

Indirect assessment of comprehensive care clinics course: Sixth year dental students perspective

Othman Wali, Shanthi Vanka, Amit Vanka, Razan Sadaka J AlSindi, and Salem Awny Elharazeen

Ibn Sina National College for Medical Studies, Jeddah, Saudi Arabia

RESEARCH

Please cite this paper as: Wali O, Vanka S, Vanka A, AlSindi RSJ, Elharazeen SA. Indirect assessment of comprehensive care clinics course: Sixth year dental students perspective. AMJ 2021;14(3):70–79.

<https://doi.org/10.35841/1836-1935.14.3.70-79>

Corresponding Author:

Shanthi Vanka

Ibn Sina National College for Medical Studies, Jeddah, Saudi Arabia

Email: shanthiamit@rediffmail.com

ABSTRACT

Background

Health care providers often lack a comprehensive approach towards treating patients. The comprehensive care clinics course model in dental curriculum is an integrated course which mainly focuses on the comprehensive oral health care of a patient. However, students have fear, apprehension and stress as the course involves significant amount of documentation, management and coordination with the patient.

Aims

The aim of this study was to assess the students' feedback on several aspects of the Comprehensive Care Clinics course from two academic year cohorts.

Methods

The present study is a questionnaire based study which has been conducted by collecting the data from two cohorts 2018-19 and 2019-20 final year students from the Dentistry program.

Results

The respondents responded that the communication among

the staff from various specialities in cohort 1 was excellent for 7.1 per cent, very good in 15.2 per cent, good for 14.7 per cent, fair for 6.5 per cent and poor for 1.6 per cent and in cohort 2 excellent for 6 per cent, very good for 12.5 per cent, good for 26.1 per cent, fair for 8.1 per cent and poor for 2.2 per cent.

Conclusion

The study concludes that the students strongly agree that there was a shortage of allocated time for the course, the students disagree about the outcome of the result. The students have responded to have ease of laboratory access for the cases and they expressed to have a good satisfaction about the overall score for the course in all respects.

Key Words

Comprehensive care clinics, assessment, dental students, comprehensive treatment

What this study adds:

1. What is known about this subject?

The integrated courses in final year undergraduate curriculums for medical courses help students to get a holistic approach on comprehensive treatments of a patient.

2. What new information is offered in this study?

Integrated model of treating a patient with comprehensive care in undergraduate curriculum helps in improving students to apply previous years training and skills.

3. What are the implications for research, policy, or practice?

There is an urgent need for uniformity to be maintained in all medical curricula where all undergraduate final year should include an integrated comprehensive course.

Background

Health care providers often lack a comprehensive approach towards treating patients. The comprehensive care clinics

course model in dental curriculum is an integrated course which mainly focuses on the comprehensive oral health care of a patient. However, students have fear, apprehension and stress as the course involves significant amount of documentation, management and coordination with the patient.

Treating of a comprehensive care patient during the undergraduate curriculum is very widely appreciated and implemented across a wide range of dental schools globally as well as in the Kingdom of Saudi Arabia.¹⁻⁴ Previously the dental curriculum in the final year had more numeric requirements to be completed on patients. Once the minimum requirements of the students were completed, treating the patients comprehensively was not taken up by them.

There were issues of underutilizing the clinical sessions which were resolved with the introduction of the students completely treating a patient comprehensively. The revised curriculum led to emphasis on comprehensively delivering oral health care to the patient and giving confidence to the students to improve their clinical competence in completing the total spectrum of treating patients.

The Comprehensive Care Clinics course has a very wide variation with respect to its definition and applications.¹⁻⁴ Globally many schools expect the students to perform treatment in a comprehensive care clinic and few want their students to complete comprehensive treatment plan of a patient. A key issue to this model being integrated to the dental curriculum is focussing on the comprehensive care of a patient rather than on requirements completion.¹ This is one of the most important reasons the study has been designed to collect the final year students' perspective on CCC course. Ibn Sina National College for Medical Studies has the Dentistry program with a foundation year, followed by six years and one year in internship. CCC course is a final year course with a credit of 12 CR.

