

The Knowledge, Attitudes And Practice Of Self-Medication Among Senior High School Students.

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Abstract

Introduction: The study was undertaken to determine the knowledge, attitude and practice of self-medication among senior high school students in Accra, Ghana because that age group needs education on the adverse effect of self-medication most. However, the extent of the adolescent's awareness and prevalence of self-medication in Ghana is not well documented.

Methods: This was a questionnaire-based, descriptive study. Demographic data and information on knowledge, practice and overall attitude towards self-medication was collected from consenting senior high school students in two schools. Results of data analysis with SPSS version 21 and Microsoft Excel were expressed as frequency and percentages.

Results: A total of 150 third year senior high school students, ages 15-19 years participated in the study. The mean age with standard deviation was 17.9±0.8. Almost all (142/150: 94.7%) had some idea of self-medication. Main reasons for self-medication were, getting quick relief from symptoms (27.3%),

availability of drugs at home (20.7%) and the perception that there was no need to visit doctors for minor illness (21%). The common symptoms that influenced self-medication were headache (17.7%), body pains (15.8) and upper respiratory symptoms (13.6%). The major sources of advice concerning illness were pharmacists (41.3%), friends (32%) and doctors (14.7%). The types of drug most commonly used were analgesics and cough syrup.

Conclusion: The main reason for self-medication was getting quick relief from symptoms. The significant proportion of respondents were informed by informal sources concerning illness and self-medication. Therefore, formal education would be needed to inform adolescents about self-medication and its consequences.

Keywords: Adolescents, self-medication, senior high school

Introduction

Self-care is defined as the ability of persons and families to promote health, prevent diseases, maintain health and cope with illness and disabilities with or without the help of a certified Health-care

provider. A large percentage of people practice self-care and in certain instances this is done by means of self-medication.¹ Self-medication is the use of drugs to treat self-diagnosed medical conditions without prior consultation with an identified health

practitioner. Several benefits have been linked to appropriate and responsible self-medication, among them are increased access to medication and relief for the patient, the active participation of the patient in his or her own health care, better use of physicians and pharmacist's knowledge and skills. It also reduces burden on health care resources due to health expenditure from the treatment of seemingly minor health conditions.² However, self-medication cannot be considered as a completely safe practice, particularly in the case of irresponsible self-medication. Potential risk of self-medication practices includes: incorrect self-diagnoses, delays in seeking medical advice, infrequent but severe adverse reactions, dangerous drug interactions, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse.²

Self-medication is becoming an increasingly important area of concern within the health care system and it moves patients toward greater independence in making decisions about perceived minor illnesses and seeking professional care too late.³ Its prevalence is not only limited to Ghana but rather it is a globally identified problem. Majority of the individuals who embark on self-medication have insufficient knowledge about the dose, time of intake, side effects, effects of overdose, its safety margin and mode of administering the drug effectively and appropriately.³ It has been reported that about 60-80% of health problems are treated by self-medication.^{4,5,6} The rise in self-care has been attributed to a number of factors such as ready access to medications, increased availability of medicinal products, increased potential to manage certain diseases through self-care, demographic and epidemiological factors.⁵ Self-medication and health seeking behaviour patterns varies among different groups of people and are influenced by different factors like age, gender, education, family, society, availability of drugs, exposure to advertisement and the nature of the illness.⁷

Inappropriate use of medication results in the wasting of healthcare resources, microbial resistance, especially bacteria and adverse drug reactions.⁸

While irrational use of medicine carries more significance in the developing world, the problem has been investigated in only a few of these countries. In Ghana, there is a broad range of medications available on the market and acquiring drugs without a prescription is a common practice. Recent studies have shown resistance to many of the antibiotics available on the Ghanaian market and this could result in treatment failure and several clinical complications for the people practicing self-care.⁹ The use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continuous use of a prescribed drug for chronic or recurrent diseases or symptoms is considered an acceptable means of defining self-medication.¹⁰ According to WHO, it is extremely important that doctors have a good understanding about the characteristics and practices of self-medication in the population they serve.⁵ An individual's level of education is an important predictor of self-medication.¹¹ WHO classifies an adolescent as a person between 10-19 years.¹²

During Adolescence, the individuals are unable to fully comprehend the consequences of their behavior, which includes the use of medication. The current senior high school curriculum does not include anything on the judicious use of medicine. Therefore, investigation on self-medication among secondary school students is relevant because they represent a segment of the population that need some level of awareness. However, the extent of adolescents' awareness and prevalence of self-medication in Ghana is not well documented. The aim of the study was to determine the knowledge, attitudes and practice of self-medication among senior high school students and to know the common illness for which these students engage in self-medication. The common drugs used, to examine the knowledge of the adverse effects of self-medicated drugs and to examine the influence of health insurance on self-medication in order to help address the gaps in policies and programs that encourage right use of medications among the young people in Accra, Ghana.

