# **Original Article**

# Perceived Stress among French Dental Students and Their Opinion about Education Curriculum and Pedagogy

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**Objectives:** The purpose of this study was to identify the major sources of perceived stress and their relation to a student satisfaction questionnaire about the curriculum and the pedagogy among French dental students.

**Materials and Methods:** All dental students (n = 178) from years 4 to 6 at the University of Montpellier (France) participated in this exploratory survey. In spring 2016, a 3-part questionnaire was distributed during clinical sessions: the first part asked about sociodemographic and living conditions, the second part aimed to assess the students' perceived stress (Dental Environmental Stress questionnaire), and the third part was a satisfaction questionnaire exploring the clinical organization and the teaching methodologies (Student Course Experience Questionnaire). A Spearman's correlation test and a principal component analysis were used to assess the relation between the variables of the questionnaire.

**Results:** The response rate was 99.4%. The most stressful items were "the number of tasks to be performed during clinical practice," "the waiting time before opinion from teachers," and "the administrative part and computer problems." Fifty-four percent of the students claimed to be satisfied with their studies, showing a score of seven or higher. There was a negative correlation between the level of student satisfaction and the level of perceived stress.

**Conclusion:** Although most of the students were globally satisfied with their curriculum, this study highlighted dysfunctions in the clinical education with a level of stress correlated with the student's dissatisfaction. Most of all, students found that examinations were too stressful and that the clinical requested task quotas were overestimated.

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**Keywords:** Dentistry, education curriculum, evaluation, pedagogy, stress

### INTRODUCTION

The French Degree of Doctor in Dental Surgery is obtained at the completion of 6 years of study. At the end of the 1<sup>st</sup> year, students are required to choose between Medicine and Dentistry according to their ranking. From the commencement of the 4<sup>th</sup> year of their dental curriculum, clinical teaching is introduced, added to the theoretical teaching, which contributes to an increase in the perceived stress of the 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> year students. Hence, they need to be competent in both theoretical and clinical aspects of dental care.<sup>[1]</sup> From a psychological point of view, several definitions of stress have been proposed, but it still remains a vague

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concept. Stress has been defined by Mackay *et al.* as "a stimulus, a response, or the result of an interaction between the two, with the interaction described in terms of some imbalance between the person and the environment."<sup>[2]</sup> Different sources of students' stress have been explored in the literature such as examinations, workload, performance pressure, and lack of relaxation time.<sup>[3-5]</sup> Moreover, it has been reported that stress could

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affect mental health like anxiety, depression,<sup>[6,7]</sup> burnout, and suicide.<sup>[8-10]</sup> High levels of stress among students could lead to decreased concentration, decreased job satisfaction, and increased proneness to make medical errors.<sup>[11]</sup>

Furthermore, evaluation of teaching by students has become a common practice in higher education institutions worldwide.[12-14] The evaluation of the education system is an essential part of good-quality teaching within an institution. It allows for the improvement of hospital students' involvement in the management of a dynamic educative process. During the last three decades, many studies have been conducted in different countries to evaluate the level and the sources of stress associated with the teaching of dentistry.<sup>[15-19]</sup> However, no study has concerned itself with the stress perceived by these students according to their level of satisfaction in relation to the teaching methods used. One single study has simultaneously evaluated the perception of both stress and work environment within the Dental Faculty of Malaya (Malaysia).<sup>[20]</sup>

The aim of this study was to identify the major sources of perceived stress and their relation to a student satisfaction questionnaire about the curriculum and the pedagogy among French dental students.

#### **MATERIALS AND METHODS**

In March and April 2016, an observational transversal study was undertaken at the Faculty of Dentistry of the University of Montpellier. It concerned students who were following both the theoretical and clinical programs, i.e., all 4th, 5th, and 6th year students. Hence, 178 students were asked to complete an anonymous questionnaire. The Ethical Committee of the University of Montpellier was contacted for the approval of the present study. They stated that no special authorization was required, since the questionnaires were anonymous. Moreover, the students were really asking for this type of approach which might lead to a better studying environment. The ERASMUS (The Erasmus Programme (European Region Action Scheme for the Mobility of University Students) is a European Union student exchange programme established in 1990) students, as well as the students who did not give their consent to the study, were not included. Participants who did not hand back the questionnaire on the day of its distribution in the clinic and students with an incomplete questionnaire were excluded from the study.

The questionnaire comprised three parts [Appendix 1] (available online). The first part, with 14 general questions, was related to sociodemographic and lifestyle data. The second part used the validated and slightly

(DES)<sup>[21]</sup> "Dental Environmental Stress" modified questionnaire (translated from English into French) with 25 items and a Likert scale from 0 to 4 to evaluate students' stress. Indeed, the majority of studies done in other countries evaluated stress among dentistry students by means of the DES questionnaire or its modified version. <sup>[22]</sup> The third part of the questionnaire used the "Student Course Experience Questionnaire"<sup>[23]</sup> modified (translated from English into French) and adapted for the Faculty of Montpellier. They contained 24 items, 21 of which followed a Likert scale from 0 to 4 targeting student satisfaction regarding the structuring of their studies. Items 22-24 did not correspond to a quantitative but to a qualitative evaluation (see questionnaire in the appendix).

