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Students' opinions on tutor-supported comprehensive care training in clinical dental education

KEYWORDS

Tutor-supported training Comprehensive care Dental education Patient-centred care

SUMMARY

Tutor-supported comprehensive care training at the University of Bern School of Dental Medicine (SDM) has been used for many years. Therefore, the aim of this study was to evaluate dental students' opinions on tutor-supported training to identify key aspects of future course organisation that are important for students to achieve the minimum requirements for their graduation. A digital survey was developed and distributed among all fourth- and fifth-year dental students enrolled in the SDM in 2014 and 2016. A total of 28 (41.2%) and 21 (36.2%) students participated in the survey in 2014 and 2016, respectively. The average age of all respondents was 25.8 (±4.0) years. The proportion of females was 75% with no differences between groups, neither among classes nor years of the survey. The students felt well prepared following the bachelor's degree preclinical programme and a two-week

introduction immediately preceding the clinical course. During clinical training, the students' experiences with their assigned tutors were positive even though waiting times for tutors during patient care as well as organisational efforts to manage attestations and logbooks were mentioned. For each discipline, patient assignment ($\rho = 0.54$, p < 0.0001) and frequently meeting with their tutors (ρ = 0.56, p < 0.0001) revealed the highest correlation with 1) achieving minimum requirements and 2) improving treatment planning skills in both fourth- and fifth-year dental students. In conclusion, tutor-supported comprehensive care training is well accepted by dental students while focusing on both patient assignment and frequent discussions with tutors may help students to better achieve minimum requirements in clinical dental education.

Introduction

Comprehensive dental care is defined as integrated treatment that addresses all dental needs of patients (ADIBI ET AL. 2012). In clinical dental education it enables students to provide dental care in a manner that is closely related to the dental practice in which they will work after graduation (VINING 1984). Today, efforts to provide comprehensive care training in clinical dental education aim to train patient-centred approaches, incorporating high-quality dental care services from all dental disciplines.

Traditional methods of undergraduate dental education were more focused on the educational needs of students and less on the dental needs of patients (HENZI ET AL. 2007; NADER-SHAHI ET AL. 2010). The comprehensive care model, on the other hand, is described as more patient-oriented and it allows for comprehensive and timely dental care, while providing students with an enhanced educational experience (DEHGHAN ET AL. 2015; EVANGELIDIS-SAKELLSON 1999). In addition, comprehensive dental care allows for long-term monitoring and supportive therapy for all patients (MCCONNELL ET AL. 1993).

The tutoring system has become another key element in undergraduate dental education. The tutors can very well understand the inner tension of the students in terms of meeting the minimum requirements necessary for graduation. Meetings between tutors and their assigned students help to build an interpersonal relationship that fosters compliance, reward, empathy and motivation in both students and tutors. Clinical training supported by tutors can therefore lead to quality of learning and education for dental students.

Only a few studies have been conducted to evaluate the benefits of tutor-supported training in undergraduate dental education. A study from the University of Tennessee in the USA found that students were satisfied with and supportive of the transition from a traditional departmental to a comprehensive care model at their dental school. The majority of students (86%) reported that their educational model enabled them to achieve "more comprehensive dentistry with greater consistency of supervision from faculty in a more patient-centred environment than in the departmental model" (DEHGHAN ET AL. 2015). Moreover, another study of 21 North American dental schools revealed that junior, senior and graduate dental students consider constructive relationships with faculty as the most important aspect of their clinical education (HENZI ET AL. 2006). Therefore, in a comprehensive care model, tutors contribute to enhancing students' clinical experience. Additionally, tutors have been reported to help reduce student stress by providing support and clinical guidance (Schwartz et AL. 2014). In a study at the U.S. Harvard School of Dental Medicine involving dental students, they reported stress during the transition from preclinical to clinical year when there was no faculty member to tutor them (SUKOTJO ET AL. 2007). The administrative matters of the clinic could also be perceived as difficult and stressful (POLYCHRONOPOULOU & DIVARIS 2009). To achieve their goals, dental students should gain confidence in their abilities and understand when to ask for help (RADCLIFFE & LESTER 2003). Nowadays, the education system focuses on developing new strategies to support dental students during their studies in order to achieve high skills levels. Moreover, the competitiveness of the workforce places high demands on the knowledge of new dental techniques, without neglecting the role of dentistry in patient health care. For this reason, it is appropriate to investigate the students' level of satisfaction

and their opinion on improving various aspects of their education

Therefore, the aim of this study was to evaluate the tutor-supported comprehensive dental care training from the students' perspective. A questionnaire was used to identify possible links between the organisation of the course and the students' ability to meet the minimum requirements necessary for their graduation.

Materials and Methods

The study of dentistry at the University of Bern, Switzerland, consists of three preclinical years of undergraduate education in the bachelor's programme and two clinical years leading to the master's degree in dental medicine. In the master's programme at the University of Bern School of Dental Medicine (SDM), the main focus is placed on clinical training. Students both learn and experience the various interrelated aspects of dentistry in a comprehensive care clinical course on patients. Students treat their assigned patients in the fields of oral surgery, periodontology, restorative dentistry, as well as fixed and removable prosthetic dentistry.

During the clinical work in the course, students are supported by tutors from the respective specialist clinics. This tutor-supported teaching is a significant part of the clinical training at the SDM. All students are assigned one tutor per semester and for each of the five subjects. Thus, all students have five contact persons who support them. Tutors, on the other hand, are assigned several students whom they supervise in their subject area.

The students discuss the clinical findings and the respective diagnoses of the assigned patients as well as the treatment plans and all course-related administrative work with their tutors. In addition to this supervision of the students, the tutors have the task of formative assessment of the students' clinical performance. In each subject area, tutors are briefed before the start of the academic year on how to discuss treatment plans and conduct formative assessment with their students.

Study design

The present study was conducted with fourth- and fifth-year undergraduate dental students enrolled at the SDM in 2014 and 2016, respectively. A total of four classes were surveyed by means of an anonymised questionnaire (online supplement). All surveys took place at the end of the respective academic year. The study protocol was submitted to and approved by the Ethical Committee of the Canton of Bern (KEK), Switzerland (Req-2021-00323).

