

# **Health Media Information on Self-Medication Use: Knowledge, Attitude and Practices**

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## **ABSTRACT**

Self-medication is a common practice worldwide, and inappropriate drug use is a significant source of concern that resulted from misinformation about medication use acquired from television, newspaper, the internet, social media, and radio station. This study aimed to assess the level of knowledge, attitude, and practices among 3rd-year medical students from Liceo de Cagayan University and determine the influence of these variables on the health-media information on self-medication. A descriptive-correlation and causal research study were conducted

with a total computed sample size of 209 using a stratified random sampling technique. The most common sources of health-related information were obtained from medical professionals followed by textbooks, and social media, in which internet sources equally impact the medical knowledge of the population acquired from textbooks. It has been recorded that medical students have a good level of knowledge, favorable behavior, and appropriate self-medication practice that influences their health-media information on self-medication. In addition, health-media information on self-medication use has shown a significantly moderate relationship with the knowledge, attitude, and practices of medical students, in which the level of attitude of medical students is the most critical predictor variable that influences their health-media information on self-medicating.

**Keywords:** health-media information, self-medication, knowledge, attitude, practices, medical students

## INTRODUCTION

Self-medication practice involves consuming medicines on one's initiative or the consultation of others without a healthcare professional (Alshogran et al., 2018). The World Health Organization (WHO) stressed that self-medication must be adequately taught and monitored by others to avoid drug-related issues like antimicrobial resistance, which is now a global problem, especially in developing countries where antibiotics are frequently available without a prescription. (Hague & Netherlands, 1998). In the Philippines, self-medication had long been practiced, which had even been considered the norm among Filipino health practices. This may be attributed to a number of factors, including socioeconomic status, lifestyle, medication accessibility, and the availability of medicinal products in developing countries.

Being a future medical practitioner, self-medication has a remarkable impact on medical students (Kumari, Toppo & Priyanka, 2003). However, the prevalence of self-medication has varied among medical students of different countries in earlier studies (Jazul JP, 2014; Sontakke SD, 2011; Klemenc-Ketis Z, 2010; Zafar SN, 2008) undertaken to ascertain the self-medication practices among medical students. However, since most of the studies were conducted in universities other than schools in Cagayan de Oro City, health media information on self-medication practices at Liceo de Cagayan University among Allied Health students remained uncharted. With this in mind, the present study was planned to determine the level of health media information on self-medication use among medical students at Liceo de Cagayan University. The result of the study helped to assess the knowledge,

attitude, and self-medication practices among medical students. Also, this would sensitize the student's awareness regarding the rational use of drugs and be guided in designing various health education strategies required to educate the students and the community as a whole.

