



Graphic Medicine - An effective educational tool in Microbiology



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Introduction

The transition to **Competency-Based Medical Education Curriculum** necessitates Innovative Educational Approaches to enhance student engagement and critical thinking.



Aims

To introduce and assess the **effectiveness** of Graphic Medicine as a new teaching-learning tool in Microbiology and obtain the perception of undergraduate students and faculties regarding acceptance of this new tool.



Objectives

To introduce graphic medicine as a new teaching-learning tool in **Microbiology**

To evaluate the effectiveness of **Graphic Medicine** as a teaching learning tool on academic performance

To obtain the perception of undergraduate **students** and faculty members regarding acceptance of this new tool.

How does resistance develops? Mechanism:

1. Decreased permeability across cell wall (don't let antibiotics enter)

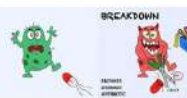


2. Efflux pumps
Bacteria possess Efflux pumps which mediate expulsion of drugs from the cell soon after their entry.



3. By enzymatic inactivation.

Bacteria inactivate antimicrobial agents by producing various enzymes like BETA- LACTAMASE, ACETYL TRANSFERASES etc.



4. By modifying target sites.

Target site of action of antimicrobial gets altered.



Methodology

Study design: Prospective interventional analytical study.

Setting: Department of Microbiology, Himalayan institute of Medical Sciences.

Sample size: 125 Phase-2 MBBS students (2021 batch).

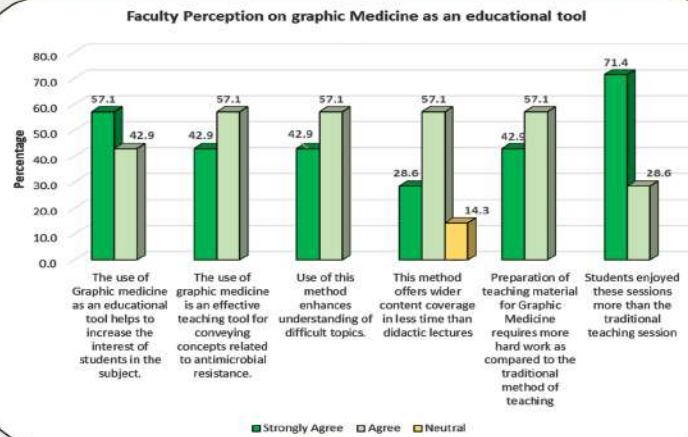
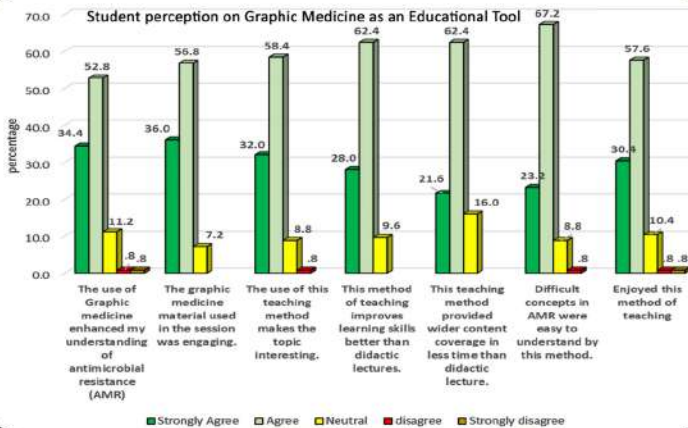
Sampling: Complete enumeration.



Results

Table 1: Comparative performance of Students

Topic	AMR		AMSP	
	Graphic Medicine	Traditional	Graphic Medicine	Traditional
TL Method	Graphic Medicine	Traditional	Graphic Medicine	Traditional
Count	55	59	60	65
Median (I.Q.R)	15(17-13)	13(15-11)	14(18-12)	13(14-12)
p-value	**<0.001		*<0.022	



Conclusions

Graphic Medicine can serve as a supplementary educational tool for teaching Microbiology.

Students expressed enthusiasm and interest in this approach.

Faculty found it useful and feasible if well planned.

Additional research is necessary to investigate the integration of this method into standard teaching



Limitations

Only Specific Topics were addressed

Knowledge retention over an extended period could not be assessed

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References

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