

PERCEPTIONS FROM SECOND-YEAR MEDICAL STUDENTS ON DRUG PROMOTIONAL LITERATURE EXERCISE IN PHARMACOLOGY

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ABSTRACT

INTRODUCTION: This study covers the perceptions of second-year MBBS students on the importance of critically analyzing drug promotional literature (DPL) as part of their pharmacology training. Pharmaceutical companies' often uses DPL to influence prescribing behavior; they may lack balanced, accurate information and undermine rational drug use.

OBJECTIVE: To assess the perception of second-year MBBS students regarding drug promotional literature and its evaluation by using WHO criteria.

MATERIALS AND METHODS: In the study 150 second year MBBS students were enrolled only 125 participated in the study. The Pre validated questionnaire was given to the students having 20 items in 3 sections comprising Demographic, Perception and Understanding of DPL. Before starting the study IEC permission and consent of the students was taken. The Department of Pharmacology at SRMS IMS conducted a cross-sectional study using pre-validated questionnaires. 150 second-year MBBS students took part in the study. A 3-point Likert scale was used to gather responses, and descriptive statistics were used for analysis. **RESULTS:** Out of 125 students, 115 stated that they understood the importance of Drug promotional literature (DPL) as a use full tool for gaining knowledge about new drugs.

A total of 120 students were able to evaluate the references in DPL and agreed that this exercise should be included in future sessions. Additionally, 118 students agreed that the use of visuals such as graphs and images enhance the credibility of the material. However, only 95 students were able to identify bias in the content of DPL, and 94 felt confident in differentiating between reliable and unreliable information. Furthermore, 100 students acknowledged that DPL often exaggerates the benefits of drugs. A total of 115 students disagreed with the statement that DPL includes all the WHO criteria. All 125 students agreed that they received guidance from faculty on how to evaluate DPL, and after learning, they felt capable of performing the evaluation independently. Moreover, all 125 students agreed that the knowledge gained about DPL would help them critically assess materials presented by medical representatives in hospitals.

CONCLUSION: Students demonstrate critical and ethical evaluation skills toward DPL but remain cautious of its reliability. Enhanced training and regular exposure can further improve their competence and confidence.

KEYWORDS: WHO Criteria, Second professional, Rational Prescribing, Drug Promotional Literature (DPL), Perception.

INTRODUCTION

The pharmaceutical industry plays an important role in drawing the landscape of modern healthcare by introducing and promoting new therapeutic agents. The World Health Organization¹ (WHO) defines drug promotion as "all informational

and persuasive activities by manufacturers and distributors, the effect of which is to induce the prescription, supply, purchase, and or use of medicinal drugs". Due to the involvement of the ethical concerns, WHO established ethical criteria in 1988 for medicinal drug promotion to guide the development and evaluation of promotional drug literature (DPL)². Despite the presence of these guidelines, numerous studies have revealed DPL having deficiency in completeness, accuracy, and balance. They often emphasize on drug efficacy while minimizing or omitting information about adverse effects, contraindications, and scientific evidence^{3,4}. This can mislead healthcare professionals and contribute to irrational prescribing practices. Particularly in the absence of formal training on critical appraisal skills, medical students, are not immune to influence of such promotional content, ⁵. MBBS students of second-year are introduced to structured exercises evaluating DPLs using WHO criteria, as an educational intervention can sensitize them to the persuasive tactics used in marketing and develop the skills necessary to critically appraise promotional claims⁶. Additionally, these activities promote evidence-based reasoning and lessen dependence on potentially biased drug information sources, like pharmaceutical representatives. ⁷. Past research has demonstrated that students exposed to DPL appraisal exercises develop greater skepticism towards biased information and show improved understanding of the ethical dimensions of drug marketing⁸. Additionally, students' opinions and comments on these activities can provide insightful information about the efficacy of these instructional interventions and point out areas where the curriculum needs to be improved⁹. This study was conducted to evaluate the perception s of second year medical students on the relevance, utility and educational value in engaging in DPL exercise as a part of their pharmacology teaching programme. It is important to explain DPL to students after it is added in CBME¹⁰ curriculum so that they understand it's real-world relevance. It helps them to learn how drug information is clearly communicated to healthcare professional and patients' knowledge is essential for the careers in pharmacovigilance, clinical research and regulatory affairs. It promotes awareness about drug safety and correct usage. Understanding its importance increases the engagement and alignment with competency-based learning. Understanding their views is essential for refining pharmacology teaching strategies and ensuring future prescribers are better prepared to critically analyze drug-related information and uphold the principles of rational prescribing.

MATERIAL AND METHODS

A cross-sectional questionnaire- based study was conducted in the Department of Pharmacology, SRMS IMS for a period of 6 month. The study participants included **150** IInd phase M.B.B.S students. A questionnaire was created focusing on DPL concept, students' knowledge and perception towards it. The final questionnaire consisted of 3 sections. A consisting demographic details, section B having questionnaire on Perception of DPL questions, Section C having questionnaire on Understanding and Evaluation of DPL. The signed informed consent was taken from the students and the questionnaire was distributed and responses collected after 1 hr. The questions with a response were recorded based on **3-point Likert scale**. The forms filled by the students were collected and data was analyzed using Microsoft excel 2021. Institutional ethics committee approval was obtained prior to the commencement of the study. Data were collected, and result was evaluated in percentage.