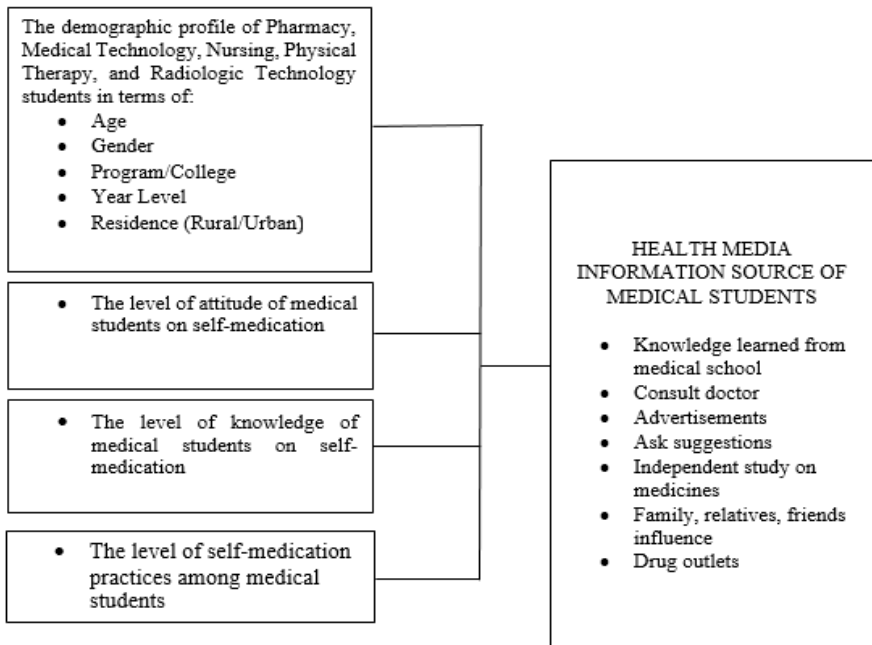
## FRAMEWORK

This research is anchored on multiple theories, namely, the Grounded Theory, which Anselm Strauss and Juliet Corbin developed with regards to the process of self-medication occurrence, and the Theory of Planned Behavior, developed by Icek Ajzen, to predict self-medication with over-the-counter (OTC) common drugs. In addition to that, there are also communication theories to explain health-related social media use and health behavior changes (Rosenberg D., 2017). These theories were bound to explain the influence of health media information on the level of knowledge, attitude, and practices on self-medication among medical students at Liceo de Cagayan University.

The qualitative grounded theory reveals that people sought to deal as quickly as possible with their experienced symptoms/illness according to their attitudes towards, their perceptions of diseases, and their economic and social problems. Results suggest that patients' attitudes towards conditions and physicians influenced their practice of self-medication along the process of self-medication. Using the theory of planned behavior to predict self-medication with over-the-counter analgesics, a study by Pineles et al. has able to explore the influence of beliefs about medicines and individual pain experienced as predictors of intent to self-medicate. The research has shown that the intention to self-medicate is most significantly predicted with the reported use of analgesics. Furthermore, over-the-counter pain medication was more likely to occur when the value of pain relief is more significant than concerns about harm. In the study conducted by Rosenberg et al. (2017) communication theories helped explain health-related social media use and health behavior change. The social media platform has been used to search for health information and communication purposes regarding health issues.

## INDEPENDENT VARIABLES

## DEPENDENT VARIABLES



*Figure 1.* Schematic presentation showing the interplay of variables in the statement of the problem

## OBJECTIVES OF THE STUDY

The study aimed to determine the level of knowledge, attitude, and self-medication practices and their relationship to the health-media information on self-medication use among Pharmacy, Medical Technology, Nursing, Physical Therapy, and Radiologic Technology students of Liceo de Cagayan University. Specifically, it aimed to attain (1) demographic profile of Pharmacy, Medical Technology, Nursing, Physical Therapy, and Radiologic Technology students in terms of age, gender, program/college, residence (rural/urban), source of health media information, (2) to determine the level of knowledge of medical students on self-medication in terms of definition of self-medication, knowledge about commonly used therapeutics on self-medication, knowledge about drug's safety dosage, side effects, and hazards due to overdosage (3) to determine the level of attitude of medical students on self-medication (4) to determine the practices of medical students on self-medication

in terms of frequency of self-medication use, health conditions treated with self-medication and drugs used for self-medication, reasons of self-medication practice and (5) to determine the health-media information of medical students on self-medication use.

## METHODS

A descriptive-correlational design and causal research design was utilized in the study. In particular, the relationship of the level of knowledge, level of attitude, and level of practices among medical students to the health-media information on self-medication were determined and among these variables, the best predictor of the dependent variable was also determined. A stratified random sampling technique was used to determine the sample size. This study was conducted through online surveying using the academic email address provided by Liceo de Cagayan University. To ensure the internal accuracy of the measurements of these instruments, checks on the reliability of the instruments have been calculated. Ethical procedures were fully observed by the researchers in all phases of the study. Before conducting online surveying using the Google form questionnaires, consent letters were emailed to the students through their academic email addresses. Also, formal letters were given to each Allied Health Departments (Pharmacy, Medical Technology, Nursing, Physical Therapy, and Radiologic Technology) to provide proper notice of the present investigation, explaining the purposes, procedures, and significance of the study to the respondents. Upon approval of the consent, the copy of the approved letter was attached to a separate letter addressed to the respected Deans from each department requesting permission to distribute the survey questionnaires, and google form survey questionnaires were distributed to the respondents.

