

BACKGROUND

- Emphasis on interprofessional education (IPE) has increased in recent years.
- Assessment is of special importance, because of the many challenges associated with these types of programs.
- Many tools are available and have been developed in an attempt to evaluate program curriculum and satisfy accreditation standards.
- More recently, the Institute of Medicine has placed renewed emphasis on the assessment of interprofessional education.¹
- Miscommunication and inadequate teamwork among healthcare providers is associated with two-thirds of sentinel events.²
- The perceptions of quality of patient care and collaborative relationships were the most important predictors of job satisfaction for healthcare providers.³

PURPOSE

- To assess the impact of a 2½ hour interactive case study on the attitudes and skills of health science students toward collaborative patient-centered health care teams using a published and validated tool.

MATERIALS AND METHODS

- The interactive case utilized an interprofessional student team (6-8 members), 1-2 facilitators and a standardized patient (SP). Teams were given basic patient information, had to create a question list for the patient and then create a treatment plan. The teams had two opportunities to interact with the SP, one to gather unknown information and the second to deliver the treatment plan. Teamwork, communication and sharing of roles and responsibilities were stressed in these sessions.
- Students attended from the University of Iowa Colleges of Dentistry, Medicine, Nursing, and Pharmacy, as well as, Physician Assistant (PA), Physical Therapy (PT) and Social Work (SW) programs. Students in Nutrition, from Iowa State University, also attended.
- IRB approval was obtained for this study (#201406739).
- We utilized the Interprofessional Collaborative Competencies Attainment Survey (ICCAS) tool, developed by MacDonald (2010)⁴ and validated by Archibald (2014),⁵ a 20-question survey, with 6 sub-scales, that is evaluated on a 7 point Likert scale (Fig. 1)
- Data on gender and prior multi-disciplinary team experience were also collected.
- The survey was offered to a total of 504 students and was administered on paper before and after the interactive case study (n = 504).
- The data were collected and analyzed to determine statistical significance.
- Pre and post comparisons were made in aggregate and among the individual colleges and programs.