For the purpose of this evaluation, a digital questionnaire was developed using Microsoft Word (Microsoft Corporation, Redmond, WA, USA). The questionnaire consisted of a total of 27 questions divided into four sections asking the students about their experience with 1) the introduction to the clinical course, 2) the comprehensive care training, 3) collecting attestations and keeping logbooks, and 4) the tutor-supported training. Answers in the digital questionnaire were structured according to a five-point Likert scale.

Clinical course procedure and student assessment

At the beginning of the fourth year of study, a two-week introduction to the clinical programme took place. In this introduction, the procedures for diagnostics, treatment planning and patient care were introduced, and the tutor-supported

teaching was demonstrated. The formative assessments of students were also explained and the minimum requirements for achieving the course objectives were stated. It was also pointed out that the assigned tutors needed to be contacted regularly so that the intermediate steps of diagnostics and treatment procedures could be discussed.

At the beginning of each academic year in 2013 and 2015, students were assigned their patients for both examination and treatment. During the semesters, students were responsible for scheduling their patients' appointments and billing for the treatments performed during the course. Patients who repeatedly did not show up for the agreed appointment had to be returned to the course instructors. If necessary, students could request new patients from the course instructors again. In order to meet the quantitative minimum requirements, the students had four half-days per week during the two-year master's programme to carry out the examinations and treatments in the respective semesters.

Formative assessments of the students' clinical performance took place directly in the student clinic. Intermediate steps were assessed in analogy to the quality assurance of the Swiss Dental Association (SSO) with grades A+, A, B and C, whereby both grades B and C were classified as insufficient. The grades were noted on attestation forms (A4 size sheets). Students were responsible for both receiving their assessments and managing the attestation forms. There were separate attestation forms for all patients and in all disciplines which the students had to manage personally. After completion of a respective treatment, an overall grade was entered by the tutors in a logbook (A4 size booklet). Students again had to keep and manage their own logbook showing the minimum requirements for all disciplines per academic year. Summative assessments of the students took place at the end of each academic year. Upon achieving all quantitative minimum requirements, the specified European Credit Transfer System (ECTS) credit points necessary for graduation were awarded.

Statistical analysis

Statistical analyses were performed with RStudio (version 1.3.1093, RStudio Team, [2020]. RStudio: Integrated Development Environment for R. RStudio, PBC, Boston, MA www.rstudio.com). Means, percentages and standard deviations were calculated using descriptive statistics.

Categorical data were analysed with Fisher's exact tests while non-parametric data were assessed with Kruskal-Wallis rank sum tests, respectively. Potential differences between the distributions of the five-point Likert scale data from different classes (4th- and 5th-year dental students) and the respective survey year (2014 and 2016) were analysed using Kruskal-Wallis rank sum tests. Possible associations between various questions were evaluated using both Spearman rank and Pearson product-moment correlations and interpreted using the Cohen convention (COHEN 1988). P-values <0.05 were defined as statistically significant.

Results

In the years 2014 and 2016, a total of 126 fourth– and fifth–year students from four classes were surveyed with an anonymised questionnaire (Tab. I). The overall return rate per class ranged from 29.6% (min.) to 43.2% (max.) with a mean of 38.4%. A total of 49 questionnaires were evaluated for the study (Tab. I).

Demographic data

The mean age of the study participants was 25.8 (\pm 4.0) years with no statistically significant difference between the fourth-(p=0.130) and fifth-year students (p=0.525) (Tab.I). The mean percentage of female students was 74.8% with a minimum of 61.5% and a maximum of 87.5%, again with no statistically significant difference between students from the fourth (p=0.192) and fifth year of study (p>0.999), respectively (Tab.I).

Survey data

Distributions of the five-point Likert scale data from both fourth- and fifth-year dental students and the respective survey year (2014 and 2016) were compared and pooled if equality was found. In all the questions relating the students' experience with 1) the introduction to the clinical course, 2) the comprehensive care training, and 3) collecting attestations and keeping logbook, equal distributions were found with P-values reaching from 0.086 (Fig. 1) to 0.972 (Fig. 3).

Experience with course introduction

The vast majority of all n = 49 dental students felt well prepared following the bachelor's degree preclinical programme,

| Tab.I Dental students' demo | graphics from | all the classes a | nd their respon | se rates to the | surveys in 2014 | and 2016 | |
|-------------------------------------|---------------------|---------------------|-----------------|-----------------|-----------------|-------------------------|-------------------------|
| | | | | | | P-values | |
| | All | 4th year | 5th year | 4th year | 5th year | 4th year 2014 & 2016 | 5th year 2014 & 2016 |
| Year of survey | N/A | 2014 | 2014 | 2016 | 2016 | N/A | N/A |
| n students per class | N/A | 37 | 31 | 31 | 27 | N/A | N/A |
| Response to survey 2014 (%) | 28 (41.2) | 16 (43.2) | 12 (38.7) | N/A | N/A | N/A | N/A |
| Response to survey 2016 (%) | 21 (36.2) | N/A | N/A | 13 (41.9) | 8 (29.6) | N/A | N/A |
| Mean age (SD) | 25.8 (±4.0) | 24.5 (±1.2) | 26.3 (±3.3) | 25.0 (±1.1) | 28.8 (±8.7) | 0.130* | 0.525* |
| Gender (female, %) | 37 (75.5) | 14 (87.5) | 9 (75.0) | 8 (61.5) | 6 (75.0) | 0.192** | >0.999** |
| SD: standard deviation; * Kruskal-W | allis rank sum test | ** Fisher's exact t | est. | | | | |

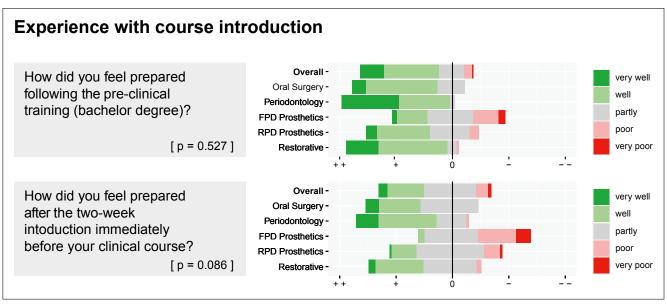


Fig. 1 Overall and subject–specific five–point Likert scale data from the students' answers (pooled) regarding their experience with the introduction to comprehensive care training. P-values of ≥0.05 indicate similar distributions from different years (2014 and 2016) and classes (4th– and 5th–year dental students). FPD: fixed partial denture, RPD: removable partial denture.

albeit with minor differences between the individual subjects (Fig. 1). Similarly, the students felt well prepared after the two-week introduction immediately before the clinical course.