## RESULTS AND DISCUSSION

Table 3, 4, 5, 6 and 7 shows the result of the demographic profile of Pharmacy, Medical Technology, Nursing, Physical Therapy, and Radiologic Technology students in terms of age, gender, program, residence and source of health media information, respectively.

Table 3

*Frequency and Percentage Distribution of the Participants Age | (N=209)*

<b>Age</b>	<b>F</b>	<b>%</b>
20	61	29.2
21	124	59.3
22	20	9.6
23	1	.5
25	1	.5
27	1	.5
29	1	.5
<b>Total</b>	<b>209</b>	<b>100</b>

Table 3 shows the frequency and percentage distribution of the participants' age. Among the 209 respondents, 124 (59.3%) were aged 21, 61 (29.2%) were aged 20, 20 (9.6%) were aged 22, while the remaining 4 respondents were aged 23, 25, 27 and 29, respectively. This result suggests that the majority of the third-year medical respondents were between the ages of 20-21, which is the average age of third-year students in the tertiary level based on the Philippines Education System, wherein two (2) senior high school years were added during their secondary level (CHED, 2016).

Table 4

*Frequency and Percentage Distribution of the Participants Sex | (N=209)*

<b>Gender</b>	<b>F</b>	<b>%</b>
Male	63	30.1
Female	146	69.9
<b>Total</b>	<b>209</b>	<b>100</b>

Table 4 reveals the frequency and percentage distribution of the participants' gender, in which 146 (69.9%) were female and 63 (30.1%) were males. Thus, the data shows that the majority of the respondents from the allied health programs were female, considering that more women than men were selectedly chosen from medical programs to participate in the present study. In fact, there are more women enrolled in medical school based on numerous demographic surveys related to enrollees in health-related programs (Bowers J.Z., 2021). This result is also supported by the number of total enrollees in Allied Health Programs of Liceo de

Cagayan University, and wherein females dominated the population than males.

Table 5

*Frequency and Percentage Distribution of the Participants Program/College | (N=209)*

<b>Program/College</b>	<b>F</b>	<b>%</b>
College of Pharmacy	28	13.4
College of Nursing	35	16.7
College of Radiologic Technology	23	11.0
College of Physical Therapy	13	6.2
College of Medical Technology	110	52.6
<b>Total</b>	<b>209</b>	<b>100</b>

Table 5 shows the total number of respondents per Allied Health Programs based on the frequency and percentage distribution. Out of 209 third-year medical students, 110 (52.6%) were Medical Technology students, 35 (16.7%) were Nursing students, 28 (13.4%) were Pharmacy students, 23 (11.0%) were Radiologic Technology students, and 13 (6.2%) were Physical Therapy students. The present study gathered a 100% response rate from the sample size computed per allied health programs using stratified random sampling. As supported by the data on the total third-year enrollees of Liceo de Cagayan University in the second semester of the school year 2020-2021, the highest number of third-year enrollees is from Medical Laboratory Science Department with a total of 240 students, followed by Nursing Department with 76 students, Pharmacy Department with 59 students, Radiologic Department with 51 students, and the least number of third-year students is from Physical Therapy Department with 29 students. In the present study, third-year students from allied health programs were selected.

Table 6

*Frequency and Percentage Distribution of the Participants Residence Classification | (N=209)*

<b>Classification</b>	<b>F</b>	<b>%</b>
Rural	81	38.8
Urban	128	61.2
<b>Total</b>	<b>209</b>	<b>100</b>

Table 6 provides the frequency and percentage distribution of the participants' residence classification. Among the 209 participants, the majority of the students (61.2%) reside in the urban area, whereas 81 (38.8%) students reside in the rural area.