RESULTS

TABLE 1: DPL PERCEPTION

S.NO	DPL Perception Statement	Agree	Neutral	Disagree
1	I understand the importance of critically evaluating drug promotional literature.	115	05	05
2	DPL is a useful tool for understanding new drugs and therapies.	115	06	04
3	I can identify biases in DPL content.	95	09	21
4	The use of Graphs and images in DPL enhances its credibility	118	01	06
5	I feel confident differentiating between reliable and unreliable information in DPL	94	08	23
6	I understand the ethical implications of drug promotional practices.	117	02	06
7	DPL often exaggerates the benefits of the drug.	100	20	05
8	DPL includes sufficient scientific evidence to support claims.	10	00	115
9	I can evaluate references and citations provided in DPL	120	00	05

	effectively.			
10	I find medically terminologies used in DPL difficult to comprehend.	116	00	09
11	I regularly read drug promotional literature	40	39	46
12	Should DPL evaluation exercise should be continued for future batches	120	03	02
13	The claims made in DPL seem reliable.	10	25	90
14	DPL helps me to know about the drug and enhances my trust	118	01	06
15	I feel confident identifying exaggerated claims in DPL.	99	17	09
16	Are DPLs following the WHO guidelines	00	00	125
17	Do students should be given more exercises on DPL exercises to improve evaluation outcome	19	13	93
18	I have received enough guidance from faculty to evaluate DPL.	125	00	00
19	Are You Able to do DPL exercise without any assistance	125	00	00
20	Adequate Knowledge will help me evaluate the DPL Submitted by The Medical representatives	125	00	00

A total of 125 students responded to the Drug Promotional Literature (DPL) perception survey. The majority of students i.e. 115 agreed that they understood the importance of critically evaluating DPL while only 5 students remained each as neutral and disagreed. Similarly, 115 participants agreed that DPL is a useful tool for understanding new drugs & therapies. However, only 95 students felt confident in identifying the biasness in DPL content, while 21 students disagreed on this aspect. 118 students believed that the use of graphs and images enhances the credibility of the DPL. When it came to assess the reliability of the information only 94 students expressed confidence in distinguishing between reliable and unreliable information in the DPL, while 23 disagreed. That 117 students were aware of the ethical concerns in DPL agreeing that they understood the ethical implications of the drug promotional practices. A significant number of (100) students believed that DPL often exaggerates the benefits of the drugs, Only 10 students agreed that DPL provides sufficient evidence to support their claims, while 115 disagreed in this context. A large majority (120) of students reported being capable of evaluating references and citations effectively. Despite these 116 students found medical terminologies used in DPLs difficult to comprehend. The regular reading of the DPLs was limited to only 40 students who agreed while 46 disagreeing on it. There was a good support by almost 120 students in continuing the DPL evaluation exercise for future batches. Students trust in DPL claims was low, as only 10 students found the claims reliable, while 90 disagreed. 118 Students firmly felt that DPL helped in enhancing their knowledge about drugs. Additionally, 99 students expressed confidence in identifying exaggerated claims. Notably, all 125 participants disagreed with the notion that DPLs follow WHO guidelines. When asked whether students should be given more exercises to improve DPL evaluation skills, only 19 agreed while 93 disagreed. However, All 125 students agreed that they received enough guidance from faculty and could perform the DPL exercise independently. Finally, all participants acknowledged that having adequate knowledge significantly aids in evaluating DPLs submitted by medical representatives.

DISCUSSION

The findings from this survey highlighted a positive perspective among the students regarding the evaluation and understanding of the DPL. Majority of students demonstrated awareness of the importance of critically analyzing DPLs and acknowledge its usefulness in learning about new drugs and therapies. Furthermore, the ethical dimension of DPL was well understood, indicating that the curriculum effectively sensitized students to ethical promotional practices. A notable proportion of 21 students reported difficulty in identifying biases, and 23 lacked confidences in distinguishing between reliable and unreliable information in DPLs. This gap is further supported by the fact that 115 students disagreed with the statement that DPLs include the sufficient evidence to support their claims. Moreover, only a small number of students found that claims in DPLs to be reliable. The low frequency of regular DPL reading also points toward a lack of engagement outside of structured academic settings. While most of the students were able to evaluate citations and expressed confidence in identifying exaggerated claims in DPLs. A significant no of students agreed that the DPLs not adheres to the WHO guidelines is a concern which underscores the need for better regulatory awareness. The finding that

116 students found medical terminology difficult to comprehend, suggests a potential barrier to full understanding of DPL content. Encouragingly, the unanimous agreement on receiving adequate faculty guidance and being able to complete DPL exercises independently suggests that the instructional design and support provided during the exercise were effective. However, the contradiction seen in the response to whether more exercises are needed, where 93 students disagreed raises questions about perceived redundancy or fatigue toward such exercises, despite their apparent benefit.

CONCLUSION

This study reveals that students appreciate the value and ethical considerations of DPL; there remains a need to strengthen their critical appraisal skills and understanding of regulatory standards. Most students feel supported and capable of evaluating DPLs independently, yet show a clear mistrust in the scientific validity and reliability of promotional claims. To address this, future training should emphasize evidence-based evaluation techniques, decoding of medical jargon, and familiarization with WHO ethical guidelines. Incorporating more engaging and varied DPL-related activities may also enhance student interest and long-term retention of appraisal skills. Continued reinforcement through guided exercises, perhaps with real-world DPL samples, may bridge the gap between theoretical knowledge and practical evaluation competence.

LIMITATIONS

As there are no other studies available on the perception we don't have the data of other medical colleges.

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