Experience with clinical training

Overall, the dental students' experiences with their clinical training were positive even though their patients usually had high expectations (Fig. 2). Furthermore, notable positive experiences were made especially with 1) high reliability, 2) rare short-term cancellations and 3) good payment morale of patients. Even though students reported long waiting times for tutors during patient care, this issue seemed to be somewhat compensated by greater learning experiences.

Experience with collecting attestations and keeping logbook

Concerning the dental students' experiences with collecting attestations and keeping their logbook, almost equal distributions were found among all subjects (p > 0.311) (Fig. 3).

Although the guidelines for both collecting attestations and transferring them to the logbook were predominantly perceived as very good, the time required and the organisational effort to obtain these attestations and keeping the logbook felt to be long or even very long (Fig. 3).

Experience with tutor-supported training

Overall, the dental students' experiences with the tutor-supported training as part of the comprehensive care clinical training were often very good, although there were variations between different subjects. Students did not meet with their tutors equally often in all disciplines (p = 0.013) or fulfil the minimum requirements equally well (p = 0.004) (Fig. 4). Hence, bivariate correlations were calculated both overall and for each discipline separately (Fig. 5 and 6).

Achieving the minimum requirements during comprehensive care training in all subjects correlated with positive experiences especially when patient assignment worked out well

for the students (Spearman ρ = 0.54, 95% confidence interval [CI] 0.443–0.632, p < 0.0001). More specifically, a high positive correlation was found with the subject of fixed partial denture prosthetics with a Spearman ρ = 0.62 (95% CI 0.410–0.796, p < 0.0001) (Fig. 5). Moreover, the treatment planning skills improved when the students met with their tutors more often (Spearman ρ = 0.56, 95% CI 0.443–0.632, p < 0.0001). Again, with the subject of fixed partial denture prosthetics, the highest correlation was found with a Spearman ρ = 0.63 (95% CI 0.410–0.796, p < 0.0001) (Fig. 6).

Discussion

The present study demonstrated that dental students felt well prepared for comprehensive care training following the bachelor's degree preclinical programme and a two-week introduction immediately preceding the clinical course. During clinical training, the students' experiences with their assigned tutors were positive and for all disciplines, patient assignment and frequent meetings with their tutors revealed the highest positive correlation with 1) achieving minimum requirements and 2) improving treatment planning skills, both reaching statistical significance. Therefore, it was concluded that tutor-supported comprehensive care training is well accepted by dental students while focusing on patient assignment by course instructors and frequent discussions with tutors may help students to better achieve minimum requirements in clinical dental education.

The origin of the idea to implement a comprehensive care training in clinical dental education emerged following a continuous decline in patient numbers attending University dental clinics throughout the late 1970s (CASAMASSIMO & SEALE 2015). Due to the shortage of patients, the problem arose that the students treated patients not according to their needs but according to the gaps in the students' list of requirements. This critical issue called for fundamental changes in the curriculum of numerous University dental clinics. At the third U.S. Conference on Comprehensive Care in Clinical Dental Education in 1983, one of the issues addressed was how to

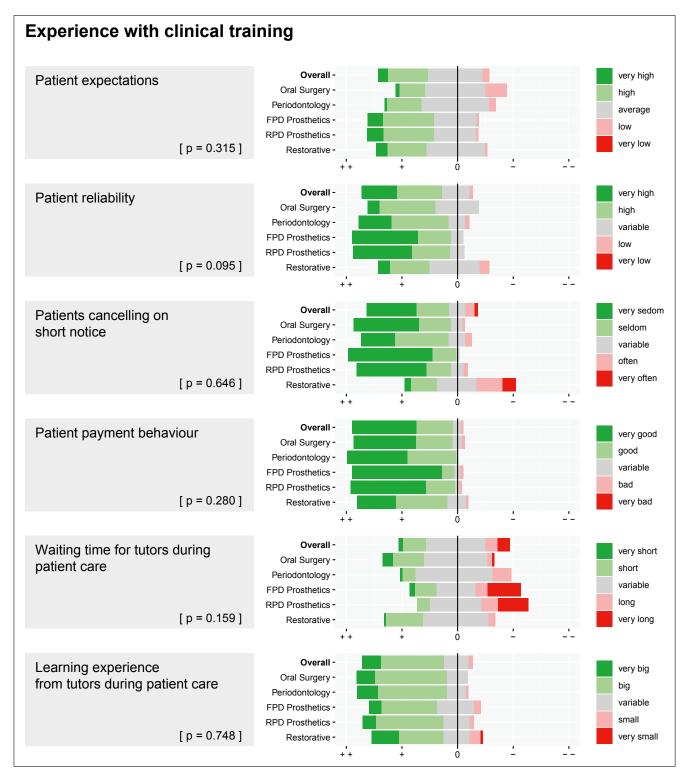


Fig. 2 Overall and subject-specific five-point Likert scale data from the students' answers (pooled) regarding their experience with the clinical training of comprehensive care education. P-values of >0.05 indicate similar distributions from different years (2014 and 2016) and classes (4th- and 5th-year dental students). FPD: fixed partial denture, RPD: removable partial denture.

provide a larger number of patients to undergraduate dental students (VINING 1984). Various suggestions were elaborated in order to ensure a sufficient number of patients for the students to reach the quantitative minimum requirements necessary for their graduation. A maintenance system including patients enrolled in supportive periodontal therapy, which was discussed for the first time during this workshop in 1983, represented a relevant innovation.

