



Early Patient Care and Biomedical Science Integration Increases Predoctoral Dental Student Competence and Confidence

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Introduction

In the past year, the National Board Dental Examination has been replaced with the Integrated National Board Dental Examination (INBDE) (van der Hoeven, 2021). In response to the new INBDE, many predoctoral dental programs have begun to restructure their curricula to better integrate the sciences (van der Hoeven, 2021). Our study investigates early experiential learning as a method of curricular integration in predoctoral dental education. In this research, we had two treatments composed of predoctoral dental students.

Research Questions

1. Will earlier exposure to the clinic lead to earlier clinical competency?
2. Will earlier exposure to the clinic lead to increased numbers of completed procedures?
3. Will earlier exposure to the clinic lead to increased confidence?

Methods

- Quasi-experimental design
- The Standard Curriculum Treatment (SCT) received their education with no significant alterations made for the INBDE, n=43
- The Integrated Curriculum Treatment (ICT) received their education with significant changes made, such as, beginning their clinical experience in the first year of the program, as well as having their biomedical classes distributed throughout their educational experience, n=44.
- Data were collected from 2017-2021, including age, gender, undergraduate GPA, DAT scores, clinical evaluation scores, and survey responses

Results

Figure 1. Curriculum Hours for Treatment Groups. (A) Standard Curriculum Treatment (SCT). (B) Integrated Curriculum Treatment (ICT).

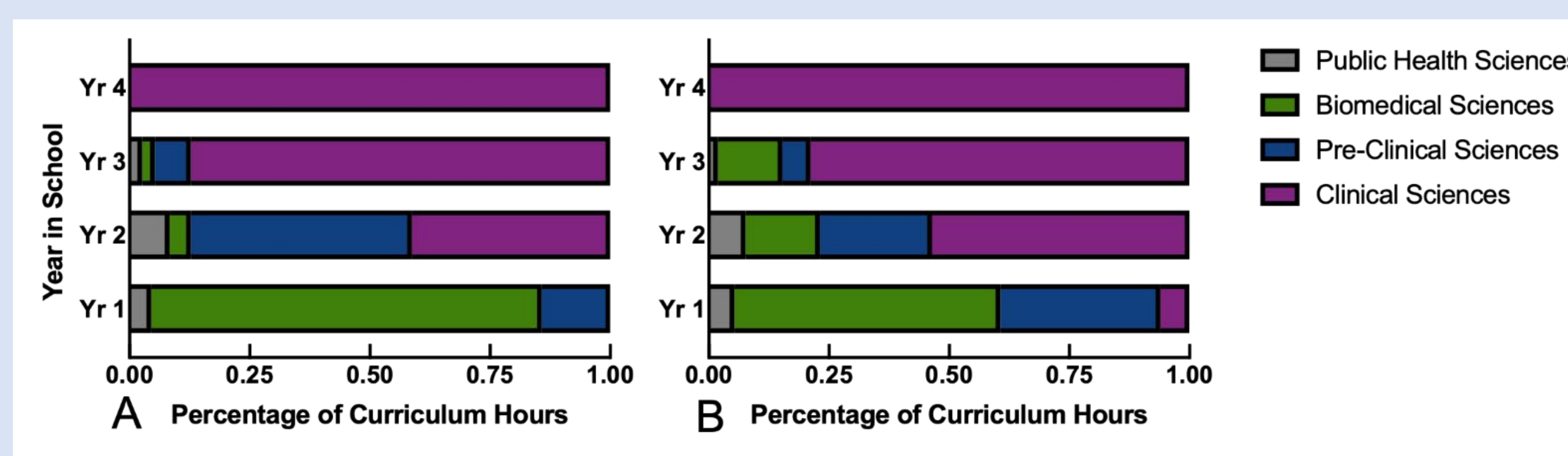


Figure 2. Clinical Competence. (A) Assessed by Daily Faculty Evaluations. (B) Self-Assessed by Students.

