



## Knowledge, Attitude and Practice (KAP) Study Among Medical Students on Skin Disorder and Drugs Used in Skin Disorders: A Pre and Post Questionnaire Analysis

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### ABSTRACT

Skin disorders are a major global health burden, affecting individuals across all age groups and significantly impacting their quality of life. Dermatological conditions require appropriate pharmacological management, and medical students must possess a strong understanding of the drugs used to treat such conditions. This study aimed to evaluate the baseline knowledge, attitudes, and practices (KAP) of second-year MBBS students at G.S.V.M Medical College, Kanpur, regarding drugs used in dermatology, before and after a 2-hour educational intervention in the form of a lecture. A Pre and post-lecture questionnaire, designed to assess knowledge, attitudes, and practices concerning skin disorders and their treatments, was completed by 210 students. Results showed a significant increase in students' knowledge, with correct identification of skin conditions such as Herpes labialis and Scabies improving from 69% to 99.5% and 2.5% to 97.6%, respectively. Knowledge of dermatological drugs, including Acyclovir and corticosteroids, also showed marked improvement. In terms of learning preferences, students expressed a slight increase in preference for PowerPoint lectures, although direct patient interaction remained highly favored. The study found that the lecture improved students' confidence in managing dermatological conditions, with the proportion of students finding dermatology "often" difficult dropping from 37% to 16.4%. This study highlights the effectiveness of focused educational interventions in enhancing medical students' dermatological knowledge and suggests the integration of diverse teaching methods for better clinical preparedness.

**Keywords:** Skin disorders, medical students, dermatology, drug knowledge, educational intervention, knowledge, attitudes, practices, KAP study, dermatological pharmacotherapy, PowerPoint lectures.

### INTRODUCTION

Skin diseases are common and cause a huge disease burden globally. Collectively skin is the 18<sup>th</sup> leading cause of health burden worldwide and it was 4<sup>th</sup> leading cause of nonfatal health burden in 2010 globally<sup>1</sup>. Skin disorder are the major contributors of disease burden in society, it affects individual of all ages, neonates to elderly. Owing to its chronic nature, it causes serious impact on quality of life and financial status of the sufferer and his family<sup>2</sup>. The problems gets compounded with inappropriate and irrational use of medicine. In India, there are various problems in prescription pattern of drugs like irrational drug combinations, overuse of multivitamins, unnecessary use of antibacterial in fungal conditions and prescribing drugs from same class<sup>3,4</sup>. It contributes to the emergence of antimicrobial resistance. Dermatologists account for almost 5% of antibiotic prescriptions worldwide and most of the conditions require prolonged treatment<sup>5,6</sup>. Understanding the knowledge, Attitudes and Practices (KAP) of Medical students concerning the drug used in skin disorder is crucial for enhancing their educational outcomes and clinical proficiency. A KAP study provides insight into what students know, how they feel, and how they behave regarding drug used in dermatology, allowing educators to tailor intervention to improve learning and clinical practices.

**Background and Rationale** - Skin disorders, ranging from acne and eczema to more complex conditions like psoriasis and melanoma, are common and significantly impacts a

patient quality of life. Effective management of the conditions often requires the use of various pharmacological agents including topical and systemic medication. Medical Students as future healthcare providers, must be well versed in these treatment to ensure optimal patient care. A KAP study helps identify gaps in knowledge and barriers to proper practice, thereby guiding educational reforms.

**Objectives of study-** The Primary objectives of this KAP study are

1. Assess the baseline knowledge of medical students regarding drug used in skin disorder.
2. Evaluate their Attitude towards the use of these drugs
3. Determine the practices they intend to adopt or have adopted concerning dermatological pharmacotherapy.
4. Compare the changes in knowledge, attitude and practices Pre and post intervention, after Lecture on drug used in skin disorder.

### MATERIALS AND METHODS

#### Study Design and Setting

This study is a cross-sectional Knowledge, Attitude and Practice (KAP) questionnaire based conducted at G.S.V.M Medical college, Kanpur by the department of Pharmacology. The study participants were second year



MBBS students, There were 232 students participated in this study. This study employed a pre- and post questionnaire design to evaluate changes in KAP among medical students.

### Data Collection

A self designed structured questionnaire was framed , total 33 questions were design in online platform Google form after taking consent from students , link of this Google form was shared on their common Whatsapp group from their these students fill their questionnaire individually and lock their responses within 20 minutes. All the necessary instructions were given to students before submission of questionnaire.

Pre-Intervention questionnaire was shared on their common whatsapp group 20 minutes before an educational intervention ( 2 Hour Lecture). These questions assessed baseline knowledge, attitudes, and practices regarding drug use in skin disorder.

Post-intervention questionnaire administer after an educational intervention 2 hour lecture to measure change in KAP. Student have to submit their response within 20 minutes, after the lecture.