The reproducibility of the questionnaire (test-retest) was assessed using a sample of 15 students before its final use on the participants of the study. The weighted Kappa permitted assessing the reproducibility of the questionnaire at a 1-week interval for this sample of 15 students. This reproducibility test allowed us to also assess the necessary time to respond to the questionnaire, about 5 min. The reliability (internal consistency) of the questionnaire was tested by means of Cronbach's alpha.

The questionnaire was distributed during the compulsory clinical practice holiday break and the data collection occurred 2 weeks later. The data analysis methodology was based on a multidimensional data analysis (factorial analysis) to analyze the sixty items as a whole to study their intercorrelations. This enabled gaining simultaneous understanding of the second and third parts of the questionnaire (stress and evaluation of teaching). The qualitative variables were analyzed with the aid of the Chi-square independence test. Since the quantitative variables did not follow a normal distribution, they were analyzed with the aid of the Mann–Whitney and Kruskal–Wallis tests and Spearman's correlation. All tests were validated with a P value fixed at 0.05. The data were treated using Stata 14.1 software (StataCorp., USA).

#### RESULTS

# SOCIODEMOGRAPHIC CHARACTERISTICS AND LIFESTYLE (FIRST PART OF THE QUESTIONNAIRE)

We obtained 177 responses out of the 178 targeted students (response rate = 99.44%), spread equally over the 3 years with 46% males and 54% females and an average age of 24 years (minimum = 21 years; maximum = 37 years). For the majority of students, their parents lived in the same region (70%). For a minority (4%), their parents lived abroad. More than half of the students lived alone (56%), the remainder of students in shared accommodation (27%) or with their parents (12%) or as a couple (5%). Their main mode of

transport for getting to university on a daily basis was mainly by car (67%) and then public transport (26%). The travel time was between 5 and 20 min for 59% of them. The travel time required for getting to university is known as being a stress factor for students, often occurring among students living with their parents because they would need more time to get to their place of study. Nearly 77% of the samples were engaged in paid work alongside their studies: the most common reason given was pocket money (38%) followed by financial difficulties (33%). Out of the examined sample, 70% of students chose Dentistry at the end of the 1st vear of the course. While 65% of the sample found that daily stress was demotivating, 47% felt like they were overwhelmed by their studies, and 61% had fears for the future of their career.

#### STRESS (SECOND PART OF THE QUESTIONNAIRE, 25 ITEMS)

The questionnaire items about stress presented an alpha coefficient of 0.90 with an average covariance between items of 0.31. The weighted Kappa, which assessed the reproducibility of the questionnaire at a 1-week interval, was equal to 0.44 with a concordance percentage of 82.9%.

The most stressful items were the order, "the quantity of tasks to perform in clinical practice," "the waiting time before opinion from teachers," "the administrative part," "computer problems," "insufficient time in clinical treatment," and "the examinations" [Table 1]. Stress differed according to the year of study (Kruskal-Wallis test P = 0.01). It was the 5<sup>th</sup> year students who were the most stressed (mean = 2.38; standard deviation [SD] = 0.56) followed by the 4<sup>th</sup> years (mean = 2.16; SD = 0.52) and then the 6<sup>th</sup> years (mean = 2.06; SD = 0.64). Overall the  $6^{th}$  year students were the least stressed, except for item 28 ("communication with teachers") where they showed a level of stress greater than the other years. There was no significant difference between males and females (P = 0.23). Finally, it was found that the greater the travel time to get to the university campus from home, the more the students were stressed (P = 0.02); the more the students were fearful for their future, the more they were stressed (P = 0.002); and the more the students felt their stress to be demotivating, the more they were stressed (P = 0.0001).

# SATISFACTION WITH TEACHING (THIRD PART OF THE QUESTIONNAIRE, 24 ITEMS)

The questionnaire items about satisfaction with teaching showed an alpha coefficient equal to 0.75 with an average covariance between items of 0.16. The weighted Kappa (reproducibility of the questionnaire) was equal to 0.64 with a concordance percentage of 88.5%.

On a scale of 1–10, about 54% of students claimed to be satisfied with their studies, showing a score of 7 or higher. Items 9 ("after the examinations, would you like to have written corrections of all tests"), 8 ("would you like to have access to class note handouts"), 19 ("clinical staff with clinical cases could assist you"), and 10 ("you need to research information to complete what is taught") were their preferred choices [Table 2]. These were followed by items 1 and 21 "the number of lecture hours was sufficient" and "do you find your studies stimulating." The 3 years of study expressed the same wish to improve teaching methods and materials, since the stress felt was significant and seemed to be linked to the pedagogic situation.