The clinical model followed by the students is detailed below:

1. The courses included in CCC are Periodontics, Oral Surgery, Restorative Dentistry, Endodontics, Fixed Prosthodontics and Removable Prosthodontics.
2. A CCC is approved based on the criteria in which interdisciplinary approaches are planned and treatments performed, monitored and evaluated.
3. Case based discussions and Treatment planning sessions are to approve the diagnoses, promote

the various modalities of treatment and to apply the students' previous year's training and skills.

The case selection for the course is mainly developed to ensure that the students have exposure to interdisciplinary management of cases.¹ The treatment plan is an essential component of patient care process. Students should develop complete thoroughness in documenting and presenting the case with the detailed clinical and radiographic findings. Expert staff from different branches of dentistry will approve the case for the students after critical discussion sessions.⁵ The students are expected by the end of the course to be able to complete the CCC case and submit the documentation as an important part of their course. Students are apprehensive and uncertain when they start the course as they have lot of documentation to do, coordinate with the labs and manage the patient, when delivering comprehensive treatment.

Kristensen et al mentioned that, it is imperative to have dental students' perception towards the course, so as to incorporate compatible changes to help and cater the requirements for the students to treat their patients.⁶

The null hypothesis of the study has been considered as there is no relationship between all the responses of the two cohorts on the CCC course. The aim of this study is to assess the students' feedback on the Comprehensive Care Clinics course from two academic year cohorts.

Method

The present study is questionnaire based study which has been conducted by collecting the data from two cohorts 2018–2019 and 2019–2020 final year students from the Dentistry program. The CCC course in the curriculum is a final year course so the students in the final year formed the sample frame for the study. This study is designed to be a longitudinal observational study. The study was conducted in the dental school campus. The data was collected in the year cohort of 2018–2019 from the final year students and then again collected in 2019–2020 cohort. The feedback from the final year Dentistry program students was taken using a close ended questionnaire. The options were given using a likert scale⁽⁷⁾ options of:

1. Excellent/ Very good/ Good/ Fair/ Poor
2. Strongly agree/ Agree/ True sometimes/ Disagree/ Strongly disagree

The questionnaire had 18 questions detailing the assessment related to all the aspects of the course. The details of the questionnaire is as follows:

1. Communication among the staff from various specialties during the delivery of the course.
2. The amount of stress during the completion of requirements of the course.
3. Stress during the exam.
4. Students not having time for relaxation.
5. Fear of failing the course.
6. Fear of not being able to complete the requirement.
7. Difficulty in understanding the course materials to study.
8. Stress when the patients do not turn up or late for the appointment.
9. Shortage of allocated clinical time for the course.
10. Preparation of the student for the exam.
11. Satisfaction on the performance in the assessment.
12. Self-assessment on competence to graduate as a dentist.
13. Approval of cases by the supervisor.
14. Ease of laboratory access for the cases.
15. Benefit of planning a case comprehensively in a clinical perspective.
16. Benefit of communication with the patient in the comprehensive case.
17. Ease of completing the comprehensive case as requirement for the course.
18. Overall score for the course in all respects.

The questionnaire was validated by the results from the questionnaire filled by 10 students. The reliability of the questionnaire was assessed using kappa statistics which came to be 0.82. Data was entered into the excel and the frequencies and percentages were calculated using the IBM SPSS Statistics 23.0. Association between the dependant variables (which are the responses of the cohorts) and the independent variables (which are all the questions asked in the questionnaire) was done using the chi square test. The t test was used to compare the mean responses between both the cohorts and was used in hypothesis testing to determine if there was a difference between the responses of both the cohorts. The p value of less than 0.05 was considered statistically significant. All the students available on the day the questionnaire was included in the study. The students who were not interested in filling the response were excluded from the study. The data that was considered for analysis was only when the full questionnaire was filled by the respondent. The ethical consent for the study was given by the ethical committee of Ibn Sina National College for Medical Studies. The protocol identification number for the study is 023DP21022019 and the IERC Reference number is H-18-30042019. Prior to the collection of data ethical consent from all the participants

was also taken. The consent from the participants included explanation of all the details of the study for which the data was being collected.

