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ORIGINAL RESEARCH

Learning session on Disease mongering- Student feedback

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ABSTRACT

Background: Disease mongering may divert scarce resources from pressing health problems. Reports of learning sessions on disease mongering are lacking in the literature. The Manipal College of Medical Sciences, Pokhara, Nepal admits students from Nepal, India and Sri Lanka to the undergraduate medical (MBBS) course.

Aim: The department of Pharmacology conducted a learning session on disease mongering for the third and fourth semester students. Student feedback about the session was obtained and student opinion was compared among different subgroups.

Methods: The session was conducted in small groups of 7 or 8 students each. The students were shown a documentary about the creation of a new disease called 'Motivational Deficiency Disorder'. There was a short presentation by the first author and the groups were given a set of exercises to solve and this was followed by a presentation and discussion. Student opinion was collected using a questionnaire. Basic demographic information was collected and the degree of agreement of the respondents with a set of 15 statements was noted using a Likert-type scale.

Results: 117 students participated; 67 were from the third semester. The median total score of the respondents was 53 (maximum possible score 75) and the interquartile range was 48.5-55.5. The score of most individual statements was 4. Nepalese and Indians were the major nationalities. Majority of students were self-financing and from urban areas. No significant difference in the median score was seen among the different subgroups.

Conclusion: The overall opinion about the session was positive. A single session can only serve as a preliminary introduction to this complex topic. The session should be continued and strengthened.

Key words: Disease mongering, Medical students, Small group learning

Key message

- Disease mongering can include turning ordinary ailments into medical problems, seeing mild symptoms as serious, treating personal problems as medical, seeing risks as diseases and framing prevalence estimates to maximize potential markets.
- Doctors have a vital role to play in combating disease mongering. Educating medical students about disease mongering is required.
- The department of Pharmacology conducted a learning session on disease mongering for the third and fourth semester students. The students were in favour of similar sessions in the future.

Introduction

Disease mongering can include turning ordinary ailments into medical problems, seeing mild symptoms as serious, treating personal problems as medical, seeing risks as diseases and framing Prevalence estimates to maximize potential markets [1]. Disease mongering is the opportunistic exploitation of both a widespread anxiety about frailty and a faith in scientific advance and innovation [2].

Disease mongering can generate huge profits for the pharmaceutical industry [3]. In developing countries, new drugs aggressively promoted for 'suspect' diseases may divert funds and attention from the treatment of infectious diseases and other important problems [3].

In Asia, many countries have populations which lack access to essential medicines. However, medicines are aggressively promoted for erectile

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dysfunction, male pattern baldness, irritable bowel syndrome and risk factors like hypertension and hypercholesterolemia in urban areas and among the rural elite [3]. Expensive skin preparations peddle the concept of eternal youth and beauty. Fairness creams promote a racist, western ideal of beauty and may be considered as an example of disease mongering [4]. Traditional medicines are widely promoted and used for baldness, erectile dysfunction and to ensure potency and virility.

Critics have said that the pharmaceutical industry is in league with medical doctors and patient advocacy groups to convince healthy people that their usually mild ailment urgently requires drug treatment [5]. However, it has been said that though doctors are often seen as perpetrators of disease mongering they may be actually be some of its most prominent victims [6]. Doctors and other medical professionals have an important role to play in combating disease mongering [7]. A genuine disentanglement from the pharmaceutical industry is required. Doctors should develop critical appraisal skills and avoid drug treatments for physiological states and life processes. They should generate knowledge about disease mongering. It has been suggested that doctors should be more proactive with regard to various problem areas in their relationship with the pharmaceutical industry [8].

The Manipal College of Medical Sciences (MCOMS), Pokhara, Nepal mainly admits students from Nepal, India and Sri Lanka to the undergraduate medical (MBBS) course. There are also a few students from other countries. Pharmacology is taught during the first four semesters in an integrated, organ system based manner with the other basic science subjects. The department of pharmacology has the objective of teaching students to use essential medicines rationally and trains students to critically look at pharmaceutical drug promotion. Class activities include critical analysis of drug advertisements and promotional material against the World Health Organization's Ethical Criteria for Medicinal Drug Promotion [9]. The session on 'Disease mongering' was introduced as an extension of the sessions on drug promotion.

A recent study in India had suggested that medical students were less aware about disease mongering compared to pharmaceutical students [10]. To sensitize medical students (third and fourth semesters) to the problem of disease mongering a learning session was conducted. Student feedback about the session was obtained using a questionnaire and student opinion was compared among different subgroups.

Methods

Recently a number of initiatives have been undertaken to combat disease mongering. In April 2006, the first international conference on Disease mongering was held in Newcastle, Australia. Professor David Henry, the organizer of the conference was kind enough to send us a DVD of the conference proceedings. This DVD was used during the learning session.

The session was conducted during the pharmacology practical. The students were informed of the topic a week in advance. Reference articles, opinion pieces and features about disease mongering were made available to the students in the college library. The students were divided into two batches for the practical sessions. Each batch was further subdivided into five groups of 7 or 8 students each.