Table 7

*Frequency and Percentage Distribution of the Participants Source of Health Information | (N=209)*

Sources	F		%	
	Yes	No	Yes	No
Printed advertisement	80	129	38.3	61.7
Social media (FB, Twitter, IG)	157	52	75.1	24.9
Drug Outlets	68	141	32.5	67.5
Textbook	157	52	75.1	24.9
Medical Professionals	180	29	86.1	13.9
Friends	82	127	39.2	60.8
Neighbors	29	180	13.9	89.1
Stranger	9	200	4.3	95.7

Table 7 presents the participants' common source of health information based on the frequency and percentage distribution. The most common source of information for which the respondents acquire health-related knowledge is from medical professionals (86.1%), followed by health information obtained from social media (FB, Twitter, IG) and textbooks (75.1%), friends (39.2%), printed advertisements (38.3%), drug outlets (32.5%), and the least common sources of health information were coming from neighbors (13.9%) and strangers (4.3%). The results showed that most of the respondents reported that they sought information or instructions about medicines from medical doctors or pharmacists as the completely trusted medical professionals in drug-related information. The second most commonly used source was the health information obtained from social media (FB, Twitter, IG) and textbooks. The data acknowledged that internet sources appeared to equally impact the medical knowledge of the population acquired from textbooks. The medium or means how the respondents obtained health-related information can be a factor that influences them in the decision-making related to their health, such as self-medicating.



Table 8

*Descriptive statistics of participant's level of knowledge of medical students on self-medication* (N=209)

Indicators	Mean	SD	Interpretation
1. Q1-Knowledge on definition of SM	4.11	.763	Moderately Knowledgeable
2. Q2-Knowledge about medicines:			
Q2a- Antipyretics	3.27	1.306	Knowledgeable
Q2b- Analgesics	3.75	1.162	Moderately Knowledgeable
Q2c- Antacids	3.40	1.264	Knowledgeable
Q2d- NSAIDs	3.30	1.315	Knowledgeable
Q2e- Anti-allergies	4.11	.903	Moderately Knowledgeable
Q2f- Decongestants	3.70	1.065	Moderately Knowledgeable
Q2g- Herbals	3.84	.925	Moderately Knowledgeable
Q2h- Antibiotics	4.24	.797	Highly Knowledgeable
3. Q3- Knowledge about:			
Q3a-Hazards due to overdosage	4.23	.885	Highly Knowledgeable
Q3b-Drug's side effects	4.07	.869	Moderately Knowledgeable
Q3c-Completing dose of the drug	4.12	.930	Moderately Knowledgeable
<b>Overall Mean</b>	<b>3.84</b>	<b>.726</b>	<b>Moderately Knowledgeable</b>

Table 8 shows the result of the level of knowledge of medical students on self-medication in terms of (a) knowledge about the definition of self-medication, (b) knowledge about commonly used therapeutics on self-medication, and (c) knowledge about the drug's safety dosage, side effects, and hazards due to overdosage. Table 8 shows the level of knowledge of medical students on self-medication based on mean and standard deviation. As presented in the data, it is observable that medical students are moderately knowledgeable on the definition of self-medication (mean 4.11). However, with regards to the commonly used therapeutics on self-medication, the respondents have shown different levels of knowledge. It has found out that medical students are highly knowledgeable about antibiotics (mean 4.24); moderately knowledgeable about anti-allergies (mean 4.11), herbals (mean 3.84), analgesics (mean 3.75), and decongestants (mean 3.70); and knowledgeable about antacids (mean 3.40), NSAIDs (mean 3.30) and antipyretics (mean 3.27). Also, based on the data, they were found to be very much aware on the knowledge about the risks or hazards due to overdosage when self-medicating (mean 4.23), with a good understanding of the knowledge about drug's safety dosage (mean 4.12) and side effects (mean 4.07). Therefore, the presented data shows an overall mean of 3.84, which describes the moderately good level of medical students' knowledge

on self-medication.