The questionnaire included a mix of multiple choice questions likert scale items , image based questions , open ended questions The knowledge section includes knowledge about various skin disorder, drug used in skin disorder and their mechanism of action, attitude and practices towards use of drugs in various skin disorder.

**Educational intervention-** The intervention consist of a comprehensive educational lecture of about 120 minutes was conducted in the form of power point presentation by a faculty member on the topic of drug used skin disorder.

**Inclusion criteria-** The student who completed the questionnaire within the time limit were included in this study

**Exclusion criteria-** The people who had an incomplete questionnaire were excluded from this study.

**Statistical Analysis-** Statistical Analysis was done through using MS Excel and Comparing the response in percentage Pre-Lecture versus Post Lecture and result were Mentioned in tubular Form and graphical representation through Bar chart.

### RESULTS

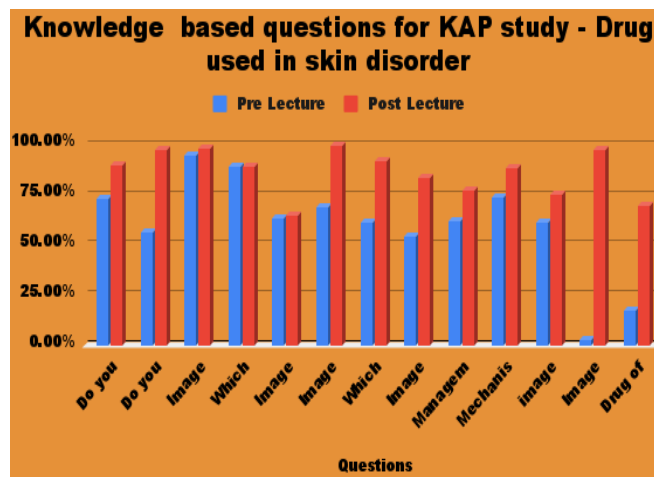
The study included 210 second-year MBBS students from G.S.V.M Medical College, Kanpur. They completed questionnaires before and after a 2-hour lecture on dermatological disorders and their treatments. Out of the 210 students, 189 filled out the questionnaire before the lecture, and 188 did so after.

The results show that the lecture significantly improved students' knowledge. Before the lecture, 72.9% of students knew about skin disorders, but this increased to 89.9% (Table 1) afterward. Knowledge about drugs used for skin

disorders also improved greatly, rising from 56% to 97.3%. (Table 1 and Fig 1.) Specific improvements included better identification of Herpes labialis (69% to 99.5%) and Scabies (2.5% to 97.6%) Table 1. and Fig 1.) Students' understanding of the drug Acyclovir's class went up from 61% to 91.7%, and their knowledge about treating Psoriasis improved from 61.9% to 77.3%. Recognizing Psoriasis increased from 53.9% to 83.4%, and understanding how corticosteroids work in Psoriasis treatment rose from 73.6% to 88.4%. (Table 1. and Fig 1.)

**Table 1:** Knowledge based question pre and post questionnaire

Questions	Pre Lecture (%)	Post Lecture (%)
Do you Know any skin Disorder	72.9	89.9
Do you know any drug used in skin disorder	56	97.3
Image based- Identification of Tenia Corporis (Ringworm)	94.7	98.4
Which class of drug is ketoconazole (Correct answer)	89.1	89.3
Image based- Identification of Vitiligo	63.3	64.5
Image based-Identification of Herpes labialis	69	99.5
Which class of drug is Acyclovir (Correct answer)	61	91.7
Image based-Identification of Psoriasis	53.9	83.4
Management of Psoriasis (correct answer)	61.9	77.3
Mechanism of action of corticosteroids in psoriasis (correct answer)	73.6	88.4
Image based- identification of Acne vulgaris Grade	61.3	75
Image based - Identification of Scabies	2.5	97.6
Drug of Choice for De worming in Scabies	17.5	69.7



**Figure 1:** Knowledge Based questions For KAP study - Drug used in skin Disorder.

### Attitude and practice based questionnaire result

Regarding learning preferences, 63.6% of students preferred learning through patient interactions before and after the lecture. However, there was a slight increase in preference for PowerPoint lectures, from 25% to 31.9%, and a drop in interest in self-study through books, from 6.8% to 1.6% (Table 2 and Fig 2.) Additionally, fewer students reported finding dermatology difficult after the lecture, with "often" difficulties dropping from 37% to 16.4%. (Table 2 and Fig 2) This shows that the lecture helped make learning easier and more effective