Earlier educational methods tended to focus on training students, while newer approaches to patient care considered more holistic and patient–centred treatments that could still be carried out by dental students (Dehghan et al. 2015; Henzi et al. 2007). In order to ensure high quality work, the range of patient care should be diverse and as similar as possible for all students. During clinical training, dental students should receive their expected experience while at the same time the

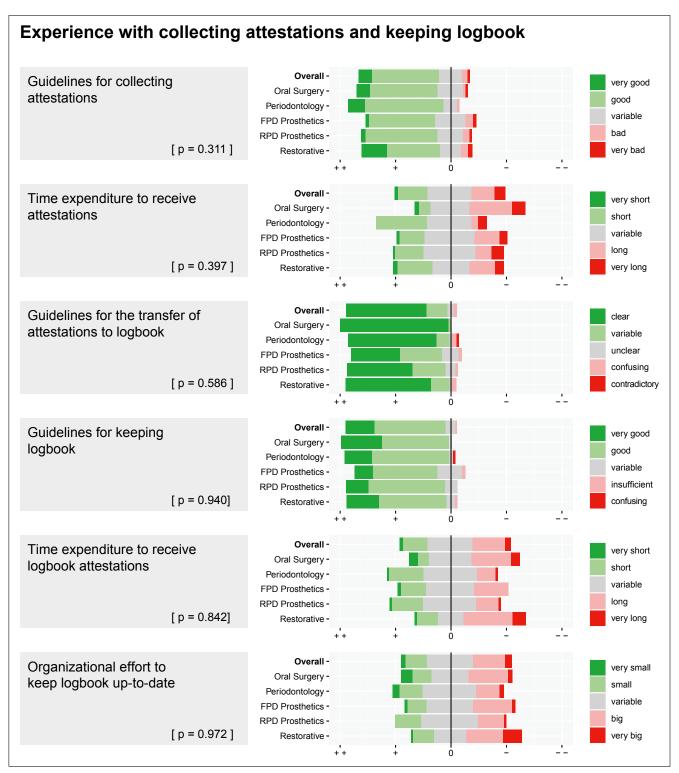


Fig. 3 Overall and subject-specific five-point Likert scale data from the students' answers (pooled) regarding their experience with collecting attestations and keeping their logbook during comprehensive care training. P-values of ≥0.05 indicate similar distributions from different years (2014 and 2016) and classes (4th- and 5th-year dental students). FPD: fixed partial denture, RPD: removable partial denture.

patients should receive their treatment as indicated (ADIBI ET AL. 2012). Therefore, Universities keep trying to use different learning and training methods to educate students in their best possible way. These methods include problem-based learning as well as comprehensive care training supported by peers or tutors from University dental schools. Often, faculty members such as graduate students or dental hygienists are assigned tutoring and mentoring responsibilities in the student clinic

(CROFT ET AL. 2005; LANNING ET AL. 2014). In European Dental Schools today, clinical curricula still do not always allow students to elaborate treatment plans and in such cases treatment procedures are assigned to students whose clinical expertise is sufficient to perform the treatment as indicated (Zeller et Al. 2022). As pointed out by Zeller and co-workers, this approach resulted to fewer treatments in certain dental disciplines, again largely due to lacking patient numbers (Zeller et Al. 2022).

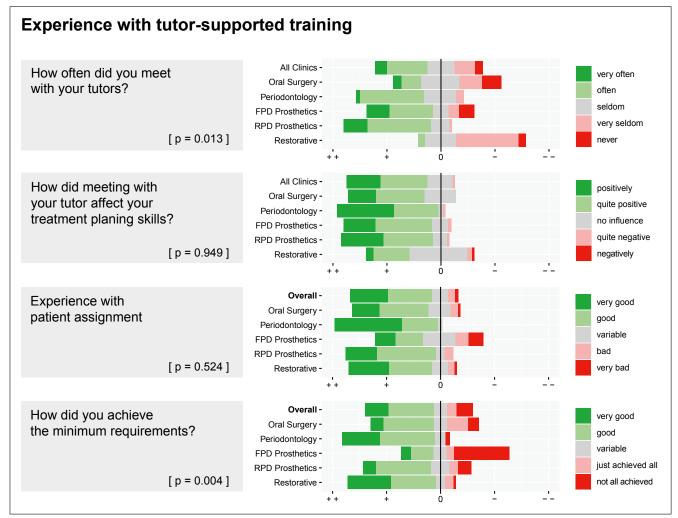


Fig. 4 Overall and subject-specific five-point Likert scale data from the students' answers (pooled) regarding their experience with the tutor-supported training during comprehensive care education. P-values of ≥0.05 indicate similar distributions from different years (2014 and 2016) and classes (4th- and 5th-year dental students). FPD: fixed partial denture, RPD: removable partial denture.

Comprehensive dental care, on the other hand, allows the students to work with their tutors to develop and adjust treatment plans with fewer patients while enabling them to take responsibility from the beginning (Dehghan et al. 2015).

Moreover, the present study demonstrated that the better patient assignment worked out for students, the better they met the minimum quantitative requirements for graduation. The study conducted by Adibi and colleagues at the U.S. University of Texas School of Dentistry indicated that 29% of patients received comprehensive dental care and patients on average discontinued treatment after the third or fourth visit (ADIBI ET AL. 2012). Their treatments were predominantly restorative and thus patient assignments for comprehensive dental care proved to be challenging (ADIBI ET AL. 2012). Zeller and co-workers additionally pointed out that Swiss dental students performed fewer fixed prosthodontic treatments compared to restorative therapies, which again was mainly due to the lack of fixed prosthodontics patients available for the student course (Zeller et al. 2022).

The majority of reports in the literature on tutor-supported comprehensive care training are found in medical education and only a small number of studies could be identified in dental education. Even in these, it was found that in established tutoring programs, students had a contact person to support them

with important issues. Support was provided with treatment planning, making diagnoses, preparing cost estimates and other administrative work. The personal interaction with the tutor allowed students to raise doubts and concerns that are less likely to be addressed in more open settings (HENZI ET AL. 2007).