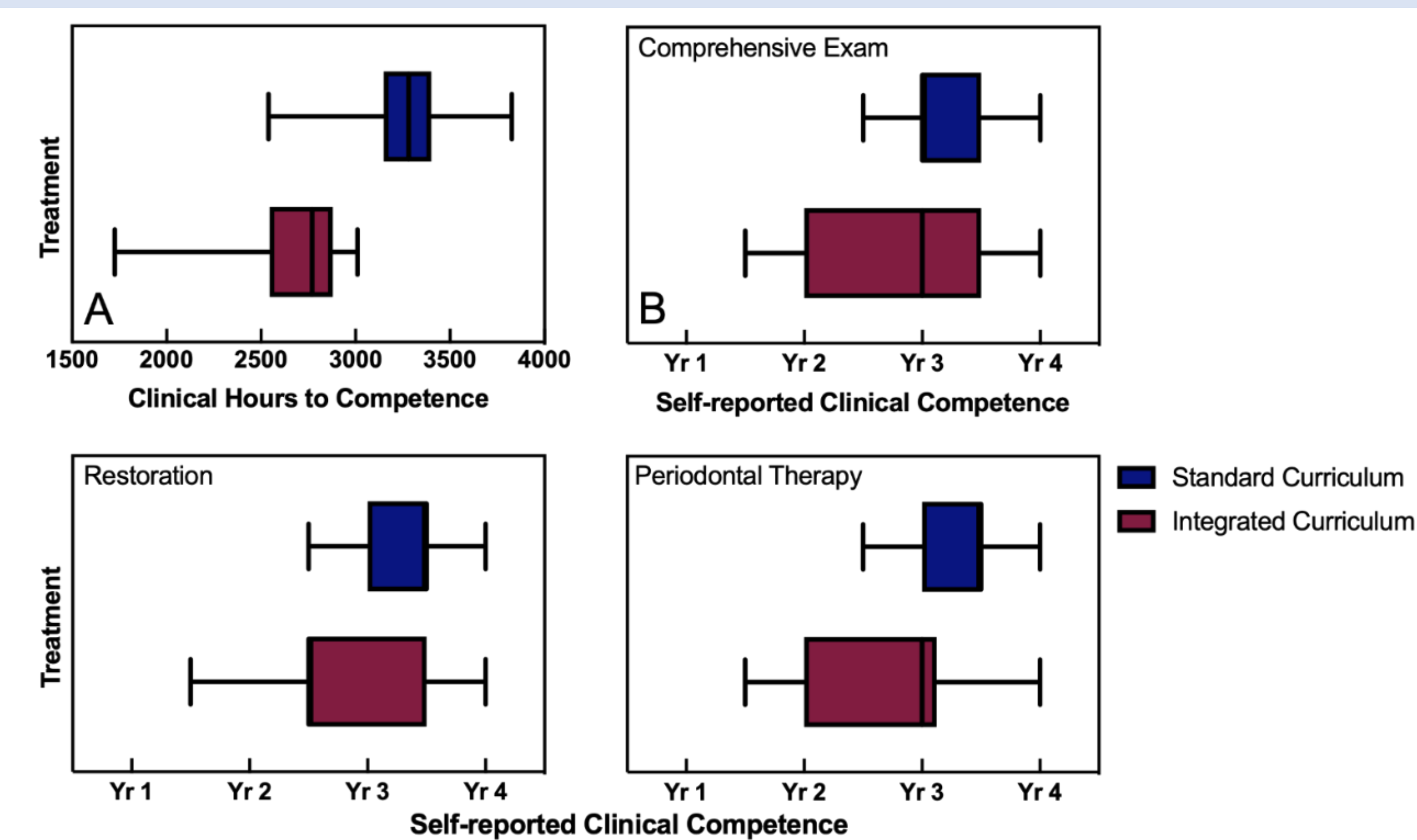
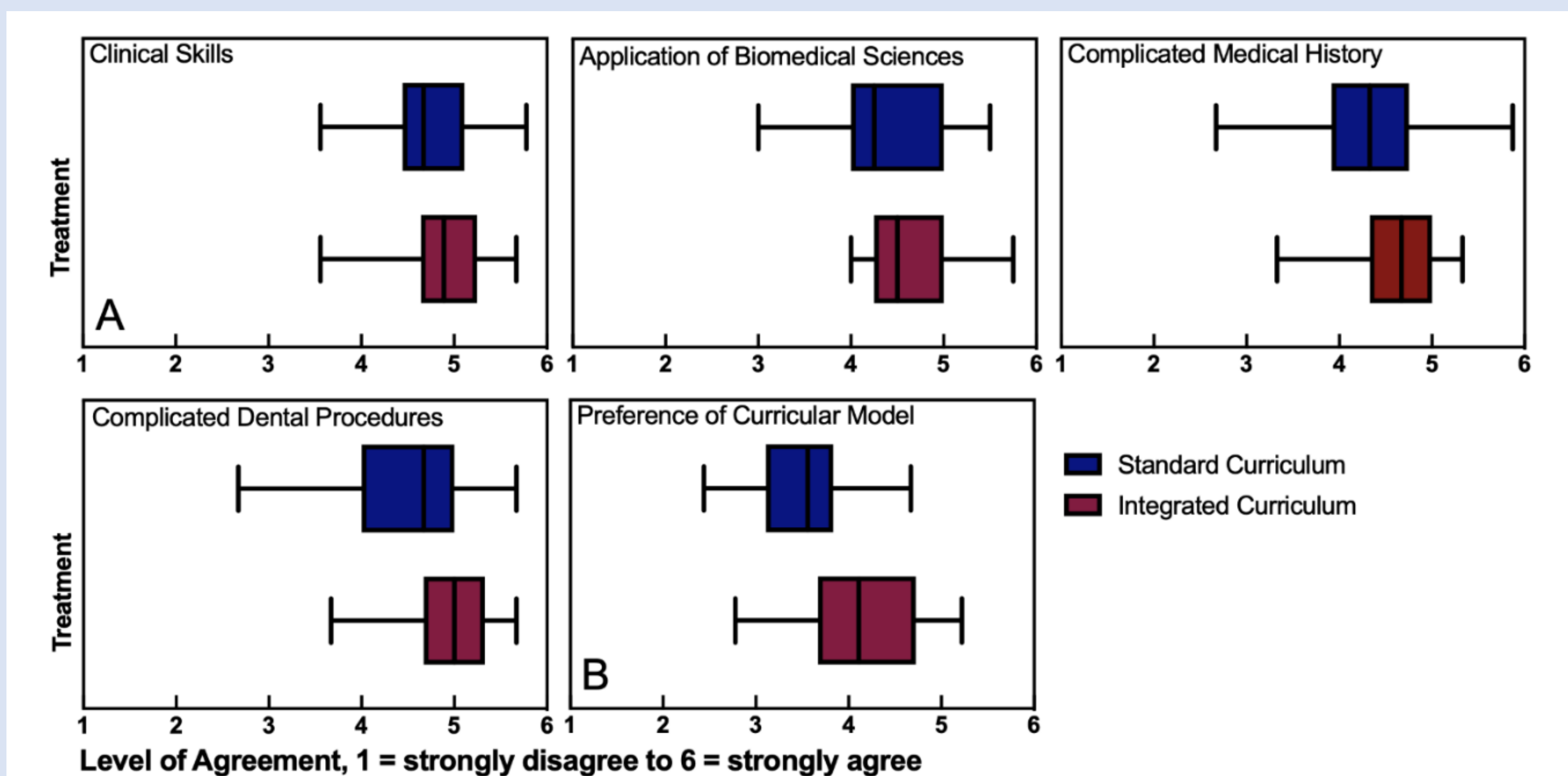


Figure 3. Attitudinal Results. (A) Student Confidence. (B) Student Preference of Curricular Model.



Results

- Our research indicates that when compared to the SCT, it took 608 hours less for the participants in the ICT to reach clinical competence (see figure 2).
- When we compared this data to the daily faculty evaluations of student progression and participants' self-assessment, we found similar results (see figure 2).
- When surveyed on confidence and competence, participants in the ICT reported having higher confidence in their ability to apply the biomedical sciences to patient care (see figure 3).

Conclusions

- As a result of these findings, it may be that structuring opportunities for early experiential learning as a method of curriculum integration provided a positive outcome for student competence and confidence.
- Future Research: Examine early entrance to clinic at other universities.

Future Research

- As a result of these findings, it may be that structuring opportunities for early experiential learning as a method of curriculum integration Examine early entrance to clinic at other universities.

References

van der Hoeven, D., Hachem, D., et al. (2021). Methods and timing of curricular integration in U.S. dental education in preparation for the Integrated National Board Dental Examination. *Journal of Dental Education*. 85(3):359-369.

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