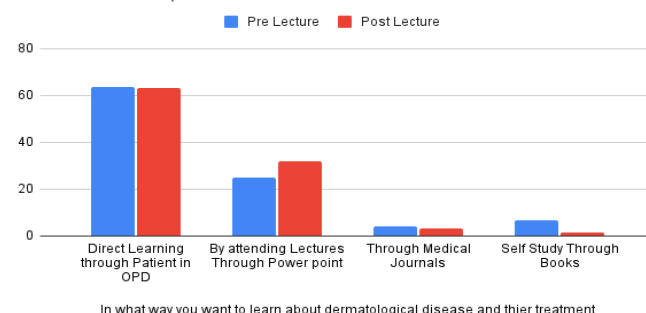
**Table 2: Attitude based questions**

In what way you want to learn about dermatological disease and their treatment	Pre Lecture	Post Lecture
Direct Learning through Patient in OPD	63.6	63.2
By attending Lectures Through Power point	25	31.9
Through Medical Journals	4	3.3
Self Study Through Books	6.8	1.6

**Table 3: Practice based questions**

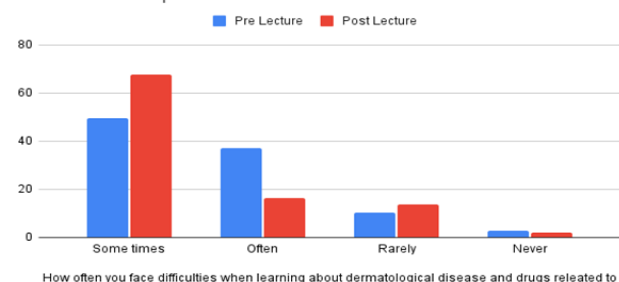
How often you face difficulties when learning about dermatological disease and drugs related to it	Pre Lecture	Post Lecture
Sometimes	49.7	67.8
Often	37	16.4
Rarely	10.4	13.7
Never	2.9	2.2

**Attitude based question**



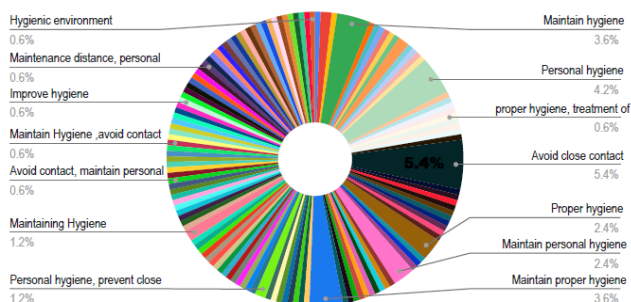
**Figure 2: Attitude Based Questions**

**Attitude based question**



**Figure 3: Practice Based Questions**

### What instructions to be given to the family members of a patient of scabies for prevention?



**Figure 4: Practice based question- Responses**

### DISCUSSION

This study shows that a focused educational lecture can significantly boost medical students' knowledge about skin disorders and the drugs used to treat them. Before the lecture, 72.9% of students were familiar with skin disorders, but this number increased to 89.9% afterward. Knowledge about skin disorder medications also jumped from 56% to 97.3% (Table 1). These improvements are crucial because understanding these topics is important for providing good patient care.

The lecture notably improved students' ability to identify conditions like Herpes labialis (from 69% to 99.5%) and Scabies (from 2.5% to 97.6%). This shows that the lecture was successful in helping students recognize and manage these conditions more effectively. Knowledge about Psoriasis management and the action of corticosteroids also improved, indicating that the lecture was thorough.

Although students' preference for learning through PowerPoint lectures increased slightly, their overall learning preferences stayed similar. This suggests that while lectures are helpful, incorporating other methods like hands-on practice and self-study might make learning even more effective.

The decrease in the number of students who found dermatology difficult—dropping from 37% to 16.4%—shows that the lecture helped clear up confusion and boost confidence. To keep improving, it's important to continue offering focused educational sessions and use a variety of learning methods. Overall, the study supports the value of targeted educational efforts in enhancing medical students' understanding of dermatology.

### CONCLUSION

This study demonstrates that a focused 2-hour lecture significantly enhanced medical students' understanding of skin disorders and related treatments. Prior to the lecture, 72.9% of students were knowledgeable about skin disorders, which increased to 89.9% afterward. Their grasp of drugs used for these conditions also improved markedly, rising from 56% to 97.3%.

The lecture notably increased students' ability to identify specific conditions. For instance, recognition of Herpes labialis improved from 69% to 99.5%, and identifying



Scabies surged from 2.5% to 97.6%. Furthermore, their knowledge about the treatment of Psoriasis and the action of corticosteroids also saw significant gains.

Regarding learning preferences, students slightly shifted towards favoring PowerPoint lectures, but their overall learning preferences remained largely unchanged. They continued to value direct patient interactions highly. The lecture also helped reduce the difficulty students experienced with dermatology, with those finding it “often” difficult dropping from 37% to 16.4%.

In conclusion, the lecture effectively increased students' knowledge and confidence in dermatology. While the lecture was beneficial, integrating it with practical experiences and self-study could further enhance learning outcomes. This study underscores the importance of targeted educational interventions in improving medical students' competence in managing skin disorders. By employing a mix of teaching methods, educators can better prepare students for real-world clinical challenges in dermatology.

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