Our study revealed strengths and weaknesses of the tutorsupported comprehensive care training in clinical dental education. In terms of course preparation and introduction, students were satisfied although differences were found among the two subjects of periodontology and fixed partial denture (FPD) prosthetics. However, no plausible reason for this situation could be found in the data of this study. Moreover, longer waiting times for tutors during clinical care and a high organisational effort in obtaining attestations and keeping their logbook were reported in all disciplines. At the SDM, meetings with tutors were face-to-face. As reported by other studies, the presence of a trusted person has a positive impact on the student's learning environment (HENZI ET AL. 2007). Being able to discuss cases with a confidant reduces students' internal stress and it also gives an ability to discuss both treatment plans and clinical cases in a calmer environment (George et al. 1987; SCHWARTZ ET AL. 2014). This was further shown in a study by Henzi and co-workers (2007) where 81% of the students in their study confirmed being less stressed after talking to their

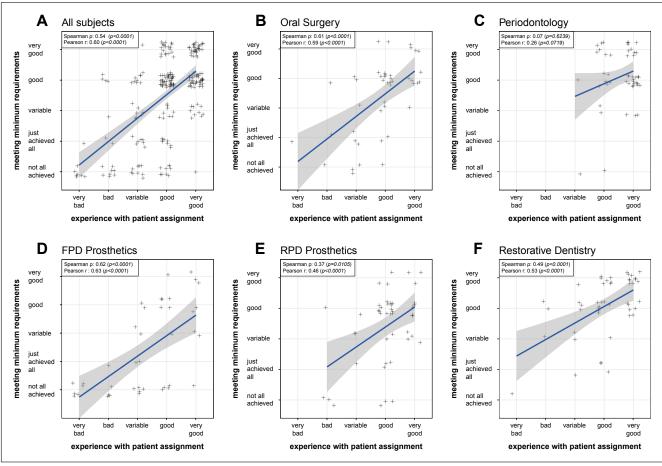


Fig. 5 Overall and subject-specific correlations between the students' experience of patient assignment and meeting the minimum requirements. Plots of regression lines and 95% confidence intervals obtained from data numerically converted for Pearson product-momentum correlations. FPD: fixed partial denture, RPD: removable partial denture.

tutor (Henzi et al. 2007). Additionally, it may be beneficial when students are not under supervision of a single tutor for a longer period of time. Working with multiple tutors gives students the opportunity to both effectively care for their patients and build professional relationships with faculty which not only impacts their clinical skills, but also provides them with personal connections that they may later benefit from professionally (Dehghan et al. 2015).

In their study, Murphy and colleagues have shown tutor-supported education to be a valuable investment for the future (Murphy et al. 2009). In order to keep the tutors updated, the standard clinical protocols should be updated regularly so that tutors can pass on the same information to their students. Likewise, the tutors should frequently exchange information and calibrate among each other. This can be achieved with regular meetings and calibration sessions (Murphy et al. 2009). In alignment with our study, according to Dehghan and co-workers reported that students reacted positively to the tutor-supported educational programme (Dehghan et al. 2015).

Our study has shown that, the more often students connected with their tutors, the more they felt that their treatment planning skills improved. In the end, however, it may be the qualitative aspect of a conversation rather than the quantitative which helps students improve their treatment planning skills. Nevertheless, our data revealed a statistically significant trend for the frequency of meeting with tutors and improvement of treatment planning skills with a Spearman ρ of 0.56

(p<0.0001) leading to the conclusion that the quantitative aspect of frequent meeting may play a significant role in comprehensive care training.

With a response rate of 41.2% in 2014 and 36.2% in 2016, both our hypotheses were validated, i.e., that diligent patient assignments and more frequent meetings with tutors have a positive impact on the learning environment of clinical dental education. However, a few limitations of this study need to be discussed. The sample size of only 49 dental students in total who had participated in two surveys prior to the COVID-19 pandemic (2014 and 2016) may be of concern. However, although response rates were only 41.2% in 2014 and 36.2% in 2016, our pooled analysis yielded good estimates with high correlations between 1) students' experiences with patient assignments and meeting the minimum requirements as well as 2) frequency of meetings with their tutor and improvement of their treatment planning skills, each of which were statistically significant. Moreover, these correlations could be reasonably generalised with their respective 95% confidence intervals. Moreover, the lack of a pre-post or parallel-group design could be criticised. However, according to the available literature, other studies used similar designs and neither a pre-post nor a parallel-group design were needed to evaluate the impact of tutor-supported education in comprehensive clinical care training in dental education (ADIBI ET AL. 2012; STENFORS-HAYES ET AL. 2011). An additional issue needs to be mentioned since between 2014 and 2016 the curriculum of the SDM may

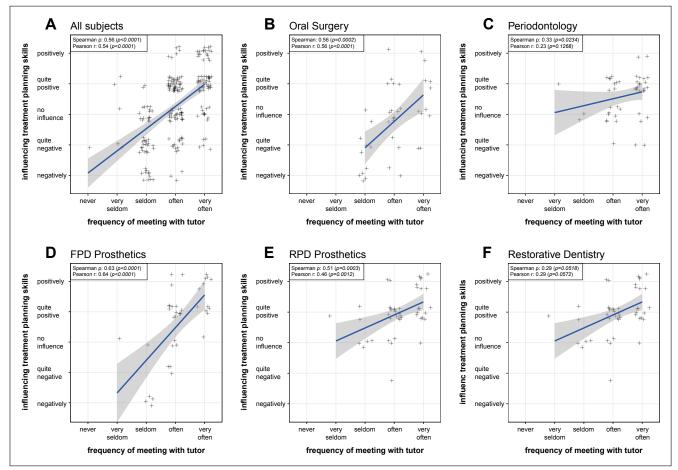


Fig. 6 Overall and subject-specific correlations between the students' frequency of meeting with tutors and their influence on treatment planning skills. Plots of regression lines and 95% confidence intervals obtained from data numerically converted for Pearson product-momentum correlations. FPD: fixed partial denture, RPD: removable partial denture.

have changed and these changes might have affected the students' responses in the questionnaire. However, in the time-frame of the present study, no notable changes were implemented in the SDM curriculum which was reflected in the comparison of our data from all four classes surveyed in 2014 and 2016, respectively. For the vast majority of the questions, there were no statistically significant differences in the distribution of responses between the groups of fourth– and fifth-year students in 2014 and 2016. Finally, no control group of students with no tutors assigned was created in this study. A controlled study could effectively determine the effect of tutoring support. However, due to ethical considerations, such a study design would not be appropriate for undergraduate dental student education.