Results

The total number of students in cohort 1 were 119 in cohort 1 and 78 in cohort 2. The null hypothesis has not been proven as not all the responses of both the cohorts showed to have a statistically significant relationship.

The response rate of the students in Cohort 1 was 70 per cent and Cohort 2 it was 94 per cent. Responses of the cohorts versus variables assessed with the Likert scale: Excellent, Very good, Good, Fair and Poor has been detailed in table 1. The respondents responded that the communication among the staff from various specialties in cohort 1 was excellent for 7.1 per cent, very good in 15.2 per cent, good for 14.7 per cent, fair for 6.5 per cent and poor for 1.6 per cent and in cohort 2 excellent for 6 per cent, very good for 12.5 per cent, good for 26.1 per cent, fair for 8.2 per cent and poor for 2.2 per cent.

The students' perception of studying well before the exam was excellent among 14.1 per cent, very good among 32.1 per cent, good among 38 per cent, fair and poor among 13.6 per cent and 2.2 per cent. Majority of the students from both the cohorts have good (50.3 per cent) and very good (12.6 per cent) laboratory access for the cases. Good percentage of the respondents agreed that they got benefit of planning a case for the comprehensive care clinics course. The students from both the cohorts did learn good communication with the patient in the comprehensive care clinics course. The ease of completing the Comprehensive case as a requirement was good among 12.5 per cent in the first cohort and 23.4 per cent in the second cohort.

The table 2 details responses of the cohorts versus variables assessed with the Likert scale: Strongly agree, Agree, True sometimes, Disagree and Strongly disagree. The respondents strongly agree [129(70.1 per cent)] that there is a lot of stress during the completion of requirements of the course.

There are 60.9 per cent from both the cohorts 1 and 2 who strongly agree that they lack the time for relaxation. Nearly 144(78.2 per cent) and 104(56.6 per cent) strongly agree and agree from both the cohorts that they have the fear of not able to complete the requirements and failing the course. Majority of the respondents have found it true sometimes 89(48.4 per cent) that there is difficulty in understanding the course material. Almost three fourth of

the respondents strongly agree (74.5 per cent) that they have stress when the patients do not turn up or late for appointments. The respondents seem to disagree 63(34.2 per cent) and strongly disagree 40(21.7 per cent) about their result of the course.

The table 3 details the association between all the independent variables of the study in both the cohorts. The results of the study indicate that response of the students on shortage of allocated time for the course, satisfaction on the result, ease of laboratory access for the cases and their overall scores for the course in all respects to be statistically significant.

Discussion

The CCC course is based on encouraging the students to perform comprehensive care of the patient which helps in developing an increased commitment towards the responsibility of completing the treatment plan of a patient.¹ In a study by Al- Alawi⁸ students have responded to a relatively high psychological stress in relation to approvals of cases by their supervisors. Similar results have been discussed in a study by Dehghan et al.⁹ where almost half of the students have responded to be stressed.

The weight of credits of CCC course in final year is very high and it causes stress to both the staff and students. The students in the present study did not have stress in case selection for the CCC course which is in contrast with the study by Al-Alawi et al.⁸ The present study represents an attempt to understand the students' perceptions on the CCC course which is the same conclusion in a study by Henzi et al in 2005.¹⁰

In a study by Mahmoud Al-Dajani⁽¹¹⁾ he concluded that increased focus on clinical teaching can help in improving the students' confidence in treating a patient. So, a mix of the confidence of the student along with training in treating a patient comprehensively will help to achieve better learning outcomes of the program. Behar-Horenstein et al in their study also concluded that providing comprehensive patient care and ensuring that the students are competent is a very delicate balance to maintain.¹² Hattar et al also concluded as in our study that the students did show appreciation about the comprehensive care clinics course.¹³ Self-learning blended with the cognitive and psychomotor skills are enhanced in this course. There is a consensus about adapting the methodology of comprehensive care clinics to enhance dental education and achievement of learning outcomes.

