

Review of: "Attitudes, and Knowledge of Pharmacy and Medical/ Dental Students towards, and Barriers to Inter-Professional Education and Collaboration in the United Arab Emirates"

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Potential competing interests: No potential competing interests to declare.

Abstract is well written and summarizes the main methods and study findings well. One statement in the abstract results is not clear, possibly due to a grammatical error: "The majority of students of both groups agreed that share common goals and objectives when caring for the patient, their roles are complementary to one another and an introductory IP experience would have a positive impact on their understanding of collaboration and teamwork." I think it should say "... that shares common goals..." or "that shared common goals..." would make this read more clearly.

Introduction:

- Overall, the introduction is informative and well constructed to build to the purpose of the study.
- The WHO definition of IPE importantly includes the broader description that it is "...about, from, and with..." not just "with," as noted in the text.
- Typo: "improving" should be "improving."
- In the last introduction paragraph, the statement "In the University of Sharjah, United Arab Emirates (UAE), the educational environment is ready to heavily embark on IP learning" is somewhat confusing at this point in the paper. One would think that Sharjah is already conducting meaningful IPE given the interest in testing IPE attitudes, rather than being ready to "heavily embark." Not sure exactly what "heavily embark" really means. I suggest reconsidering the intent of this sentence and trying rewording for better clarity.

Methods:

- It would be helpful to be provided a list of actual electives that are commonly taken by the three colleges, and maybe descriptions of what the IP interactions were like in those classes (did they simply attend lectures together? Or did they get more interactive activities to work together?).
- Were students incentivized to complete the surveys in any way? How was coercion avoided so students didn't feel undue pressure to participate in the survey?

Results:

- Survey results are summarized in an organized manner across the text and several tables.

- One survey item in Table 2 is confusing: “The pharmacist should only dispense the drugs the doctor prescribes”--this item produced some opposing opinions between the two groups. But I cannot tell what the intent of the question was: Was it asking if dispensing drugs is the ONLY thing pharmacists should do? Or was it asking that the pharmacist should dispense just the drugs the doctor prescribes but no others (like over-the-counter drugs, or prescription drugs the physician didn't order?)? Depending on how someone interpreted that question, it could lead to very different opinions. Do you know for certain how respondents interpreted this, and can you include that explanation in your paper?
- In presenting results about the “barriers” in the text and Table 3, rather than noting that the general trend was that P students had higher agreement levels with all barriers than MD students, it might be more interesting to note the items that had the most agreement among each group: The highest level of agreement for P students was around “organizational obstacles” (68%) while for MD students it was “inadequate education and clinical training” (which, at 56%, was the only item for the MD group where there was majority agreement).
- Table 4 is not helpful and simply repeats all the data that is in Table 3. Was this intentional? Recommend this table be removed.
- Similarly, Table 5 simply repeats select survey items from Tables 1 and 3, but adds chi-square results. Not sure why an entirely separate table is needed here. Chi-square results can be added within Tables 1 and 3, and Table 5 entirely removed.

Discussion section:

- Overall, well generally written, with good connection from one topic to another, with a few exceptions noted below.
- Regarding the sentence “However, MD students showed some preservation about pharmacists changing their prescribed brand with a generic”: First, I am not sure that “preservation” is the right term here. This sentence seems to want to say (via “However”) that MD students have *reservations* about pharmacists changing brands to generics. However, I am unclear what this is based on. The linked statement in the Results says “More than half (55-75%) of the MD stated that they accept the pharmacist’s advice on dosage regimen, polypharmacy, drug interaction, two drugs of the same therapeutic class, and changing their prescribed brand to generic drug,” so it sounds like a large majority of MD students are totally fine with pharmacists switching brands to generics. Recommend this statement in the Discussion be re-worded to clarify.
- The statement “Another study also indicated that different obstacles can delay IPE development” is rather vague and doesn't say anything useful. Can you enhance this by including what some of the noted obstacles were, and elaborate on what “delay IPE development” means?
- Holistically, the paragraph starting “In general, results of the present study demonstrated...” (including the two bullets above) is rambling in its content. It covers barriers, solutions, competencies, admission attitudes, health care policies, training programs. The order of topics is not well connected. I think the best solution is to break this paragraph into 2 or 3 paragraphs and have a clear topic addressed in each one.
- Regarding the statements “An interesting example on differences in knowledge and views of students from various healthcare disciplines is represented in the present study by the unfamiliarity of a large number of medical and dental

students with the term polypharmacy. On the other hand, the majority (90%) of pharmacy students knew the term.”:

There is not any result noted about the unfamiliarity of MD students with the term polypharmacy. I think this may have been part of an earlier version of this paper that included that survey data in Results, but it is not there in the latest version. Need to either add back that data in Results or remove this statement from the Discussion.

- The sentence “Another misconception is that about two thirds of medical and dental students agreed to the notion that pharmacists should only dispense drugs prescribed by a physician or dentist” relates to my concern above that this survey item needs further exploration and consideration that it could have been misconstrued depending on how it was read.
- Regarding the statement “Pharmacy students believed that counseling on drug treatment is not the responsibility of the physician or the dentist”: What survey result is this based on? The only survey item provided that connects is “The Pharmacist is responsible for counseling patients on their drug treatment”. Just because pharmacy students agreed with that statement doesn't mean they don't believe counseling is not a responsibility of MD professionals too. This Discussion statement appears to extrapolate too much from the survey results. Consider rewording or providing additional survey data that support it.
- Similarly, for the statement “However, an interesting result comes up when pharmacy students were asked if they trust the physician's and dentist's opinion. Half of them (47.3%) answered “yes” yet, the other half (47.3%) were uncertain.” I cannot tell where the Results data justifying this Discussion statement is. The only thing in the Results that appears related is the statement “they [pharmacy students] trust the MD decisions (50%)”. Again, this Discussion statement appears to be referencing survey results that aren't presented. Recommend deleting, rewording, or including the results it is referring to.
- The following statements are repeated in 2 of the final paragraphs in the manuscript: “Moreover, inter-professional collaboration in real practice may be learned better and enhanced through active workshops where medical, dental, pharmacy, and possibly students of other disciplines such as nurses and non-healthcare students play the roles of physicians, dentists, pharmacists, nurses, and patients respectively. Various scenarios can be prepared to represent examples that warrant interaction between various healthcare team members. Such scenarios should include scenes representing both positive and negative attitudes and practices of all members. We at present are planning for such an activity, and such an educational strategy would be our future research project.”. Need to remove this commentary from one of those paragraphs.

Conclusion section

- I think the Conclusion should have at least one or two initial statements that summarize the main themes of the study, rather than focusing solely on future developments.
- The first sentence of the section has a typo “We propose that in in future...”. Should be “...in the future...”