Statement of sources of funding for the study

This study was self-funded by the Department of Periodontology, University of Bern, Switzerland.

Conflict of interest

The authors declare that there are no conflicts of interest in this study.

Conclusion

Within the limitations of this study, it may be concluded that tutor-supported comprehensive dental care training is well accepted by undergraduate students while focusing on both patient assignment by course instructors and frequent discussions with tutors may help students to better achieve minimum requirements in clinical dental education.

Zusammenfassung

Hintergrund und Ziel

An den zahnmedizinischen Kliniken der Universität Bern (zmk bern) wird seit mehreren Jahren eine tutoriell begleitete, synoptische klinische Ausbildung durchgeführt. Ziel dieser Studie war es daher, die Meinungen der Zahnmedizinstudierenden zur tutoriell unterstützten klinischen Ausbildung zu evaluieren. Daraus sollen Schlüsselaspekte der zukünftigen Kursorganisation identifiziert werden, die für die Studierenden wichtig sind, um die Mindestanforderungen für ihren Studienabschluss zu erreichen.

Material und Methoden

Es wurde eine digitale Umfrage entwickelt und an alle Studierenden der Zahnmedizin im vierten und fünften Studienjahr verteilt, die an den zmk bern im Jahr 2014 und 2016 studierten.

Resultate

Insgesamt 28 (41,2%) bzw. 21 (36,2%) Studierende nahmen 2014 bzw. 2016 an der Umfrage teil. Das Durchschnittsalter aller Befragten betrug 25,8 (\pm 4,0) Jahre. Der Anteil der Frauen lag bei 75%, wobei es keine Unterschiede zwischen den Grup-

pen gab, weder zwischen den Klassen noch zwischen den Jahren der Befragung. Die Studierenden fühlten sich nach dem vorklinischen Bachelor-Studiengang und einer zweiwöchigen Einführung unmittelbar vor dem klinischen Kurs gut vorbereitet. Während der klinischen Ausbildung waren die Erfahrungen der Studierenden mit den ihnen zugewiesenen Tutoren positiv, auch wenn Wartezeiten für die Tutoren während des Kursbetriebs sowie organisatorischer Aufwand bei der Verwaltung von Testatblätter und Masterjournalen genannt wurden. Für jedes Fachgebiet zeigten sowohl bei den Studierenden im vierten als auch im fünften Jahr die Patientenzuweisung (p=0,54, p<0,0001) und die häufigeren Treffen mit den Tutoren (p=0,56, p<0,0001) die höchste Korrelation mit 1) dem Erreichen der Mindestanforderungen und 2) der Verbesserung der Fähigkeiten, Behandlungspläne zu erstellen.

Schlussfolgerung

Zusammenfassend lässt sich sagen, dass ein von Tutoren unterstützter synoptischer klinischer Unterricht von den Studierenden der Zahnmedizin geschätzt wird, während die Optimierung der Patientenzuteilung und häufigere Gespräche mit den Tutoren den Studierenden helfen können, die Mindestanforderungen in der klinischen Ausbildung besser zu erfüllen.

Résumé

Contexte et objectif

Les cliniques de médecine dentaire de l'Université de Berne (zmk bern) dispensent depuis plusieurs années une formation clinique synoptique assistée par un tuteur. L'objectif de cette étude était donc d'évaluer l'opinion des étudiants en médecine dentaire sur la formation clinique assistée par un tuteur afin d'identifier les aspects-clés de l'organisation future des cours qui sont importants pour les étudiants afin d'atteindre les exigences minimales pour leur diplôme.

Matériel et méthodes

Une enquête numérique a été développée et distribuée à tous les étudiants en médecine dentaire de quatrième et cinquième année qui ont étudié à la zmk bern en 2014 et 2016.

Résultats

Au total, 28 (41,2 %) et 21 (36,2 %) étudiants ont participé à l'enquête en 2014 et 2016. L'âge moyen de toutes les personnes interrogées était de 25,8 (±4,0) ans. La proportion de femmes était de 75 %, et il n'y avait pas de différence entre les groupes, ni entre les classes, ni entre les années de l'enquête. Les étudiants se sentaient bien préparés après le baccalauréat préclinique et une introduction de deux semaines juste avant le cours clinique. Pendant la formation clinique, les expériences des étudiants avec les tuteurs qui leur ont été attribués ont été positives, même si les temps d'attente pour les tuteurs pendant le déroulement des cours ainsi que le travail d'organisation pour la gestion des feuilles d'examen et des journaux de master ont été mentionnés. Pour chaque spécialité, tant pour les étudiants de quatrième que de cinquième année, l'assignation de patients (p = 0,54, p < 0,0001) et les rencontres plus fréquentes avec les tuteurs (ρ = 0,56, p < 0,0001) ont présenté la corrélation la plus élevée avec 1) l'atteinte des exigences minimales et 2) l'amélioration des capacités à élaborer des plans de traitement.

Conclusion

En résumé, un enseignement clinique synoptique soutenu par des tuteurs est apprécié par les étudiants en médecine dentaire, tandis que l'optimisation de l'affectation des patients et des discussions plus fréquentes avec les tuteurs peuvent aider les étudiants à mieux atteindre les exigences minimales dans leur formation clinique.