The present study has found out that medical students have a high level of knowledge on the prescription drug antibiotics. This suggests that proper education on rational antibiotic use is provided to these future physicians or healthcare professionals before entering the real world (Huang Y. et al., 2013). Based on the medical curriculum in the Philippines, adequate understanding about medicines, including antibiotics, are taught in the higher year level under clinical courses like pharmacology, microbiology, pathology, and even clinical exposure during the internship (Buke A.C. et al., 2003). In addition, with regards to antacids, antipyretics, and NSAIDs, the majority of the medical students are quite knowledgeable on the said class of medications. As supported by the prior related studies, the collected data suggest that although many of the students undergo almost daily pain, fever, or hyperacidity and then favor to self-medicate with commonly used therapeutics, they are still not familiar with the terminologies of drug classification. This is in accordance with the study done by Li T., Murtaza G., Azhar S. et al. (2014) on the ‘Assessment of Pakistan Students on the Choice of OTC Drugs,’ which gives an overall result that other students are not exposed to the medical terminologies of drug categories like, “antipyretics,” “NSAIDs” and “antacids.”

Table 9

*Descriptive statistics of participant’s level of attitude of medical students on self-medication | (N=209)*

Indicators	Mean	SD	Interpretation
1. Self-medication is acceptable for medical students.	2.97	1.128	Neutral Attitude
2. Medical students have good ability to diagnose the symptoms.	3.00	1.103	Neutral Attitude
3. Medical students have good ability to treat symptoms.	3.03	1.051	Neutral Attitude
4. Self-medication would be harmful if they are taken without proper knowledge of drugs and disease.	4.72	.643	Highly Favorable Attitude
5. Medical license would be essential for better administration of drugs.	4.63	.616	Highly Favorable Attitude
6. The course of medicines should be complete although the symptoms subside.	4.31	.817	Highly Favorable Attitude

Table 9 Continued

Indicators	Mean	SD	Interpretation
7. The pharmacist is a good source of advice/information about minor medical problems.	4.29	.812	Highly Favorable Attitude
8. Medical students are likely to bother their doctors with minor problems always.	3.15	.973	Neutral Attitude
9. We should be careful with nonprescribed over-the-counter medicines.	4.68	.517	Highly Favorable Attitude
10. Medical students should check the accompanied medication leaflet contain	4.57	.569	High Favorable Attitude
<b><i>Over all Mean</i></b>	<b>3.93</b>	<b>.374</b>	<b>Favorable Attitude</b>

Table 9 shows the result of the level of attitude of medical students on self-medication. The table above reveals the level of attitude of medical students based on mean and standard deviation. Respondents who strongly agreed to the attitude-related questions were categorized as having a highly favorable attitude, whereas those who agreed were categorized as having a favorable attitude, and finally, respondents were classified as having a neutral attitude if found to be undecided or unsure of the attitude-related questions. This categorization of respondents was adopted in the study conducted by Dilie A. et al. (2017). In general, a favorable attitude shows a positive assessment of the respondent's behavior towards the attitude-related questions. In contrast, a neutral attitude represents neither positive nor negative assessment (or a middle ground state) of the respondent's behavior towards the attitude-related questions.

In this study, medical students were observed to have a highly favorable attitude as they strongly agreed to the idea that improper self-medication practice without knowledge from health professionals can be harmful (mean 4.72); health advice from a pharmacist or any health professionals (mean 4.29) with medical license is an essential source of information about medical problems & drugs (mean 4.63), and medical students must check medication leaflet contain (mean 4.57) to be more aware and careful of the drug's safety and possible interactions with nonprescribed OTC medicines (mean 4.68) and be able to complete course of medication despite the relief of symptoms (mean 4.31). The prior data support these recorded results on their positive behavior favoring proper self-medication,

wherein medical students have a good level of knowledge on self-medication. As pharmacy students or any medical students, they are found to be well aware of the advantages and disadvantages of self-medication (WHO Report, 2015); including the good sources or medium of health-related information and the appropriate or rational medication use under the supervision of a doctor or any medical license professionals (Shankar P.R. et al., 2012). These medical concepts are taught under pharmacology and other clinical courses in the higher year level, which probably made them possess a highly favorable attitude. This information is reflective of the overall resulted level of attitude on self-medication among medical students as having a favorable attitude with a mean of 3.93.