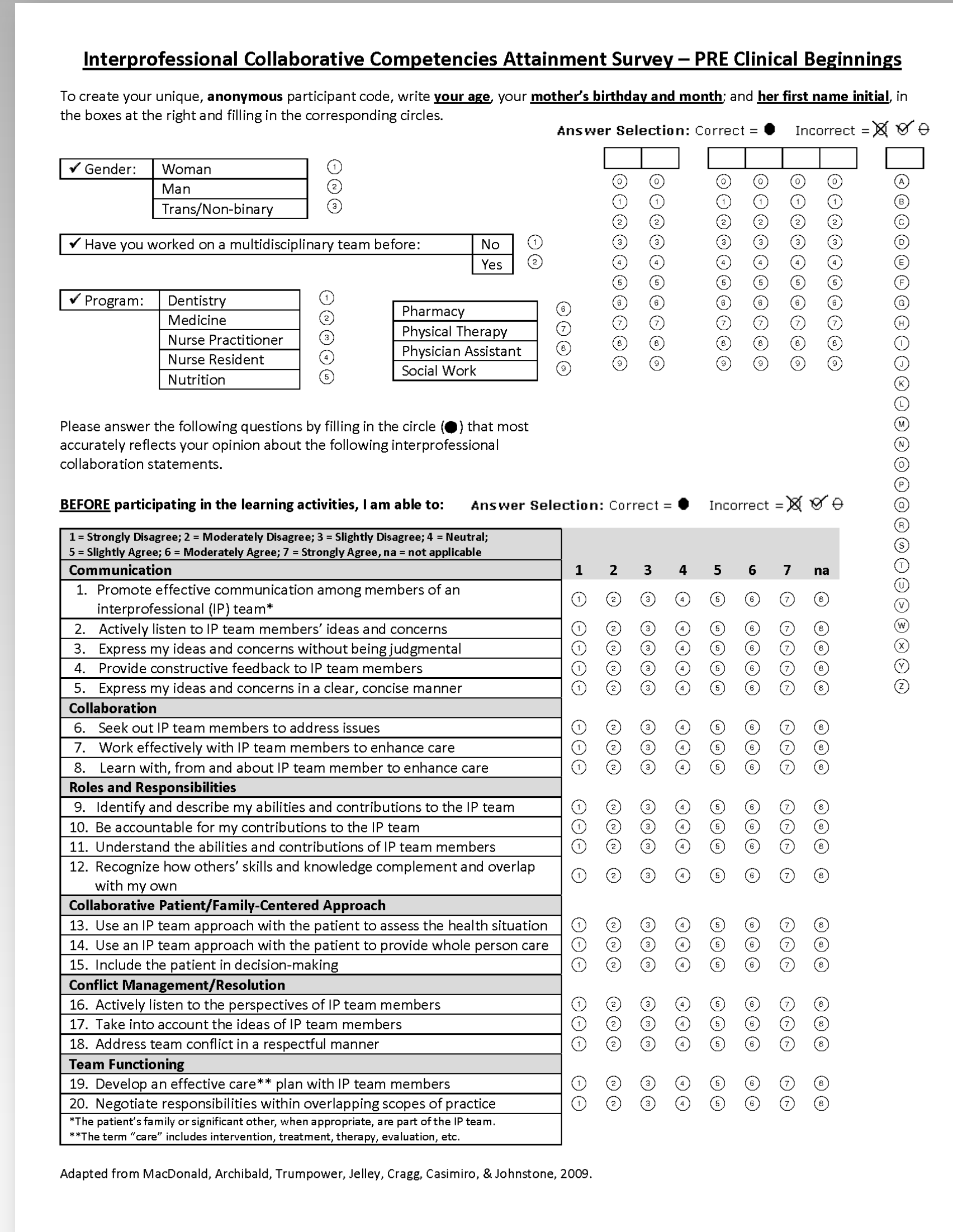


Figure 1. University of Iowa's adapted version of ICCAS (pretest).