Methods

This is a cross-sectional descriptive study conducted by the use of a self-administered questionnaire. The survey was conducted among students in Holy Trinity Cathedral and Ebenezer Senior High School in the Accra Metropolitan area from 15th January to 1st February 2018. The Metropolis is suitable for the study as it is the national capital of the Republic of Ghana and the schools being a preferred choice for many junior high school leavers both in Accra and beyond. The inclusion criteria was all students within the chosen clusters who were available during the data collection period. The exclusion criteria were sick students who were unable to give consent. Simple random probability sampling method was used to select one class from each of the three-year groups in the two schools. The purpose of the study was explained to the participants and respondents were made to complete a consent form on the questionnaire and append their signature. No personal identifying information was collected in the questionnaire. Participants had the right to withdraw from the study at any time or refuse to participate. Results of data analysis with SPSS version 21 were expressed as frequencies and percentages.

Results

A hundred and fifty students making up of 75 participants from each school participated in the study. The mean age was 17.9 years with standard deviation of 0.8 (range 15-19 years). Majority of the respondents were males ($n = 90$; 60%). Most of the respondents were Akans 73 (48.7%), the Gas were 43 (28.7%), Ewes were 27 (14.7%) and people of the Northern tribes were 12 (8.0%). Majority (89.3%) of the respondents were Christians, 10.7% were Muslim and no other religion was indicated. On basic conceptual understanding of self-medication, 94.7% had some idea of what self-medication meant.

Majority (49.3%) perceived self-medication as obtaining and consuming drugs without the advice of a doctor, 37.3% considered self-medication as the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms without

advice from a recognized health professional, 1.3% defined self-medication as the use of drugs for relief from any underlying disorder that results in addiction and 5.3% of the respondents had absolutely no idea of what self-medication meant.

Concerning first source of advice or information about illness and medication, 41.3% reported that they obtained advice from a pharmacist, 32% were advised by friends, parents or relatives, 14.7% and 2% received advice from the doctor and traditional healers respectively and 10% reported receiving advice from no one. Among the group of respondents who received no advice, 14% had information on illness and drugs from books, 28% had their information from the internet, 27% from past prescription and 31% had their information from advertisement. Out of the 150 respondents 73.3% practiced self-medication and this was more common among the male respondents than their female counterparts. Thus, out of the 110 respondent who practiced self-medication, 67 (60.9%) were males and the remaining 43 (39.0%) were females however, this difference was not statistically significant ($p = 0.1$). Reasons for self-medication are shown in table 1.

Table 1 Reasons for self-medication

Reasons	Number of responses	Percentage
Adequate knowledge about the illness	18	12.0
Adequate knowledge about the drug	21	14.0
Too busy to go to the hospital	4	2.7
Drugs are available at home	31	20.7
The hospital is too far away from home	2	1.3
No need to visit the doctor for minor illness	31	20.7
Gives quick relief	41	27.3
Privacy	1	0.7

Multiple responses indicated that, majority (27.3%) of the respondents practiced self-medication because they believe it offers them quick relief from

illness, some did not see the need to visit the hospital for minor illness and others stated the availability of medications at home making it easier to self-medicate (Table 1)

Headache, upper respiratory symptoms, stomach ache and bodily pains accounted for over 50% of the reasons for self-medication in the study population (table 2).

Table 2 Common illnesses that influence self-medication

Common illness that influence self-medication	Number of responses	Percentage (%) of responses
Headache	82	17.7
Cough, cold, catarrh	73	15.8
Bodily pains	63	13.6
Stomach ache	58	12.5
Malaria	42	9.1
Diarrhea	30	6.5
Skin symptoms	28	6.0
Menstrual problems	27	5.8
Fever	14	3.0
Vomiting	14	3.0
Eye symptoms	12	2.6
Allergy	10	2.2
Ear symptoms	8	1.7
Others specify	2	0.4
Total	463	100

Analgesics and cough syrup were the commonest drugs used for self-medication among other varied drugs used (Table 3). Main source of drugs was the community pharmacy (74%) and left-over drugs from home (14.7%). The rest got it online or from other sources. The dosage of the drug was known from the pharmacist.

Table 3 Type/class of drugs used for self-medication

Drugs used for self-medication	Frequency	Percentage
Pain killers	87	19.6
Cough syrup	62	13.9
Vitamin tablets	54	12.1
Oral Rehydration Salt	43	9.7
Antacids	33	7.4
Antibiotics	31	7.0
Topical agents	30	6.7
Anti-malarial	29	6.5
Anthelmintics	28	6.3
Herbal medications	21	6.3
Nasal or ear/eye drops	14	3.1
Antidiarrheal agents	12	2.7
I do not remember	1	0.2
Total	445	100

Among the students who engaged in self-medication, almost half, 47.3% confirmed that they knew few side effects of self-medication whereas 52.7% did not know any of the side effects of the drugs used in self-medication. Knowledge of side effects was gotten from product insert or from the pharmacist. More than half 52.7% and 39.3% of respondents indicated that they always or sometimes check drug instruction before self-medication respectively. However, only 32% indicated that they fully understood the instructions indicated in the package of drugs, whereas 64% partially understood and 4% did not understand instruction at all. Most students (62.7%) had never experienced any adverse reactions from any of the drugs used in self-medication while 34.0% of respondents had experienced some form of adverse reaction. Although 118/150 (78.7%) of the respondents had health insurance which was mostly under the National Health Insurance Scheme (NHIS), 82/118 (69.5%)

of them practiced self-medication. On question of acceptability of self-medication, majority (52.0%) found self-medication unacceptable, 14.7% were indifferent and 31.3% found it acceptable.