In the study by Hattar et al the students have expressed to have higher satisfaction and enhanced self-confidence with an overall view of the course being stressful in line with our study.¹³ It is recommended to plan one teaching staff to be assigned to monitor a smaller group of students to improve student self-efficiency as suggested in a study by Dehghan et al.⁹

The students strongly disagree with the question asked whether they are happy with their results. As recommended by Park et al.¹ in the model full time faculty member help in managing the clinical education of dental students and monitoring their progress. The students have to be given a timely feedback by the faculties contributing to the course so that they are aware of their progress. The students have responded to have been dis-satisfied with the results of the course but are satisfied by the course in general. So, it is recommended that exit interviews conducted for the students before they graduate. The exit interviews will give a detailed perspective of the students which would help the course to be improved. The students are able to manage complex cases and they are exposing proficient skills and excellent performance through this course is the conclusion of the study by Elgezawi et al.¹⁴ The present study also highlights the students have responded that they are overall satisfied with the course. So, this indicates to us that although there are issues that have been responded by the students about the course the outcome is satisfactory for the students.

Based on the conclusion of the study where the students have been satisfied about the course; there is a need to promoting educational policy interventions in promoting the inclusion of the CCC course globally into the Dentistry curriculum. Curriculum has been changing tremendously through the years towards an inclusion of critical thinking, being lifelong learners and into integrating various courses and converting it into providing comprehensive care to the patient. Promoting common curricular components to be in par with the global competencies for dental practices are very essential. It is imperative to get a feedback from the students on a regular basis especially in a course like CCC with lots of credit. Their perception helps us to incorporate compatible changes to cater to their requirements. The authors suggest strategies to reduce the stress among the final year students to improve their knowledge, cognition and psychomotor skills. The students should be oriented and continuously motivated to breach the gap between the amount of time available and the amount of course work to be completed.

This course is a platform for the students to learn interdisciplinary practice with an increased emphasis on the cognitive and psychomotor aspect of patient management. A recommended model for successful implementation of the CCC course (Figure 1). The limitation of the study is that it is a questionnaire study and its limited towards only perceptions of the students about the case. Further studies are recommended trying to find an association between direct and indirect assessments for this course. Patient satisfaction of the treatment provided by the students in the course also will provide an insight of the outcome of the course.

Conclusion

The study concludes that the students strongly agree that there was a shortage of allocated time for the course, the students are not satisfied with their result, there was good ease of laboratory access for the cases and students have expressed to have a good satisfaction about the overall score for the course in all respects. Students when exposed to such courses may relate to their future experiences in their clinical practice.

References

1. Park SE, Timothé P, Nalliah R, et al. A case completion curriculum for clinical dental education: replacing numerical requirements with patient-based comprehensive care. *J Dent Educ.* 2011;75(11):1411–6.
2. Formicola AJ, Myers R, Hasler JF, et al. Evolution of dental school clinics as patient care delivery centers. *J Dent Educ.* 2008;72(2 Suppl):110–27.
3. Holmes DC, Trombly RM, Garcia LT, et al. Student productivity in a comprehensive care program without numeric requirements. *J Dent Educ.* 2000;64(11):745–54.
4. Johnson G. A comprehensive care clinic in Swedish dental undergraduate education: 3-year report. *Eur J Dent Educ* 1993;3:148–52.
5. Hook CR, Comer RW, Trombly RM, et al. Treatment planning processes in dental schools. *J Dent Educ.* 2002;66(1):68–74.
6. Kristensen BT, Netterstrom I, Kayser L. Dental students' motivation and the context of learning. *Eur J Dent Educ.* 2009;13:10–4.
7. Saul McLeod. Likert Scale Definition, Examples and Analysis. Available at: <https://www.simplypsychology.org/likert-scale.html>
8. Al-Alawi H, Al-Shayeb M, Al-Jawad A, et al. Evaluation of a comprehensive clinical dentistry course at dental schools in Saudi Arabia. *J Dent Res Rev.* 2015;2(1):5.
9. Dehghan M, Harrison J, Langham S, et al. Comparing comprehensive care and departmental clinical education models: students' perceptions at the University of Tennessee College of Dentistry. *J Dent Educ.* 2015;79(2):133–139.
10. Henzi D, Davis E, Jasinevicius R, et al. Appraisal of the dental school learning environment: the students' view. *J Dent Educ.* 2005;69(10):1137–47.
11. Al-Dajani M. Eliciting students' perceptions of integrated clinical dental education in Saudi Arabia: A cross-sectional study. *J Health Specialties.* 2016;4(3):202.
12. Behar-Horenstein LS, Roberts KW, Zafar MA. Dental school student and faculty perspectives about changing to comprehensive patient-care clinic management. *J Commun Healthc.* 2012;5(1):40–50.
13. Hattar S, AlHadidi A, Altarawneh S, et al. Dental student perspectives of a comprehensive-based teaching methodology: A confidence, effectiveness, and challenge report. *Int J Dent.* 2020;2020.
14. Elgezawi M, Hassan K, Alagl A, et al. Complexity of comprehensive care treatments in undergraduate dental programs: The benefits of observing and assisting experienced faculty members. *The Saudi dental journal.* 2017;29(4):161–6.