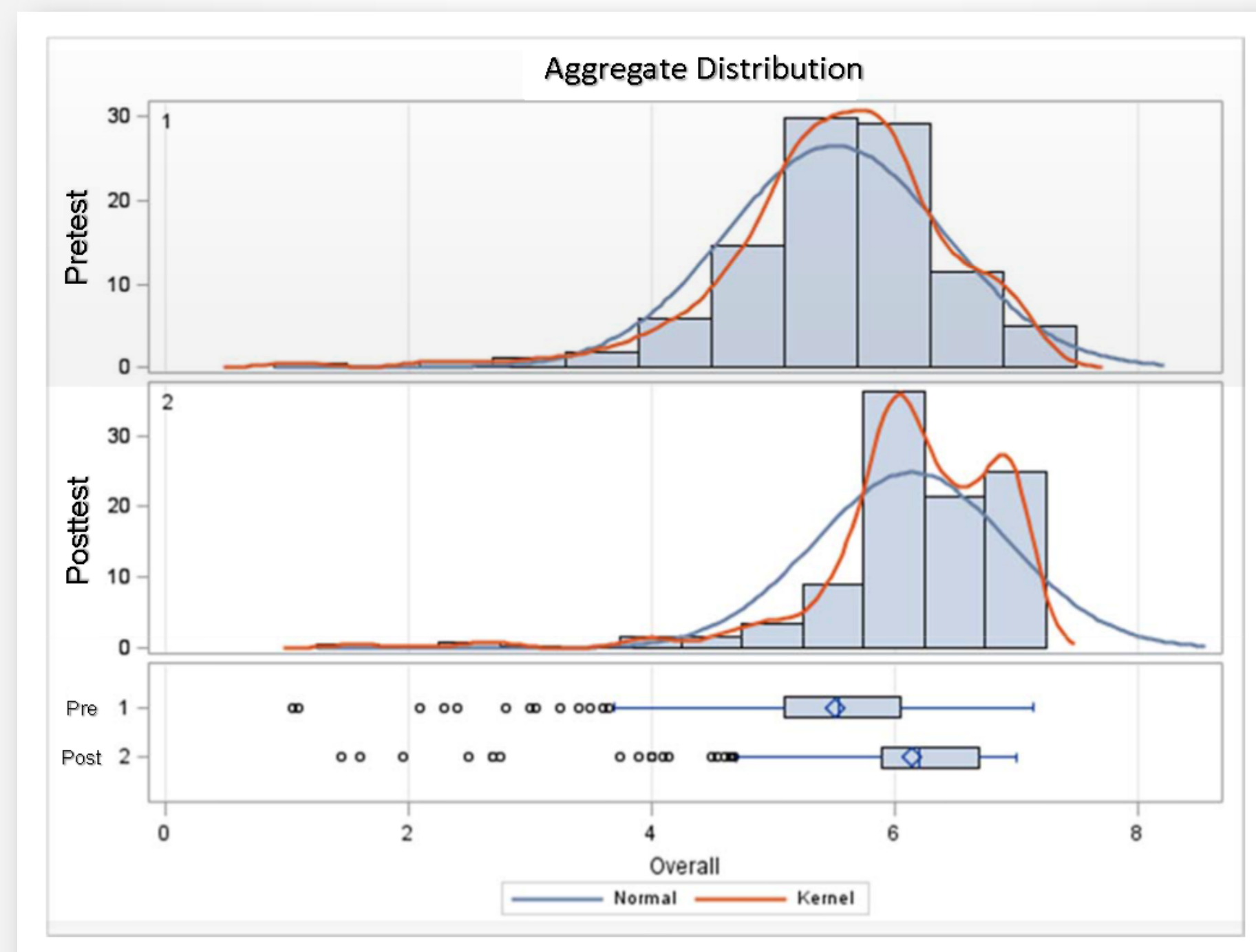


Figure 2. Overall distribution showing changes in scores using bar graphs and forest plots.