The DVD contained a ten minute documentary on the creation of a new disease termed 'Motivational Deficiency Disorder' (MoDeD). Then one of the authors (PRS) made a twenty minute presentation on disease mongering emphasizing the important points. Then the groups were given a set of exercises to solve using the resources available in the college library. The students could also use the internet for obtaining further information. The students got around 45 minutes for the exercise. This was followed by student presentations, a discussion and inputs from the facilitators.

At the end of the session, students were explained the objectives of the study and invited to participate. A participant consent form explained the purpose and conduct of the study. Respondents who agreed to participate and signed the consent form were included in the study and invited to complete the questionnaire. The research was carried out in accordance with

the requirements of the Institutional Review Board of MCOMS.

Gender, nationality, method of financing of medical education, occupation of parents, semester of study and place of residence were noted. Student attitude towards the session was studied by noting their degree of agreement with a set of 15 statements using a modified Likert type scale. The total score was calculated for each respondent. Statements 3, 6 and 11 were negative and their scores were reversed while calculating the total score. The questionnaire used is shown in the Appendix.

The median scores were compared among different subgroups of respondents using appropriate non-parametric tests ($p<0.05$). Mann-Whitney U test was used for dichotomous variables and Kruskal-Wallis test for the others. Free text comments about the sessions were invited from the respondents.

Results

A total of 117 students participated in the study. Sixty-seven students were from the third semester while 47 were from the fourth semester. Three students did not indicate their semester of study on the questionnaire. The response rate of the third semester was 89.3% (67 of the 75 students) while of the fourth semester was 69.1% (47 of the 68 students). However, not knowing the semester of three students may have biased the response rate.

[Table/Fig 1] shows the demographic characteristics of the respondents. The maximum possible score was 75. The median total score in our study was 53 and the interquartile range was 48.5-55.5. Nepalese and Indians were the major nationalities. The majority of students was self-financing and from urban areas.

The median score was higher among females and among the Nepalese but the difference was not significant. Table /Fig 2 shows the median scores of the individual statements. The score for the majority of the statements was 4. The students were not in agreement with statement 3 that *'Disease mongering is not of much economic consequence'*. The agreement with statement 5 regarding the traditional medicine practitioners and with statement 6 about permitting direct to consumer advertising in South Asia was low. The maximum agreement was with the statement *'Doctors have an important role in combating disease mongering'*. There were no significant differences in the median scores among the various subgroups of respondents. So we have not shown details of the tests applied and the p values for different subgroups.

Table 1
Demographic characteristics of the student respondents

Characteristic*		Number (percentage) N= 117
Gender	Male	68 (58.1)
	Female	48 (41)
Nationality	Nepalese	44 (37.6)
	Indian	59 (50.4)
	Sri Lankan	10 (8.5)
Method of financing	Scholarship	23 (19.6)
	Self-financing	81 (69.2)
Semester	Third	67 (57.3)
	Fourth	47 (40.2)
Occupation of parents	Both doctors	8 (6.8)
	One doctor	21 (17.9)
	None doctor	81 (69.2)
Place of family residence	Urban	93 (79.5)
	Rural	10 (8.5)

* Certain respondents did not complete all the required personal characteristics

Table 2
Median score of individual statements

Statement number*	Median score (interquartile range)
One	4 (3.5-4.5)
Two	4 (3.25-4.25)
Three	2 (1-3)
Four	4 (3.5-4.5)
Five	3 (2.25-3.25)
Six	3 (1-4)
Seven	4 (3.5-4.5)
Eight	4 (3.5-4.5)
Nine	4 (3.25-4.25)
Ten	5 (4-5)
Eleven	4 (3-5)
Twelve	4 (3.5-4.5)
Thirteen	4 (3.75-4.75)
Fourteen	4 (3-5)
Fifteen	4 (3.5-4.5)

* Statements 3, 6 and 11 were negative and their scores were reversed while calculating the total score

The common free text comments were noted. The students wanted a student seminar to be conducted on the topic of disease mongering.

They welcomed the interactive nature of the session.

Discussion

Overall student opinion about the session was positive. The students were in favour of similar sessions in the future.

Many medical schools around the world are conducting sessions for medical students about pharmaceutical promotion [11], [12]. The department of pharmacology has been conducting an educational initiative which critically looks at the drug industry's promotional tactics for more than three years [9]. We decided to expand the sessions to include the topic of 'disease mongering'.

Recently around the world tentative steps to identify, understand and combat disease mongering and the selling of sickness has been taken [2]. Health Action International (www.haiweb.org) has been concerned about the blurring of boundaries between ordinary life and medical illness to expand markets for drugs [13]. The journal PLoS Medicine (www.plosmedicine.org) brought out a special theme issue on disease mongering in April 2006. In April 2006, the first international conference on disease mongering was held in Newcastle, Australia. A website on disease mongering (www.diseasemongering.org) was created. Medical students as future doctors have an important role to play in combating disease mongering. The educational session was initiated keeping all this in mind.