Also, based on the data presented, medical students were recorded to have a neutral attitude as they were found to be undecided/unsure towards acceptance of self-medication among medical students (mean 2.97); having good ability to diagnose the symptoms (mean 3.00), and treat symptoms (mean 3.03), and always approaching doctors with minor medical problems (mean 3.15). These results suggest that medical students put a specific middle-ground state on these attitude-related statements, wherein they neither strongly agree nor disagree with the idea that self-medication is acceptable for medical students; that they are able to diagnose and treat symptoms; and that they always bother doctors with regards to minor medical problems.

Table 10

*Descriptive statistics of participant's level of practice of medical students on self-medication | (N=209)*

Indicators	Mean	SD	Interpretation
1. Take medicine immediately when you're not feeling well.	3.20	1.032	Moderately Practiced
2. Self-medication only when in emergency or major health problems.	2.47	1.225	Moderately Practiced
3. Self-medicating is frequently practiced at home during Covid-19 pandemic.	3.75	.999	Practiced
4. Use of herbal medicine when not feeling well.	2.88	.978	Moderately Practiced
5. Self-medicating only during minor or common health problems.	3.79	.899	Practiced
6. Take OTC drugs when not feeling well.	3.38	.928	Moderately Practiced

Table 10 Continued

Indicators	Mean	SD	Interpretation
7. Self-medicating with a consult from health professionals.	3.94	.964	Practiced
8. Self-medicating with guidance from health-related information.	4.02	.863	Practiced
9. Self-medicating with advice from family and friends when not feeling well.	3.69	.900	Practiced
10. Double-check the medicine being taken in the internet prior to self-medicating.	3.73	1.134	Practiced
<b>Over all Mean</b>	<b>3.45</b>	<b>.400</b>	<b>Practiced</b>

Table 10 shows the result of the level of practice of medical students on self-medication in terms of (a) frequency of self-medication use, (b) health conditions treated with self-medication, (c) drugs used for self-medication and (d) reasons of self-medication practice. Table 10 presents the level of practice of medical students on self-medication based on mean and standard deviation. In addition, the level of practice on self-medication among medical students was determined in terms of frequency of self-medication use (Questions 3), health conditions treated with self-medication (Questions 2&5), drugs used for self-medication (Question 4&6), and the reasons for self-medication practice (Question 1&7-10).

The present study has observed that medical students frequently practiced self-medicating at home during the Covid-19 pandemic (mean 3.75). Also, it has been found out that medical students practiced more self-medication during minor or common health problems (mean 3.79) than during emergency or major health problems (mean 2.47). In addition, taking immediate medicines like over-the-counter drugs (mean 3.38) or any herbal medicine (mean 2.88) is only moderately practiced among medical students. And it has recorded in this study that common reasons for self-medication practice among medical students include proper guidance and consultation from health-related information (mean 4.02) and health professionals (3.94); getting health advice from family and friends when not feeling well (mean 3.69); having a convenient and credible source of health information from internet sources (mean 3.73); and simply whenever they are not feeling well (mean 3.20), in which the latter is only moderately practiced by the medical students. Based on the overall mean of 3.45, medical students have practiced self-medication appropriately, facilitated by their good level of knowledge and favorable attitude on self-medication. As supported by the study conducted in Iran, there was a statistically significant association between the level of drug information and

the tendency of pharmacy and other medical students to self-medicate ( $p=0.005$ ) (Hashemzaei M. et al., 2021).