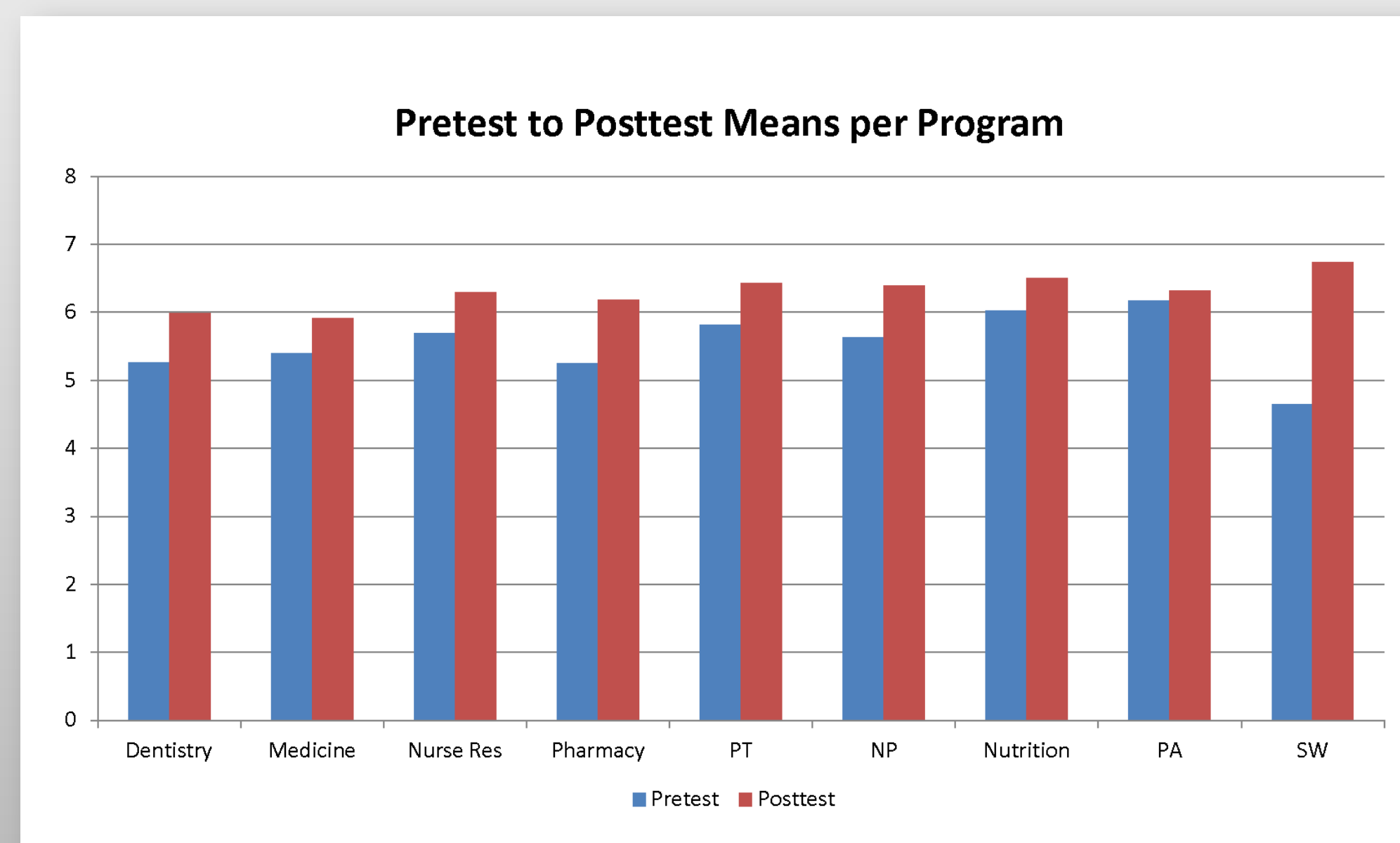


Figure 3. Pretest to Posttest overall survey means by discipline.

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RESULTS

- The overall response rate was 72%.
- The majority of participants were women (64-100%), except for Dentistry, Medicine and PT, which had nearly equal women and men (47%, 46% and 52%).
- Women scored statistically higher on both pretest and posttest, but both women and men showed improvement at the same rate.
- The vast majority of students reported previous multi-disciplinary team experience (52-100%), with the exception of Dentistry at 10%.
- Pretest scores ranged from 4.65-6.17, with PA students scoring statistically higher than the other disciplines (Fig. 2 & 3).
- Posttest scores ranged from 5.91-6.74, with the largest increase observed in SW (2.09), followed by Pharmacy (0.94) and the least in PA (0.15) (Fig. 2 & 3).
- Five disciplines had high enough student numbers (>25) for statistical analysis (Dentistry n = 65, Medicine n = 117, Nurse Resident n = 51, Pharmacy n = 29 and PT n = 29).
- Our results demonstrate a statistically significant improvement in the pretest to posttest scores in aggregate ($p < 0.0001$), in each of the 5 disciplines ($p < 0.0001$), in all 20 questions, and within all 6 sub-scales, with few exceptions.
 - The only subscales with non-significant results were S1 Communication and S4 Collaborative Patient/Family-Centered Approach.
 - These were found only in 3 disciplines and were within the same two survey items.
 - Q2 - Actively listen to IP team members' ideas and concerns (Medicine & PT)
 - Q15 - Include the patient in decision-making (Dentistry & PT)

CONCLUSIONS

- The ICCAS tool was effective in assessing changes in student attitudes and self-assessed skills following an interactive case study, which for many, was their first experience learning with students from other health science disciplines.
- Although the time was brief, attitudes about IPE improved in all domains.
- This tool, along with course evaluations, allowed us to demonstrate the value of this activity.
- These results indicate that even a short IPE experience can result in improvement in attitude, behavior and development of collaborative patient-centered health care teams.

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