ACKNOWLEDGEMENTS

I would like to thank Mrs Satyavani V for having done the grammar and spell check for the manuscript.

PEER REVIEW

Not commissioned. Externally peer reviewed.

CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

FUNDING

None

ETHICS COMMITTEE APPROVAL

Ethical Committee of Ibn Sina National College for Medical Studies. Reference number is H-18-30042019

Table 1: Responses of the cohorts versus variables assessed with the Likert scale: Excellent, Very good, Good, Fair and Poor

Question	Likert scale	Cohort 1 (2018-19) n(%)	Cohort 2 (2019-20) n(%)	Total	Chi square value	p value
1. Communication among the staff from various specialties during the delivery of the course	Excellent	13(7.1%)	11(6.0%)	24(13.0%)	5.303 ^a	0.258
	Very good	28(15.2%)	23(12.5%)	51(27.7%)		
	Good	27 (14.7%)	48 (26.1%)	75(40.8%)		
	Fair	12(6.5%)	15(8.2%)	27(14.7%)		
	Poor	3(1.6%)	4(2.2%)	7(3.8%)		
2. Have you studied well before the exam	Excellent	10(5.4%)	16(8.7%)	26(14.1%)	2.437 ^a	0.656
	Very good	25(13.6%)	34(18.5%)	59(32.1%)		
	Good	36(19.6%)	34(18.5%)	70(38.0%)		
	Fair	11(6.0%)	14(7.6%)	25(13.6%)		
	Poor	1(0.5%)	3(1.6%)	4(2.2%)		
3. How is the acceptance of the cases by the supervisor	Excellent	7(3.8%)	15(8.2%)	22(12.0%)	7.613 ^a	0.107
	Very good	19(10.3%)	18(9.8%)	37(20.1%)		
	Good	40(21.7%)	49(26.6%)	89(48.4%)		
	Fair	15(8.2%)	10(5.4%)	25(13.6%)		
	Poor	2(1.1%)	9(4.9%)	11(6.0%)		
4. Do you have ease of laboratory access for the cases*	Excellent	2(1.1%)	4(2.2%)	6(3.3%)	12.187 ^a	0.016
	Very good	15(8.2%)	8(4.4%)	23(12.6%)		
	Good	31(16.9%)	61(33.3%)	92(50.3%)		
	Fair	23(12.6%)	17(9.3%)	40(21.9%)		
	Poor	12(6.6%)	10(5.5%)	22(12.0%)		
5. Did you get benefit of planning a case comprehensively in a clinical perspective	Excellent	12(6.5%)	12(6.5%)	24(13.0%)	5.690 ^a	0.224
	Very good	28(15.2%)	20(10.9%)	48(26.1%)		
	Good	29(15.8%)	47(25.5%)	76(41.3%)		
	Fair	8(4.3%)	12(6.5%)	20(10.9%)		
	Poor	6(3.3%)	10(5.4%)	16(8.7%)		
6. Did you get the benefit of communication with the patient in the comprehensive case	Excellent	16(8.7%)	17(9.2%)	33(17.9%)	3.406 ^a	0.492
	Very good	20(10.9%)	20(10.9%)	40(21.7%)		
	Good	30(16.3%)	41(22.3%)	71(38.6%)		
	Fair	11(6.0%)	9(4.9%)	20(10.9%)		
	Poor	6(3.3%)	14(7.6%)	20(10.9%)		
7. Did you have ease	Excellent	4(2.2%)	6(3.3%)	10(5.4%)	5.171 ^a	0.270

