

Clinical Education in National Dental Centre Singapore (NDCS) – Junior and Senior Residents perspectives

Ong Meng Ann Marianne¹, Chu Sarah² & Allen John Carson²

¹National Dental Centre Singapore, ²Duke-NUS Medical School



Background

Since the 1990s, NDCS, in collaboration with the Division of Graduate Dental Studies, National University of Singapore Faculty of Dentistry, has been running the 3-year Master of Dental Surgery Residency Training Programmes (RTPs) in five dental specialties (Orthodontics, Oral Maxillofacial Surgery, Prosthodontics, Endodontics and Periodontics). An annual survey was introduced in 2015 to obtain residents' perceptions of their clinical education in the RTPs held in NDCS. This descriptive study reports the quantitative and qualitative data of Year 1, 2 and 3 resident perspectives regarding their clinical education in the RTPs accumulated over 4 years. The study protocol was reviewed and given exempt status by the SingHealth CIRB (Ref: 2015/2396).

Methods

From 2015 to 2018, all residents in the 5 RTPs were invited to complete a 50-item survey during the last 2 weeks of Academic Year (AY) Term 4 (May-June). The survey was adapted from the Clinical Education Instructional Quality Questionnaire (ClinED IQ) and consisted of 47 Likert-type rating items (1-6 rating with 6 being highest) and 3 open-ended questions. There were 4 subscales: Clinical Learning Opportunities (CLO), Involvement in Specific Learning Activities (ISP), Interactions with Clinical Instructors (ICI), and Items related to NDCS Faculty & RTP (NDCS).

Results

A total of 181 responses (Year 1=60, Year 2=60 and Year 3=61) were collated over 4 years for all 5 RTPs. The reported data is a compilation of survey responses from the AY14/15, AY15/16, AY16/17 and AY17/18 resident cohorts. The 4 jitter plots (Figure 1) illustrate the 5 RTPs combined median scores broken down by years for each of the 4 subscales in the survey. The median scores of the 4 subscales (CLO, ISP, ICI, NDCS) in the survey were taken as surrogates reflecting residents' perspectives of their clinical education in the RTPs in NDCS. A median score ≥ 4 was viewed as a positive perspective. Combined median scores for the 5 RTPs increased from Year 1 to Year 3 for subscales CLO (4.13 vs 4.50), ISP (4.70 vs 4.90), ICI (4.46 vs 4.61) and remained stable for NDCS (4.90 vs 4.91). The qualitative data is summarised in Figure 2.