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Fragen zum Synopsiskurs

| Bitte alle zutreffenden A | ntworten ankreuzer | ı. Vielen Dank! | | | |
|---------------------------|----------------------|-------------------------|------------------------|--------------------------|---------------|
| Studienjahr: 🗆 4. Studi | ienjahr □ 5. Studi€ | enjahr | | | |
| Kursvorbereitung | | | | | |
| Wie hast Du Dich nach de | em 3. Studienjahr fü | r den Synopsiskurs vo | orbereitet gefühlt? | | |
| | sehr gut | gut | teils/teils | ungenügend | schlecht |
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |
| Wie hättest Du Dich für c | den Synopsiskurs be | sser vorbereiten wolle | en? | | |
| | mehr Vorlesungen | mehr PBL | mehr Selbststudium | mehr Bücher/ Skripten | mehr Internet |
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |
| Ich hätte mir noch folger | nde Vorbereitungen | gewünscht: | | | |
| Wie hast Du Dich nach de | en zwei Wochen Ein | führung in der Klinik i | m 4. Studienjahr gefüh | nlt? | |
| | sehr sicher | sicher | teils/teils | unsicher | sehr unsicher |
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |
| | | | | | |

Patientenbehandlung

Wie hast Du die Termine mit Deinen Patienten vereinbart?

| | sehr häufig | häufig | ab und zu | selten | sehr selten |
|---|------------------------|-----------------------|----------------|--------|-------------|
| In der Klinik | | | | | |
| Telefon zmk | | | | | |
| Handy (privat) | | | | | |
| SMS (privat) | | | | | |
| E-Mail | | | | | |
| Briefpost | | | | | |
| Wie schätzt Du die Ansprüche der meisten Deiner Patienten pro Fachgebiet ein? | | | | | |
| wie schatzt Du die An | spruche der meisten De | einer Patienten pro F | acngebiet ein? | | |

| | sehr hoch | hoch | durchschnittlich | gering | sehr gering |
|----------------|-----------|------|------------------|--------|-------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie schätzt Du die Zuverlässigkeit der meisten Deiner Patienten pro Fachgebiet ein?

| | sehr zuverlässig | zuverlässig | unterschiedlich | unzuverlässig | sehr unzuverlässig |
|----------------|------------------|-------------|-----------------|---------------|--------------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie oft haben Dir Deine Patienten einen Termin kurzfristig abgesagt?

| | sehr häufig | häufig | unterschiedlich | selten | sehr selten |
|----------------|-------------|--------|-----------------|--------|-------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

| Wie war | die 7 | 7ahlun | gsmoral | Deiner | Patienten | > |
|-----------|-------|----------|---------|---------|------------|---|
| VVIC VVGI | arc 2 | _aiiiaii | Somoran | DCITICI | I attenten | • |

| | gut | meistens gut | teils/teils | meistens schlecht | schlecht |
|----------------|-----|--------------|-------------|-------------------|----------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie viele effektive Stunden pro Halbtag haben die meisten Deiner Patienten in der Klinik verbracht?

| | weniger als 1 Stunde | 1 Stunde | 2 Stunden | 3 Stunden | 4 Stunden |
|----------------|-------------------------|----------|-----------|-----------|-----------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie lang waren die Wartezeiten auf Kursbetreuer in der Klinik (Assistenten, ext./int. OAs, DHs)?

| | sehr kurz | kurz | unterschiedlich | lang | sehr lang |
|----------------|-----------|------|-----------------|------|-----------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie gross war Deine Lernerfahrung aus den Hilfeleistungen der Kursbetreuer?

| | sehr gross | gross | teils/teils | gering | sehr gering |
|----------------|------------|-------|-------------|--------|-------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

| Bemerl | kungen: |
|--------|---------|
|--------|---------|

| Wie hat die Zu | ıteilung der | Patienten | für Dich | geklappt? |
|----------------|--------------|-----------|----------|-----------|
|----------------|--------------|-----------|----------|-----------|

| | sehr gut | gut | teils/teils | schlecht | sehr schlecht |
|----------------|----------|-----|-------------|----------|---------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie hast Du die im Masterjournal pro Studienjahr geforderten Leistungsziele erreicht?

| | sehr gut erreicht | gut erreicht | teils/teils | knapp alle erreicht | nicht alle erreicht |
|----------------|-------------------|--------------|-------------|---------------------|---------------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Welche erweiterten Lernmethoden im Kurs würdest Du gerne in Anspruch nehmen?

| | mehr Demos am Patienten | mehr Assistenz am Patienten | Zuteilung von <i>mehr</i> Patienten | Zuteilung von weniger Patienten | keine Änderungen |
|----------------|----------------------------|--------------------------------|--|------------------------------------|---------------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Welche erweiterten Veranstaltungen für den Kurs würdest Du gerne in Anspruch nehmen?

| | Workshops (Praxis) | Seminare (Theorie) | Fallplanungs- übungen | Kommunikations- übungen | keine Änderungen |
|----------------|-----------------------|-----------------------|--------------------------|----------------------------|---------------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Bemerkungen:

Testatblätter

Wie ist die Vergabe der Testate auf den Testatblättern pro Fachgebiet geregelt?

| | sehr gut | gut | teils/teils | ungenügend | verwirrend |
|----------------|----------|-----|-------------|------------|------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Geben die Testatblätter eine Reihenfolge der Behandlungssequenz vor?

| | immer | meistens | teils/teils | selten | nie |
|----------------|-------|----------|-------------|--------|-----|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie beurteilst du den Zeitaufwand, die Testate einzuholen?

| | sehr gering | gering | teils/teils | gross | sehr gross |
|----------------|-------------|--------|-------------|-------|------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie ist die Übertragung der Testate von den Testatblättern in das Masterjournal geregelt?

| | klar | unterschiedlich | unklar | verwirrend | widersprüchlich |
|----------------|------|-----------------|--------|------------|-----------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Bemerkungen:

