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Self-medication for prevention and treatment of COVID-19 like illness in Nampula City, Mozambique

Gerson **AFAI**[1], Abacar **GELANE**[2], Auria Ribeiro **BANZE**[3], Erika Valeska **ROSSETTO**[4], Cynthia Semá **BALTAZAR**[3]

ABSTRACT

Medicines are an essential part of healthcare for maintaining life, but the lack of knowledge about the self-medication risks, and the health facility wait time can influence self-medication.

As part of the coronavirus disease 2019 (COVID-19) surveillance efforts, we used a semi-structured questionnaire of closed questions to conducted interviews in five pharmacies in Nampula City about self-medication increase, in June 2020, during the emergency of COVID-19. From March to June 2020, most of interviewed pharmacies (3/5) verified an increase in self-medication. The most common medicines bought by the costumers were anti-flu (4/5) and antibiotics (3/5). People who self-medicated reported flu-like-symptoms (5/5) and cough (4/5). We recommend pharmacies to refer people who were seeking to self-medicate and who presented COVID-19-like signs and symptoms to the health facility for testing.

Index terms: COVID-19, Public health surveillance, Self-medication, Mozambique

INTRODUCTION

Nampula province has a population of about 5,483,382 inhabitants, most of them (3.715.849) living in the rural areas [1]. The province has a laboratory for the performance of reverse transcription-polymerase chain reaction (RT-PCR) tests for 2019 coronavirus disease (COVID-19) from all as health facilities.

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), which is the virus that causes COVID-19, and the influenza virus that causes influenza, are different pathogens but cause similar symptoms, such as fever, chills, cough, sore throat, runny nose, fatigue, headaches, and both can also evolve from mild to severe illness [2]. About 40% of people who have COVID-19 have mild or moderate disease which can be managed with antipyretics, such as paracetamol [3,4]. There may be several reasons for people to self-medicate, lack of knowledge about the risks of self-medicating, barriers to access medical care, and wait times at the health facility.

A study conducted in Maputo City, Mozambique, showed that people use self-medication bought in pharmacies and markets, without worrying about the risks of worsening the clinical aspects, and the main reason for use of non-prescribed medication was no need to attend a health facility [5,6].

There are several problems that can arise from self-medication, among them the risk of masking symptoms of underlying serious disease which can result in delays in proper diagnosis and treatment, risk of dependence and abuse,

[1] Mozambique Field Epidemiology Training Program, National Institute of Health, Maputo, Mozambique. E-mail:
[2] Nampula Provincial Health Directorate, Nampula, Mozambique
[3] National Institute of Health, Maputo, Mozambique
[4] MassGenics assigned to Mozambique Centers for Disease Control and Prevention, Maputo, Mozambique

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inadequate or excessive dosage and drug resistance [7,8]. The purchase of medicines in private pharmacies may be more accessible to a specific social group, and this may also suggest viral circulation in a specific social group. As of 22 June 2020, 52% (383/737) of positive COVID-19 cases in Mozambique were asymptomatic, and the sero-epidemiological survey of SARS-CoV-2 conducted in Nampula City, 66% (4.466/6.272) of people exposed to SARS-CoV-2 did not have symptoms of COVID-19 [9,10]. In the context of strengthening COVID-19 surveillance in a community transmission scenario, on June 25th, 2020, interviews were conducted in five private pharmacies in Nampula City to identify the practice of self-medication for prevention or treatment of symptoms of COVID-19 in pharmacies in Nampula City.

METHODS

We conducted an observational exploratory study to characterize initially the problem of COVID-19 in the City of Nampula. The sample selection process was for convenience, based into the availability of pharmacies that were working on the date of the study. All pharmacies that were closed on the day of the interview were not included in the study.

The conducted interviews were to the pharmacists who were working in the pharmacies, using semi-structured questionnaire of closed questions, in five pharmacies in Nampula City about self-medication increase in 25 June 2020, during the COVID-19 emergency. The questions were related to: the perceived increase in the purchase of over-the-counter drugs after the emergence of COVID-19; the most commonly purchased drugs in pharmacies after the emergence of COVID-19; and the symptomatology presented by people who went to buy drugs.