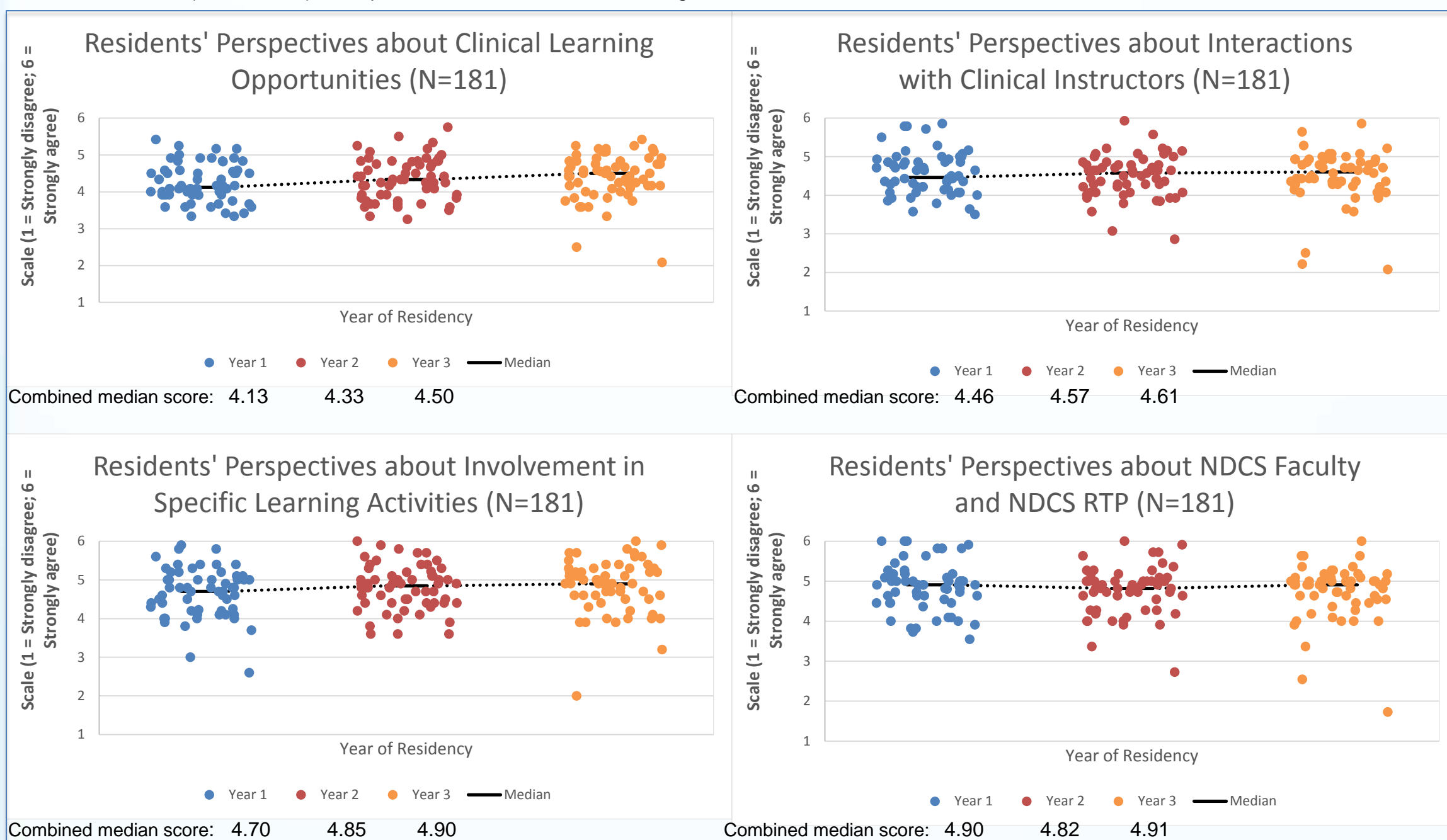
Discussion

Residents in this cohort viewed their clinical education in the RTPs in NDCS positively (≥ 4). The combined median scores for the 5 residency programmes for each of the subscales (CLO, ISP, ICI and NDCS) were either similar or showed an increase from Year 1 to Year 3. In fact, the majority of RTPs achieved median scores ≥ 4 in all 4 subscales. There was, however, a noted decrease in median scores from Year 1 to Year 3 for Oral Maxillofacial Surgery CLO and Oral Maxillofacial Surgery ICI (≤ 4) (data not shown). Residents' qualitative comments obtained from the 3 free text items revealed strengths, weaknesses and problems they encountered. By having a large patient pool, a wide range of cases and approachable faculty, RTPs in NDCS served to provide comprehensive training for the residents. Improvements needed for NDCS RTPs included providing adequate resources and equipment, increasing number of nursing support staff and providing residents with sufficient clinical time. Some common problems residents encountered were wasted time waiting for clinical supervisors and a shortage of nurses. The combined median CLO score for the 5 RTPs was rated lowest among the 4 subscales, probably due to concerns with efficiency of the dental clinic environment (dental assisting support, waiting for consults, administrative work and lack of materials).

Conclusion

The 2015 to 2018 cohort of junior and senior residents viewed their NDCS clinical education in their 3-year residency training programmes positively (combined median scores ≥ 4). We will continue to work to improve identified areas of weaknesses as well as strengthen and build upon the positive aspects of clinical education in the RTPs run in NDCS. The modified ClinED IQ will continue to be used as a supplementary tool in the annual RTP programme evaluation for assessing and improving the NDCS learning environment.

Reference: Henzi D, Davis E, Jasinevicius R, Hendricson W. North American Dental Students' Perspectives About Their Clinical Education. *J Dent Educ* 2006; 70(4):361-77.



- Strengths:**
- Large patient pool with diverse needs.
 - Wide range of clinical cases to explore.
 - Approachable and nurturing faculty.
 - Provides clinical and administrative support.
- Weaknesses:**
- Long waiting time for consultation.
 - Lack of time to discuss cases with supervisors.
 - Lack of adequate equipment and dental surgery assistance.

Figure 2. NDCS RTPs strengths & weaknesses

Figure 1. Combined median scores for 5 RTPs - Clinical Learning Opportunities, Involvement in Specific Learning Activities, Interactions with Clinical Instructors and NDCS Faculty & NDCS RTP

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