of completing the comprehensive case as requirement for the course	Very good	8(4.3%)	8(4.3%)	16(8.7%)		
	Good	23(12.5%)	43(23.4%)	66(35.9%)		
	Fair	35(19.0%)	30(16.3%)	65(35.3%)		
	Poor	13(7.1%)	14(7.6%)	27(14.7%)		
8. What is the overall score for the course in all respects	Excellent	2(1.1%)	1(0.5%)	3(1.6%)	7.580 ^a	0.108
	Very good	15(8.2%)	13(7.1%)	28(15.2%)		
	Good	44(23.9%)	51(27.7%)	95(51.6%)		
	Fair	20(10.9%)	23(12.5%)	43(23.4%)		
	Poor	2(1.1%)	13(7.1%)	15(8.2%)		

*p<0.05 is considered statistically significant

Table 2: Responses of the cohorts versus variables assessed with the Likert scale: Strongly agree, Agree, True sometimes, Disagree and Strongly disagree

Question	Likert scale	Cohort 1 (2018-19) n(%)	Cohort 2 (2019-20) n(%)	Total	Chi square value	p value
1. The amount of stress during the completion of requirement of the course	Strongly agree	63(34.2%)	66(35.9%)	129(70.1%)	5.816 ^a	0.213
	Agree	9(4.9%)	22(12.0%)	31(16.8%)		
	True sometimes	10(5.4%)	10(5.4%)	20(10.9%)		
	Disagree	0(0.0%)	2(1.1%)	2(1.1%)		
	Strongly disagree	1(0.5%)	1(0.5%)	2(1.1%)		
2. Do you feel stressed during the exam	Strongly agree	52(28.4%)	68(37.2%)	120(65.6%)	0.612 ^a	0.736
	Agree	22(12.0%)	22(12.0%)	44(24.0%)		
	True sometimes	9(4.9%)	10(5.5%)	19(10.4%)		
	Disagree	0(0%)	0(0%)	0(0%)		
	Strongly disagree	0(0%)	0(0%)	0(0%)		
3. Do you lack the time for relaxation	Strongly agree	45(24.5%)	67(36.4%)	112(60.9%)	7.192 ^a	0.126
	Agree	27(14.7%)	22(12.0%)	49(26.6%)		
	True sometimes	10(5.4%)	9(4.9%)	19(10.3%)		
	Disagree	0(0.0%)	3(1.6%)	3(1.6%)		
	Strongly disagree	1(0.5%)	0(0.5%)	1(0.5%)		
4. Do you have the fear of failing the course	Strongly agree	24(13.0%)	37(20.1%)	61(33.2%)	4.467 ^a	0.346
	Agree	22(12.0%)	21(11.4%)	43(23.4%)		
	True sometimes	27(14.7%)	27(14.7%)	54(29.3%)		
	Disagree	10(5.4%)	13(7.1%)	23(12.5%)		
	Strongly disagree	0(0.0%)	3(1.6%)	3(1.6%)		
5. Do you have fear of not being able to	Strongly agree	49(26.6%)	53(28.8%)	102(55.4%)	5.423 ^a	0.247
	Agree	18(9.8%)	24(13.0%)	42(22.8%)		