Masterjournal

| Vie stehst Du zu den folgenden Aussagen? ja teilweise nein | | | | | | |
|---|---|---|----------------------|-------------|------------|------------|
| Parodontologie | | sehr gut | gut | teils/teils | ungenügend | verwirrend |
| Kro-Brü | Oralchirurgie | | | | | |
| Prothetik | Parodontologie | | | | | |
| Me beurteilst du den Zeitaufwand, die Testate im Masterjournal einzuholen? Sehr gering Sering Seins/teils Sens Sehr gross | Kro-Brü | | | | | |
| Sehr gering gering teils/teils gross sehr gross Oralchirurgie Parodontologie Prothetik Zahnerhaltung Sehr gering gering teils/teils gross sehr gross We beurteilst du den organisatorischen Aufwand, die Testate im Masterjournal einzuholen? We beurteilst du den organisatorischen Aufwand, die Testate im Masterjournal einzuholen? We beurteilst du den organisatorischen Aufwand, die Testate im Masterjournal einzuholen? We beurteilst du den organisatorischen Aufwand, die Testate im Masterjournal einzuholen? We sehr gering gering teils/teils gross sehr gross Oralchirurgie Parodontologie Parodontologie Prothetik Prothetik Prothetik Zahnerhaltung Demerkungen: We stehst Du zu den folgenden Aussagen? We stehst Du zu den folgenden Aussagen? Ja teilweise nein Ich finde die Vergabe von Testaten im Masterjournal sinnvoll. Ich finde das Führen des Masterjournals hilfreich. Das Masterjournal ist gut gegliedert. Im Masterjournal gibt es inhaltliche Überlappungen. | Prothetik | | | | | |
| Sehr gering gering teils/teils gross sehr gross Oralchirurgie | Zahnerhaltung | | | | | |
| Oralchirurgie | Wie beurteilst du den 2 | Zeitaufwand, die Testat | e im Masterjournal e | inzuholen? | | |
| Parodontologie | | sehr gering | gering | teils/teils | gross | sehr gross |
| Kro-Brü | Oralchirurgie | | | | | |
| Prothetik | Parodontologie | | | | | |
| Zahnerhaltung | Kro-Brü | | | | | |
| Sehr gering gering teils/teils gross sehr gross Oralchirurgie | Prothetik | | | | | |
| Sehr gering gering teils/teils gross sehr gross Oralchirurgie | Zahnerhaltung | | | | | |
| Parodontologie | | | | | | |
| Kro-Brü | | sehr gering | gering | teils/teils | gross | sehr gross |
| Prothetik | Oralchirurgie | sehr gering | gering | teils/teils | gross | sehr gross |
| Zahnerhaltung | | sehr gering | gering | teils/teils | gross | sehr gross |
| Bemerkungen: Wie stehst Du zu den folgenden Aussagen? ja teilweise nein Ich finde die Vergabe von Testaten im Masterjournal sinnvoll. Ich finde das Führen des Masterjournals hilfreich. Das Masterjournal ist gut gegliedert. Im Masterjournal gibt es inhaltliche Überlappungen. | Parodontologie | sehr gering | gering | teils/teils | gross | sehr gross |
| Vie stehst Du zu den folgenden Aussagen? ja teilweise nein | Parodontologie Kro-Brü | sehr gering | gering | teils/teils | gross | sehr gross |
| ja teilweise nein Ich finde die Vergabe von Testaten im Masterjournal sinnvoll. Ich finde das Führen des Masterjournals hilfreich. Das Masterjournal ist gut gegliedert. Im Masterjournal gibt es inhaltliche Überlappungen. | Parodontologie Kro-Brü Prothetik | sehr gering | gering | teils/teils | gross | sehr gross |
| Ich finde die Vergabe von Testaten im Masterjournal sinnvoll | Parodontologie Kro-Brü Prothetik | sehr gering | gering | teils/teils | gross | sehr gross |
| Ich finde das Führen des Masterjournals hilfreich. Das Masterjournal ist gut gegliedert. Im Masterjournal gibt es inhaltliche Überlappungen. | Parodontologie Kro-Brü Prothetik Zahnerhaltung Bemerkungen: | | gering | | | |
| Das Masterjournal ist gut gegliedert. | Parodontologie Kro-Brü Prothetik Zahnerhaltung Bemerkungen: | olgenden Aussagen? | | | | |
| Im Masterjournal gibt es inhaltliche Überlappungen. | Parodontologie Kro-Brü Prothetik Zahnerhaltung Bemerkungen: Wie stehst Du zu den fo | olgenden Aussagen? | erjournal sinnvoll. | | | |
| | Parodontologie Kro-Brü Prothetik Zahnerhaltung Bemerkungen: Wie stehst Du zu den folgen der Vergabe Ich finde das Führen | olgenden Aussagen? von Testaten im Mastedes Masterjournals hilf | erjournal sinnvoll. | | | |
| Im Masterjournal gibt es inhaltliche Widersprüche. | Parodontologie Kro-Brü Prothetik Zahnerhaltung Bemerkungen: Wie stehst Du zu den folgen der Geregeben von der Geregeben | olgenden Aussagen? von Testaten im Mastedes Masterjournals hilft gut gegliedert. | erjournal sinnvoll. | | | |

Fragen zum Tutorensystem

Wie haben die Tutorengespräche Deine Fähigkeiten zur Diagnosestellung, zur Erstellung des Behandlungsplans sowie zur Durchführung der synoptischen Behandlung gefördert?

| | positiv | eher positiv | nicht beeinflusst | eher negativ | negativ |
|----------------|---------|--------------|-------------------|--------------|---------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie oft hast Du Dich mit Deiner Tutorin / Deinem Tutor getroffen?

| | sehr oft | oft | selten | sehr selten | nie |
|----------------|----------|-----|--------|-------------|-----|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wann hattest Du Dich mit Deiner Tutorin / Deinem Tutor zum Gespräch getroffen?

| | vor 8.00 Uhr | über Mittagszeit | nach 17.00 Uhr | gemäss Zeit im Stundenplan | während Vorlesungen |
|----------------|--------------|------------------|----------------|-------------------------------|------------------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Wie sollte das Tutorensystem verbessert werden?

| | mehr Gespräche | mehr Zeit pro Sitzung | nicht verändern | weniger Gespräche | abschaffen |
|----------------|----------------|--------------------------|-----------------|----------------------|------------|
| Oralchirurgie | | | | | |
| Parodontologie | | | | | |
| Kro-Brü | | | | | |
| Prothetik | | | | | |
| Zahnerhaltung | | | | | |

Vielen herzlichen Dank für das Beantworten unserer Fragen!