Discussion

The study revealed that almost all (94.7%) of the respondents had a basic conceptual understanding of the term self-medication. Abahussian et al reported that lack of uniformity in the definition of self-medication has led to variation in prevalence of self-medication.¹² This study therefore, presented respondents with the option of selecting the definition of self-medication they felt was appropriate amongst the option provided. It can be concluded that the understanding of the term self-medication was adequate with just 5.3% of respondents having absolutely no idea of what self-medication meant. This is similar to a study by Ali et al., among health care professionals.¹³ Respondent's first advice about illness came mostly from pharmacists (41.3%). This contradicts parts of Chambers et al. findings that most adolescents sought advice about illness from their parents. However, parts of the results confirm his findings that Physicians were among the least people that adolescents sought for information on illness and medication.¹⁴ In the study while some (32.0%) of adolescents consulted their parents on illness and medication, only 14.7% consulted physicians. However, knowledge about responsible self-medication is likely to be accurate if it is from a well informed source (physicians or pharmacist) and given that only about a third of respondents sought such information it can be predicted that not all the respondents would practice safe self-medication. In other studies, physicians were mostly cited as sources of information on medication.¹⁵ While other studies have shown that adolescents had access to home medicine cabinets or obtained their medicines from their parents, majority of our respondents reported to be self-medicating on their own recommendation.^{14,17}

Our results agree with existing results that name pharmacies as the most common sources of medication.¹⁶ In relation to problems associated with self-medication, majority (86.7%) of the

respondents knew about the problems of self-medication mainly as the risk of using wrong drugs and the risk of abuse of drugs. However, the source of such information mostly came from parents, friends and relatives and also from pharmacists or those working in the pharmacy. The role parents, friend and relatives play in informing adolescents on issues of side effects of medication has not been documented, however, it appears they simply assume an informal role. Pharmacists have been recognized to be capable of helping people to make informed self-care choices. The charter of collaboration between the Pharmaceutical Group of the European Community (PGEC) and the European Proprietary Medicines Manufacturers' Association (AESGP) noted the following: "The pharmacist is an adviser to the public on everyday health care and is a key figure in the supply and delivery of medicines to the consumer. He is a partner of the manufacturer of non-prescription medicines. Both share the common goals of service of high quality for the patient and encouragement of the rational use of medicines. The pharmacist in his professional capacity and in direct contact with patients is competent to provide sound advice on the medicines he supplies."¹⁷ The practice of self-medication among the respondents was 68.7%. This is consistent with some studies.¹⁸ However, the results contradict with findings observed by Lankenau et al. which says that the consumption of medicines is high among older female high school adolescents.¹⁹ Therefore, high school adolescents need to be educated on the proper pharmacokinetics of medicines, precautions and warnings, duration of use, and when to seek professional advice. These measures would improve the standard of responsible self-medication.⁵

Headache, cough, cold, sore throat and bodily pains were stated as the main illness for engaging in self-medication. Several studies have reported similar findings indicating the associations of self-medication with symptomatic treatment of these conditions.^{19,20,21} Analgesics (e.g. Paracetamol and Ibuprofen) and cough syrup were the main drugs used for self-medication and this may suggest the need for further research on the prevalence of

disorders which require these treatments in the various regions. There is the evidence that potential problems of abuse and overdose exist with analgesic use in these adolescents and the possibility of addiction with some cough medication.^{22,23} Majority of the respondents (52.0%) indicated that self-medication was unacceptable and disagreed with the practice. It is however arguable whether this negative attitude was based on actual knowledge of side effects/adverse experience of self-medication since the prevalence of the practice was found to be high. Unlike other aspects of self-care, self-medication involves the use of drugs but drugs have the potential to do good as well as cause harm²⁴. In this context, it is important to establish the right attitude toward self-medication.

Recent research has revealed that the prescription of over the counter drugs is an emerging trend and the use of medicines in adolescents is being regarded as part of a cluster of risk behaviours.²⁵ Most lifestyle habits are acquired during adolescents and most adolescents have inadequate knowledge about drugs, this group is therefore at high risk of irrational drug abuse.

The study has few limitations in that it is largely dependent on information given by respondents using a self-administered questionnaire. Also, although students were encouraged to complete the questionnaire independently, mutual influence between pupils could not be entirely ruled out. However, given the high level of response, the result should closely approximate the knowledge of self-medication among senior high school students in Accra.

In conclusion, the study shows the awareness of the prevalence of self-medication among adolescents in the Greater Accra Region and reveals that the main reason for self-medication was getting quick response from symptoms. A significant proportion of respondents were informed by informal sources concerning medication and this calls for sensitization of this group of the population on the judicious use of drugs.

Conflict of Interest

The authors declare that they have no competing interests.

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