complete the requirement	True sometimes	16(8.7%)	18(9.8%)	34(18.5%)		
	Disagree	0(0.0%)	5(2.7%)	5(2.7%)		
	Strongly disagree	0(0.0%)	1(0.5%)	1(0.5%)		
6. Do you have difficulty in understanding the course materials to study	Strongly agree	10(5.4%)	15(8.2%)	25(13.6%)	2.153 ^a	0.708
	Agree	13(7.1%)	20(10.9%)	33(17.9%)		
	True sometimes	45(24.5%)	44(23.9%)	89(48.4%)		
	Disagree	11(6.0%)	17(9.2%)	28(15.2%)		
	Strongly disagree	4(2.2%)	5(2.7%)	9(4.9%)		
7. Do you have stress when the patients do not turn up or are late for the appointment	Strongly agree	62(74.7%)	75(74.3%)	137(74.5%)	3.970 ^a	0.410
	Agree	14(7.6%)	20(10.9%)	34(18.5%)		
	True sometimes	4(2.2%)	6(3.3%)	10(5.4%)		
	Disagree	2(1.1%)	0(0.0%)	2(1.1%)		
	Strongly disagree	1(0.5%)	0(0.0%)	1(0.5%)		
8. Do you have shortage of allocated clinical time for the course*	Strongly agree	43(23.5%)	33(18.0%)	76(41.5%)	9.978 ^a	0.041
	Agree	18(9.8%)	42(23.0%)	60(32.8%)		
	True sometimes	16(8.7%)	20(10.9%)	36(19.7%)		
	Disagree	5(2.7%)	4(2.2%)	9(4.9%)		
	Strongly disagree	1(0.5%)	1(0.5%)	2(1.1%)		
9. Are you happy with your result*	Strongly agree	3(1.6%)	1(0.5%)	4(2.2%)	27.425 ^a	0.000
	Agree	22(12.0%)	12(6.5%)	34(18.5%)		
	True sometimes	29(15.8%)	14(7.6%)	43(23.4%)		
	Disagree	17(9.2%)	46(25.0%)	63(34.2%)		
	Strongly disagree	12(6.5%)	28(15.2%)	40(21.7%)		
10. Do you feel that you are competent to graduate as a dentist	Strongly agree	0(0.0%)	1(0.5%)	1(0.5%)	1.660 ^a	0.798
	Agree	4(2.2%)	5(2.7%)	9(4.9%)		
	True sometimes	7(3.8%)	11(6.0%)	18(9.8%)		
	Disagree	38(20.7%)	49(26.6%)	87(47.3%)		
	Strongly disagree	34(18.5%)	35(19.0%)	69(37.5%)		

* $p < 0.05$ is considered statistically significant

Table 3: Relationship between all the independent variables and cohort 1 and 2

Question	Cohort 1 (2018-19) Mean±SD	Cohort 2 (2019-20) Mean±SD	t value	p value
Communication among the staff from various specialties during the delivery of the course	3.434±1.0382	3.218±0.9654	1.459	0.146
The amount of stress during the completion of requirement of the course	4.602±0.7954	4.485±0.8320	0.970	0.333
Do you feel stressed during the exam	4.518±0.6872	4.580±0.6694	-0.616	0.539
Do you lack the time for relaxation	4.386±0.7937	4.515±0.7825	-1.108	0.269
Do you have the fear of failing the course	3.723±1.0159	3.752±1.1697	-0.181	0.857
Do you have fear of not being able to complete the requirement	4.398±0.7954	4.218±0.9757	1.350	0.179
Do you have difficulty in understanding the course materials to study	3.169±0.9730	3.228±1.0572	-0.391	0.696
Do you have stress when the patients do not turn up or are late for the appointment	4.614±0.7937	4.683±0.5819	-0.677	0.500
Do you have shortage of allocated clinical time for the course	4.169±1.0219	4.020±0.8874	1.039	0.300
Have you studied well before the exam	3.386±0.9084	3.455±1.0151	-0.487	0.627
Are you happy with your result*	2.843±1.0874	2.129±0.9865	4.669	0.000
Do you feel that you are competent to graduate as a dentist	4.229±0.8013	4.109±0.8591	.0972	0.332
How is the acceptance of the cases by the supervisor	3.169±0.9082	3.198±1.0956	-0.195	0.846
Do you have ease of laboratory access for the cases	2.663±1.0155	2.790±0.8796	-0.897	0.371
Did you get benefit of planning a case comprehensively in a clinical perspective	3.386±1.0801	3.119±1.0889	1.659	0.099
Did you get the benefit of communication with the patient in the comprehensive case	3.349±1.1522	3.168±1.2253	1.025	.0307
Did you have ease of completing the comprehensive case as requirement for the course	2.458±1.0277	2.624±1.0183	-1.095	0.275
What is the overall score for the course in all respects*	2.940±0.7863	2.663±0.8975	2.225	0.027

*p<0.05 is considered statistically significant

Figure 1: Model for successful implementation of the CCC course