Table 11

*Descriptive statistics of participant's health media information of medical students on self-medication use | (N=209)*

Indicators	Mean	SD	Interpretation
1. Health related information from media influences my practice in self-medication.	3.64	.866	Moderately Acknowledged
2. Do not rely much on health information from media when self-medicating.	3.90	.840	Moderately Acknowledged
3. OTC drugs being advertised influences people to self-medicate.	3.98	.871	Moderately Acknowledged
4. Self-medication practice is unavoidable especially in remote places.	4.18	.835	Moderately Acknowledged
5. Self-medication may lead to severe and dangerous diseases if not practiced well.	4.44	.699	Highly Acknowledged
6. Nowadays, internet-based media platforms are one of the convenient means of health-related information.	3.87	.986	Moderately Acknowledged
7. Endorsers of medicines being advertised influence you to self-medicate.	3.00	1.171	Neutral
8. Medical professionals are always the best source of health-related information.	4.66	.631	Highly Acknowledged
9. My knowledge on health is being applied when self-medicating.	4.01	.763	Moderately Acknowledged
10. Health media information are very understandable.	3.97	.756	Moderately Acknowledged

Table 11 Continued

Indicators	Mean	SD	Interpretation
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Table 11 shows the result of the level health media information of medical students on self-medication use. Table 11 shows the level of health media information of medical students on self-medication based on mean and standard deviation. As medical students, they still highly acknowledged medical professionals as the best source of health-related information (mean 4.66), with a high level of awareness that self-medication leads to severe and dangerous diseases if not practiced well (mean 4.44). On the other hand, the majority of the respondents somehow agreed that presently, internet-based media platforms are one of the convenient (mean 3.87) and understandable medium/sources (mean 3.97) of health-related information, which may likely influence their practice in self-medication (mean 3.64). Thus, the data presented provide an overall result that the 3rd year medical students, with a good level of knowledge on self-medication, moderately acknowledged the influence brought by the health-media information on self-medication use, but still manage to evaluate the proper use of medications that are being advertised and understands well the negative consequences if self-medication is not practiced well.

Table 12

*The Relationship Between health-media information, Demographic profile, knowledge, attitudes, practice on self-medication use among medical student students | N = 209*

Variable	Correlation Coefficient	P-value	Interpretation
Age	.069	0.321	Not Significant
Sex	.034	0.625	Not Significant
Residence Classification	.058	0.404	Not Significant
Knowledge	.241**	0.000	Significant
Attitude	.284**	0.000	Significant
Practice	.271**	0.000	Significant

\*. Correlation is significant at the 0.05 level (2-tailed).

Dependent variable: *Health medial Information on self-medication*

Table 12 shows the result of the relationship between health-media information on self-medication use and; demographic profile, level of knowledge, level of attitude, and level of practices on self-medication use among medical student students. Table 12 shows the relationship between health-media information towards demographic profile, level of knowledge; level of attitude; and practices on self-medication use among medical students based on the Pearson correlation coefficient. The data above reveals no significant relationship between health-media information on self-medication and the demographic profile of medical students, including age, gender, and residence. Similar findings were also observed in the study conducted by Selvaraj et al. (2014), wherein demographic analysis (gender, religion, residence, and monthly household income) of respondents has no influence on the respondents' practices regarding responsible self-medication. Medical students are more aware and mindful of the special measures and precautions of the information on the medication that is being advertised in different mediums (textbooks, social media, newspaper, advertisements, etc.) during self-medication, and this level of health-media information has no significant association with their age ( $p=0.321$ ), gender ( $p=0.625$ ) and residency status ( $p=0.404$ ).

Furthermore, the present study has noted that health-media information on self-medication use shown a significantly moderate relationship with the level of knowledge ( $p=0.000$ ), level of attitude ( $p=0.000$ ), and level of practices ( $p=0.000$ ) of medical students. These results suggest that a good level of knowledge, favorable behavior, and appropriate practice amongst medical students influence their health information from media on self-medicating. In the Philippines, the Covid-19 situation that has greatly influenced social media regarding misinformation about medications resulted in increased self-medication use.

