students should be taught to prioritize seeking proper healthcare from experts and avoid self-treatment in order to prevent potential health hazards like antimicrobial resistance, and learning institutions should have easily accessible student-friendly healthcare centers to support this behavior, particularly for upper-level students

Strengths

This study was entirely anonymous and participant privacy was ensured. This minimized response bias. The sample size was large to yield significant findings.

Limitations

This study looked at physical illnesses in general and was not specific to other forms of illness like spiritual and psychosocial illnesses. Particular diseases were not put into consideration. More studies should be conducted in regard to specific illnesses.

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Authors' Contribution

All authors participated in the proposal development, data collection and analysis. The first draft manuscript was written by Hannington Gamukama Wamaani, all authors read and commented on the previous versions of the manuscript and approved the final manuscript.

Conflicts of Interest

Authors do not have competing interests.

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