

# **Evolution of clinical pharmacy teaching practices in Pakistan**

Dear Editor,

I am writing this letter in reference to the concept paper published in Journal of Pharmacy titled "Evidence Based Improvements in Clinical Pharmacy Clerkship Program in Undergraduate Pharmacy Education: The Evidence Based Improvement Initiative" which discussed issues of clinical pharmacy teaching practices of Pakistan, and the steps taken by some institutions in developing the clinical pharmacy teaching infrastructure few years ago.[1] Further to this, in a letter published in Archives of Pharmacy Practice, the author recommended several points on which clinical pharmacy education could be improved in Pakistan. Pakistan's pharmacy education largely suffers from the gap between the course contents and learning goals in clinical pharmacy curriculum, and despite the revamp of Pharm.D degree program, the regulatory authorities have not provided enough opportunities for students to have hands-on experience of pharmacy practice.<sup>[2,3]</sup>

The evidence-based improvement (EBI) initiative is a set of guidelines with a robust methodology aimed at improving an undergraduate pharmacy student's practical experience in a health care setting. I was fortunate to get the opportunity to design the whole EBI initiative, and this point persuades me to share my experience of Pakistan's pharmacy education which eventually led to designing the EBI initiative. As a student of Pakistan's pharmacy education structure, I underwent the newly upgraded Pharm.D degree program during that time and was lucky to experience a professional state of the art teaching environment with practicing clinical pharmacists qualified from abroad. This eventually led to developing an interest of the subject and persuaded me to specialize in the same from abroad.

Upon completion of my specialization from abroad, I joined the teaching faculty of my mother institute which has upheld its reputation in introducing innovations in the clinical pharmacy infrastructure. [4,5]

Reflecting to my experience as a student, I took into account the shortcomings of the initial curriculum change introduced earlier and specifically designed structured modules with an aim to empower the undergraduates in those areas.

Since its execution, the EBI initiative has proved to be very fruitful in not only empowering the undergraduates in the clinical pharmacy practice but also in preparing them for higher studies involving postgraduate degree which also incorporate research as a core element.

It has not only improved the undergraduate students' ethics and communication with the health care professionals which were ignored initially and left on the shoulders of a clinical pharmacy preceptor, but also clinical pharmacy practice skills to a new level. It has further strengthened their knowledge of therapeutics by incorporating the evidence-based knowledge, disease state management, and medicines management as well which empowers them to actively participate in clinical discussions with the health care professionals locally and internationally by corresponding with various health regulating agencies of the world on critical issues.

The EBI initiative was designed with a scope beyond the undergraduate pharmacy education. It incorporated structured modules on the research with an aim of familiarizing an undergraduate with the whereabouts of research and to delve into the critical investigations in health-related matters. This is not only beneficial at the undergraduate level but will surely come in handy in further studies. The EBI initiative was implemented in the Faculty of Pharmacy, Ziauddin University by me. In a very short span, it has resulted in very positive outcomes.

After the pilot study of 4 months, the students were asked to give their feedback and share their experience. The overall 10 point student experience scale reported an overall score of 9.45 (standard deviation 0.739), and all students undergoing the EBI initiative (n = 42, 100%) opined positive about it. Almost half (n = 25, 59.5%) of the students strongly agreed on EBI increasing their attentiveness during lectures. An overwhelming majority (n = 34, 81%) of students strongly agreed on the chance to learn

something differently for the 1<sup>st</sup> time as more than half of them (n = 26, 61.9%) felt EBI initiative as an innovative approach in clinical pharmacy learning strategy. Moreover, majority (n = 30, 71.4%) found clinical pharmacy learning more easy through EBI initiative and felt satisfied (n = 18, 42.9%) and thoughtful (n = 15, 35.7%) for most part.

To summarize, I would say that the initial curriculum change introduced in Pharm.D earlier has somewhat, if not completely, fulfilled its objectives and ingrained clinical knowledge in the students. The EBI initiative is arguably a model for developing countries which are in the process of improving their clinical pharmacy teaching practices. With a very positive feedback from the students, it is hoped that this trend of innovation in the clinical pharmacy teaching will help us to bring the whole infrastructure of Pakistan's pharmacy education at par with the developed world.

# **Acknowledgment**

I appreciate the efforts of the journal in providing a forum to present, publish, and discuss possibilities in promoting quality in clinical pharmacy teaching in Pakistan's pharmacy education. I thank all the students of Pharm.D Batch-7 at Faculty of Pharmacy, Ziauddin University, Pakistan, for participation in EBI initiative.

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# **Conflicts of interest**

There are no conflicts of interest.

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