The collected data were introduced in Microsoft excel spreadsheet. Since it was a small sample, the study was limited to analysis through proportions, presented in tables, and no inference of results was made. As this was an emergency investigation for COVID-19 response there was no need for ethical approval.

RESULTS

The main findings (Table 1) identified that since the announcement of the first COVID-19 case in Nampula, 60% (3/5) of pharmacies have seen an increase in the purchase of medicines for self-medication. The medicines regularly more purchased were: anti-flu, cited by 80% (4/5) of the pharmacies, and antibiotics in 60% (3/5) of the pharmacies.

The flu-like-symptoms (100%; 5/5), cough (80%; 4/5), and fever (60%; 3/5) were the most COVID-19 symptoms reported by the customs in the pharmacies. Symptoms such as arthralgia and asthenia were less reported. Other symptoms such as throat irritation/pain, difficulty breathing, chest pain and no smell or taste were not reported by pharmacy patients.

In 80% (4/5) of the pharmacies reported that either the customers already knew which medicine they wanted or bought by indication of the pharmacy itself, while in the other 1/5 pharmacies the customers came only knowing which medicine to buy.

Table 1. Self-medication for COVID-19 according to pharmacy staff interviews, Nampula City, Mozambique, June 2020.

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	N=5	%
Perception of increased self-medication practice		
Yes	3	60
No	2	40
Most purchased self-medication in pharmacies		
Anti-flu	4	80
Antibiotics	3	60
Analgesics	2	40

Table 1. Self-medication for COVID-19 according to pharmacy staff interviews, Nampula City, Mozambique, June 2020.

	N=5	%
Vitamins	2	40
Antiallergic	2	40
Anti-inflammatories	1	20
Anti-coughs	1	20
Symptoms often most reported by the pharmacy customers		
flu-like-symptoms	5	100
Cough	4	80
Fever	3	60
Joints pain	2	40
Asthenia/fatigue	1	20
Purpose of the purchase of the medicinal product		
Prevention	0	0
Treatment	0	0
Both	5	100
Decision to purchase the medicinal product		
By indication of the pharmacy	0	0
I already knew what I wanted	1	20
Both	4	80

DISCUSSION

The increase in self-medication observed in the pharmacies visited in the city of Nampula, after the announcement of the first cases of COVID-19, may be the result of people's fear of seeking health services, being the health facilities the places with crowds of people.

Anti-flu were the drugs that pharmacies reported to have been most purchased, possibly due to people's need to self-medicate to feel protected from COVID-19. Many studies conducted about self-medication refer to antibiotics, analgesics and anti-flu drugs as being the most used for self-medication, and they can be purchased in pharmacies or in formal markets [5–7,12,13,15]. In most pharmacies, people bought the medicine knowing the name of the medicine, or through the orientation of the pharmacist. A study conducted in Mozambican pharmacies found that when patients know the name of the drug, pharmacists sell it without requiring a prescription 11. People who buy medicines for self-medication can be influenced by previous successful medical treatments of a particular disease with the same medicine. The television advertisements about medicines, the advice of friends or family, the indication of a pharmacist or clinician were reported as some sources for the knowledge of drugs purchased by some people without prescription [12–14].

Cough, and fever are common symptoms for diseases such as malaria and influenza. Mozambique is endemic for malaria and could be the reason that people who bought medicine, for fever relief, for example, were not related with COVID-19. Studies conducted in other countries demonstrated headache, cough, fever were the symptoms that most contributed to the demand for self-medication [11–13].

CONCLUSION

The self-medication might be contributing to an underestimation of COVID-19 cases as people who self-medicate might not need to be tested for COVID-19 because they are treating their symptoms. Pharmacies can positively impact the response to COVID-19 by referring people who seek to self-medicate due to COVID-19 like symptoms to get tested at a health facility. More studies with national representativeness sample should be conducted

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