In Nepal, medical conferences continue to be heavily sponsored by the pharmaceutical industry and medical representatives (MRs) have unrestricted access to doctors [14]. We have had mixed success regarding educating professionals about looking critically at promotion [14].

The exercises given to students dealt with among other things with whether traditional medicine practitioners in South Asia are guilty of disease mongering, can the promotion of fairness creams in South Asia be considered as disease mongering and should direct to consumer advertising be made legal in South Asia. The students were of the opinion that disease mongering is of significant economic consequence. In South Asia, studies on the prevalence of disease mongering are lacking. The USA is the epicenter for both drug and drug marketing innovation [5]. In South Asia, India has a powerful pharmaceutical industry and Nepal is also rapidly developing her own industry. Complementary medicine is widely used and is the older system of medicine. In future, creation of diseases by various actors like pharmaceutical industry, complementary medicine practitioners, cosmetics industry and doctors among others may increase.

The students were neutral regarding permitting direct to consumer advertising (DTCA) in South Asia. A systematic review had shown that DTCA is associated with increased prescription of advertised products and there is substantial impact on patients' request for specific drugs [15]. No additional benefits in terms of health outcomes were seen. Proponents of DTCA state that it helps to inform the public about available treatments and encourages the appropriate use of drugs while opponents argue that the information provided is often biased and misleading and DTCA raises prescribing costs without strong evidence of health benefits [16]. The consequences of DTCA in South Asia with the large illiterate population may not be positive. The session was able to stimulate student debate on this topic.

There is a thin dividing line between disease awareness campaigns and disease mongering according to the respondents. In South Asia, companies often advertise in the media about common diseases, their symptoms, non pharmacological measures and lifestyle changes. They also bring out booklets about disease. Disease awareness campaigns can lead to improved diagnosis, better matching of treatment to the needs and preferences of patients and may increase compliance [17]. However, these campaigns combined with DTCA can lead to inappropriate prescribing which may be driven by misinformed patients and doctors may have to spend time explaining why a particular therapy is not appropriate [17].

The students were aware of the important role of doctors in combating disease mongering. This is to be welcomed. Patients often ask their doctors for their opinion about a particular treatment or drug advertised in the media and doctors have an important role in guiding their patients. The cosmetics industry has an important role in disease mongering which has been ignored with

the emphasis on the pharmaceutical industry. Beauticians and the cosmetic industry promote an ideal body image and emphasize drug treatment to attain and maintain the particular image [3]. Botulinum toxin (botox) is promoted to remove wrinkles and a number of treatments for baldness are also promoted [3].

The students agreed with the statement of fairness cream promotion being a form of disease mongering. Besides promoting a racist ideal of beauty the ingredients of these creams can cause serious health problems like nephrotoxicity, mercury toxicity and serious allergic reactions [18]. Female students had a more positive score while the Nepalese had a more favorable opinion about the session compared to other nationalities. The difference was however, not significant.

The study had limitations. Student opinion was obtained using a questionnaire. Detailed information on student attitude was not obtained. The 15 statements selected may not have covered all aspects of the student attitude. The response rate of the fourth semester was low.

The student suggestion of a seminar on disease mongering is being considered. We are considering having a presentation on disease mongering during the clinical meeting which is attended by the consultants and students in the clinical years of training. Due to the heavy curriculum it would be difficult to devote more than one session to disease mongering. However, a single session can only serve as a preliminary introduction to this complex topic. We plan to continue this session in the future for new batches of students.

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Appendix: Questionnaire used for obtaining student feedback about the session on disease mongering

Learning session on disease mongering – Student feedback

Sex: Nationality: Method of financing:
Both parents doctor/One doctor/None doctor Semester: Urban/Rural

For the following statements score using the following key (1 = strongly disagree with the statement, 2= disagree with the statement, 3= neutral, 4= agree with the statement, 5= strongly agrees with the statement.) Use whole numbers only.

1. The session made me aware of the problem of disease mongering.
2. Disease mongering is a big problem in South Asia.
3. Disease mongering is not of much economic consequence.
4. Women's sexuality has been hijacked for profit.
5. Traditional medicine practitioners may be guilty of disease mongering.
6. Direct to consumer advertising should be permitted in South Asia.
7. There is a thin dividing line between disease awareness campaigns and disease mongering.
8. Medicalising physiological phenomena can lead to huge profits for the pharmaceutical industry.
9. The session was informative and interesting.
10. Doctors have an important role in combating disease mongering.
11. 'Disease mongering' has been hyped by the media and activists.
12. The cosmetic industry may be involved in disease mongering.
13. The facilitators performed their roles effectively.
14. 'Fairness cream' promotion in South Asia may be considered 'Disease mongering'.
15. I would welcome similar sessions in the future.

Any other comments (Please use back of the sheet

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