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CASE STUDY

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Raising awareness on the realities of antibiotic use through a public engagement-reflection based assignment

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I. INTRODUCTION

Antimicrobial resistance has been considered a "silent" global pandemic of magnitudes similar to climate change. However, just as climate change, awareness and understanding of the public on this needs to be increased. Recent work from Sri Lanka indicates the same (Gunasekera et al., 2022). World Health Organisation (WHO) also recommends that awareness should be increased among those involved in antibiotic prescription as well as consumers and that this should be made part of the core curriculum in professional training (World Health Organisation, 2023). Those studying in health-science related streams and other biology related streams tend to take knowledge on concepts like "microorganisms", "infectious diseases" and "antibiotics" as granted. As they are taught these concepts, or they revise what they learnt in school once again in the university, they assume that the others may also have an acceptable level of understanding on these key concepts. This leads to a communication gap between the two groups of people, the ones who have formal education on concepts like "microorganisms", "infectious diseases" and "antibiotics" and the ones who do not have such education. Therefore, we find that health education materials are not targeted to the level of simplicity that is required by the general public.

The target audience for the assignment in this particular course were from a general biology background, with no training in health-sciences in the university. For these students, a course on "Bacteria of Medical Importance" was commenced in the first semester of the third year. This included introductory lectures on antibiotics, antibiotic sensitivity testing and antimicrobial resistance. The course was conducted by the staff of the Department of Microbiology, Faculty of Medicine, University of Peradeniya, Sri Lanka and the given assignment was designed and conducted by the author.

This activity was planned as an assignment with a reflective component, so that the undergraduates who follow the course would get a first-hand experience in the extent of ignorance that is there regarding antibiotics and their use in the community.

II. METHODS

The assignment being described was developed aiming at increasing the awareness among the participants on the ground reality about the public perceptions on antibiotic use and resistance. At the same time, the activity also aimed to develop reflective practices among the students.

The assignment included the following simple instructions as shown in Table 1. Students were given a period of two weeks to complete the task and upload the content to the learner management system. Students were requested to inform the interviewee they had chosen that the assignment was part of their course work and were requested to get verbal consent for participation.

Once the assignments were submitted, evaluation was conducted and students were given feedback on their reflective write up. For this paper, their reflective write ups were coded and thematically analysed.

Talk to a family member/friend who has had no formal teaching on microbiology or health sciences and ask the following questions in English or in the language you converse in. Document the answers you get, translate to English. The last two questions are for you to answer.

• Age of the person spoken to
• Highest educational qualification of the person you spoke to
• Occupation of the person you spoke to (if a university student, state the course)
1.What is an antibiotic (open ended question)?
2.When did you last take an antibiotic?
a. Within week
b. Within a month
c. Cannot remember
3. How did you get that antibiotic?
a. A doctor prescribed it
b. I got it over the counter from a pharmacy
c. It was left-overs from home
d. Other: Please specify
4. What was the antibiotic you took?
a. Give the name:…….
b. Do not know
5. Name two other antibiotics you know of.
a. 1
b. 2
6. Have you ever taken antibiotics when you have had a cold?
a. Yes
b. No
7. What group of micro-organisms cause common cold?
a. Bacteria
b. Virus
c. Fungi
d. Parasite
8.
8.1 Do you think it is correct to take antibiotics for common cold?
a. Yes
b. No
8.2 Why? (Open ended question): ……..
•State one more question you would have liked to ask the participant (just state this without asking your informant): …….
•Your reflection on the answers you got in relation to combatting antimicrobial resistance (500 words): ……..

Table 1: The assignment

III. RESULTS

There were 11 students who took the said course and all of them submitted the assignment on time. The common themes and the narrative that emerged from the analysis of the reflections given by the participants follows.

The subjects interviewed by students were from varying backgrounds. And while some knew that viruses cause common cold other did not know or thought it was caused by bacteria. Nine of the eleven participants interviewed had stated that taking antibiotics for common cold was correct. The reasons given by the subjects interviewed were that doctors prescribe; therefore, antibiotics are indicated in common cold, antibiotics are more potent than pain killers, they give faster cure and boost immunity. Students reflected that the knowledge on antibiotics was poor among the subjects interviewed. Students identified that there is a need for education on this among the general public. There was a theme that emerged which queried the reason for medical officers continue to prescribe antibiotics for common cold as they have been equipped for the necessary knowledge.

IV. DISCUSSION

Reflection is a learned skill. This is not formally taught in many undergraduate courses in Sri Lanka or during secondary education. Therefore, some of the students in the course had written accounts on what is correct and incorrect in relation to antibiotic use or accounts on antibiotic resistance instead of writing a reflection as instructed. Some students did write reflections, still their reflections were mostly not in relation to the possible implications on combatting antimicrobial resistance, but on the answers given in general. Students were given feedback on their reflections.

However, from the reflections provided, a narrative could be derived as stated in the results section, which shows that collectively, their reflections do generate a

narrative that is useful. Therefore, from the next batch onwards, we plan to get the students to construct a narrative from their collective reflections.

This was the first time this assignment was used. We chose the questions used as in the local context, antibiotic misuse for upper respiratory tract infections is the commonest reason for antibiotic prescription as well as irrational use (Tillekeratne et al., 2017). But, globally too, upper respiratory tract infections are one of the commonest reasons for antibiotic prescriptions.

We plan to modify this assignment slightly and use it on other undergraduates or postgraduates who are following courses on antibiotics and antimicrobial resistance. As pre-activity exercise, we would like to conduct a briefing session on reflective writing, before the assignment is given to the students.

V. CONCLUSION

The given assignment can be modified and used to increase awareness on the ground realities about the understanding on antibiotics among students who are being educated on antibiotics and antibiotic resistance.

Notes on Contributors

The author conceptualised, conducted and evaluated the assignment and drafted the paper.

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Declaration of Interest

The author does not have any conflict of interest to declare.

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