Table 13

*Regression Analysis for influence the health-media information on self-medication use among medical students*

<b>PREDICTOR</b>	<b>B</b>	<b>SE <math>\beta</math></b>	<b><math>\beta</math></b>	<b>T</b>	<b>p</b>
CONSTANT	2.181	.321		6.799	.000
Knowledge	.092	.038	.162	2.419	.016
Attitude	.209	.076	.191	2.751	.006
Practice	.177	.071	.173	2.482	.014

Notes:  $R^2 = .140$  ( $p < .05$ ),  $F\text{-value} = 11.148$   $p\text{-value} = 0.000$   
 Dependent variable: *Health medial Information on self-medication*



Table 13 shows the result on Which of the independent variables (knowledge, attitude, and practices) influences the health-media information on self-medication use among medical students. Table 13 shows the best predictor that influences health-media information on self-medication use among medical students using multiple regression analysis. Based on the presented data, the level of attitude of medical students is the most important predictor variable that influences their health-media information on self-medicating ( $\beta = .191$ ;  $p=.006$ ). Presently, medical students are more aware and mindful of the special measures and precautions of the information on the medication that is being advertised in media during self-medication. The positive behavior favoring proper self-medication amongst pharmacy students or other medical students greatly influences their decision-making on acquiring health information from media on self-medication use (WHO Report, 2015).

The other predictor variables of the health-media information on self-medication use include the level of practice of medical students ( $\beta = .173$ ;  $p=.014$ ), followed by the level of knowledge of medical students ( $\beta = .162$ ;  $p=.016$ ). The presented result shows the appropriate practices among medical students in terms of common ailments, medication, and reasons for practicing self-medication, and a good level of medical knowledge among students about medicines and diseases can also influence their choice on health information acquired from media regarding self-medication use. With a good level of medical knowledge, students are expected to give a proper judgment on the validity and reliability of the resources or information presented from different social media sites or other mediums of information.

As also supported by the theory of planned behavior to predict self-medication use, this present study can explore the influence the beliefs and practices of medical students about medication and individual pain experience as predictors of intent to self-medicate. This goes in accordance with the study conducted by Pineles et al. (2013) to predict factors that influence self-medication use of over-the-counter analgesics. In addition to that, there are also communication theories that explain health-related social media use and health behavior changes among recipients of information (Rosenberg D., 2017). Furthermore, another theory using qualitative grounded theory has explained that along the process of self-medication occurring, results suggest that patient's attitudes towards illnesses and physicians influenced their practice of self-medication use (Shridhar SB, 2018; Aoyama I, 2012).

## CONCLUSIONS

Being future medical practitioners, self-medication has a special impact on medical students. The study shows that the medical students who are equally exposed to the different medium of health information on self-medication are being appropriately practiced by the medical students, like the general population. Demographic profile of the respondent has no significant association to their knowledge, attitude, and self-medication practices. The present research has recorded the respondents' awareness about the various adverse effects of a drug overdose, including antibiotic resistance. This result ensures safer self-medication practices among medical students. With a good level of medical knowledge, they can contribute to spreading this awareness, which will benefit society. Also, this study has observed the favorable attitude among medical students that self-medication should be opted for only in appropriate situations and not inadvertently. This positive behavior favoring proper self-medication amongst pharmacy students or other medical students greatly influences their decision-making on acquiring health information from media on self-medication use. Consequently, the appropriate practices among medical students in terms of common ailments, medication, and reasons of practicing self-medication; a good level of medical knowledge among students about medicines and diseases also influences their choice of health information acquired from media self-medication use.

## RECOMMENDATIONS

Based on the findings of the study and conclusions reached, the following are recommended:

1. Since the study has not able to include all medical students from each year level in the institution, a bigger population is to be considered to show the more validated prevalence of self-medication in Liceo de Cagayan University.
2. Further research considering non-medical students enrolled in this institution as respondents to determine the influence of health-media information on self-medication to their knowledge, attitude, and practices, may also be conducted.
3. A focus study about self-medication practices of over-the-counter drugs among pharmacy students may also be conducted since among the population, pharmacy students are more exposed to detailed knowledge on the pharmacology of drugs.
4. Future researchers could utilize this study to conduct counseling programs about the potential risk of self-medication use.

5. Future researchers could utilize this study to create intervention programs to minimize the indulgence of students in improper self-medication practice.

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