

# **Understanding and perceptions of final-year Doctor of Pharmacy students about generic medicines in Karachi, Pakistan: a quantitative insight**

## **Abstract**

### General objective

To evaluate the understanding and perceptions of generic medicines among final-year Doctor of Pharmacy students in Karachi, Pakistan.

### Methods

A 23-item survey instrument that included a question on the bioequivalence limits and Likert-type scale questions regarding the understanding and perceptions of generic medicines among the students was executed. Cronbach's alpha was found to be 0.62.

### Results

Responses were obtained from 236 final-year Doctor of Pharmacy students (n=85 from a publicly funded institute; n=151 from a privately funded institute). When comparing a brand-name medicine to a generic medicine, pharmacy students scored poorly on bioequivalence limits. More than 80% of the students incorrectly answered that all the products that are rated as generic equivalents are therapeutically equivalent to each other ( $P<0.04$ ). Half of the students agreed that a generic medicine is bioequivalent to the brand-name medicine ( $P<0.001$ ). With regard to quality, effectiveness, and safety, more than 75% of the students disagreed that generic medicines are of inferior quality and are less effective than brand-name medicines ( $P<0.001$ ).

More than 50% of the students disagreed that generic medicines produce more side effects than brand-name medicines ( $P<0.001$ ).

## Conclusion

The current study identified a positive perception toward generic medicines but also gaps in the understanding of generic medicines. Pharmacy students lacked a thorough understanding of the concepts of bioequivalence. Pharmacy academia should address these issues, which will help build confidence in generic medicines and increase the generic medicine use in Pakistan.

**Keywords:** safety, curriculum, efficacy