For the majority, students did not feel that they were correctly and fairly assessed, the teachers were not sufficiently present and available during clinical practice to supervise them (and the use of different class materials [PowerPoint, photographs, and videos] during lectures was unsatisfactory). The average satisfaction was greater among students who had

Table 1: Averages and standard deviations of the								
25 items of the Evaluation of Stress Questionnaire								
according to the 3 years of study								
	4 <sup>th</sup> year		4 <sup>th</sup> year		4 <sup>th</sup> year		Total	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Item 1	2,15	0,68	1,88	0,76	1,54	0,98	1,86	0,85
Item 2	2,83	0,67	3,4	0,76	2,88	0,87	3,04	0,81
Item 3	2,75	0,77	2,65	0,84	2,05	0,93	2,49	0,9
Item 4	1,12	1,17	1,57	1,25	1,35	1,32	1,34	1,25
Item 5	1,75	0,86	1,78	0,92	1,63	0,88	1,72	0,88
Item 6	2,5	1,02	2,45	1,1	2,11	1,08	2,35	1,07
Item 7	1,88	1,03	1,88	0,99	1,79	1,1	1,85	1,03
Item 8	2,45	0,91	2,78	1,09	2,19	1,22	2,48	1,1
Item 9	1,98	1,3	2,5	1,1	1,84	1,26	2,11	1,25
Item 10	1,12	0,96	1,48	1,14	1,05	0,95	1,22	1,03
Item 11	2,55	1,03	2,9	1,08	2,3	1,16	2,59	1,11
Item 12	2,27	1,06	2,67	1,08	2,54	1,05	2,49	1,07
Item 13	2,78	0,98	2,95	0,95	2,67	1,12	2,8	1,02
Item 14	1,98	1,17	1,85	1,1	2,07	1,16	1,97	1,14
Item 15	2,27	1,01	2,15	1,04	2,21	1,21	2,21	1,08
Item 16	2,52	1,02	2,42	1,09	2,21	1,05	2,38	1,05
Item 17	2,28	1,12	2,78	0,92	2,39	1,19	2,48	1,1
Item 18	1,62	0,94	2,12	1,15	1,93	1,33	1,89	1,16
Item 19	1,95	1,13	2,23	1,18	1,89	1,1	2,03	1,14
Item 20	2,58	1,06	2,97	1,01	2,53	1,18	2,69	1,1
Item 21	1,83	1,17	2,2	1,01	1,86	1,2	1,97	1,13
Item 22	1,8	1,22	1,95	1,08	1,72	1,25	1,82	1,18
Item 23	2,68	1,19	2,85	0,94	2,39	1,26	2,64	1,14
Item 24	2,42	1,25	2,48	1,1	2,25	1,21	2,38	1,19
Item 25	2	1,22	2,5	1,14	2,11	1,33	2,2	1,24
Mean	2,16	0,52	2,38	0,56	2,06	0,64	2,2	0,59

never repeated (P = 0.03), among females (P = 0.03), among students who perceived daily stress as motivating (P = 0.0002), and who were not engaged in an activity alongside their studies (P = 0.02), but also for those who feared more for their future (P = 0.002). For examination modes, students first preferred multiple choice questions (MCQs), followed by short open response questions and finally editorial point questions.

# THE INFLUENCE OF STRUCTURING OF STUDIES UPON STRESS

There was a negative correlation between the level of student satisfaction in the teaching received and their stress levels: the more students were stressed, the less satisfied they were with the structuring of their studies and vice versa [Figure 1]. The overall correlation factor was equal to -0.28 (P = 0.0001). The items most correlated to stress are presented in Table 3. The average stress level did not vary according to the evaluation of teaching materials: the most stressed students did not have particular preferences for teaching materials.

The factorial analysis [Figure 2] confirmed the negative correlation and the clear distinction between the items of the second and third parts of the questionnaire (stress and evaluation of teaching). The gender, place of

	Table 2: Averages and standard deviations of the
25	items of the Evaluation of Teaching Questionnaire
	according to the 3 years of study

	4 <sup>th</sup> year		4 <sup>th</sup> year		4 <sup>th</sup> year		Total	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Item 1	2,63	0,76	2,97	0,84	2,49	1,07	2,7	0,91
Item 2	2,6	1,12	2,7	0,99	2,56	0,87	2,62	1
Item 3	1,75	1,22	2,32	1,03	1,72	1,03	1,93	1,13
Item 4	2,57	0,93	2,68	0,75	2,23	0,91	2,5	0,88
Item 5	2,77	1,24	2,4	1,26	2,09	1,33	2,42	1,3
Item 6	2,73	0,86	2,57	1,01	2,09	1,01	2,47	0,99
Item 7	1,5	1,14	1,03	0,97	1,07	0,98	1,2	1,05
Item 8	3,73	0,66	3,48	0,91	3,53	0,85	3,58	0,82
Item 9	3,8	0,54	3,9	0,35	3,65	0,74	3,79	0,57
Item 10	3,03	0,78	2,83	0,98	3,12	0,80	2,99	0,86
Item 11	1,12	0,98	2,55	1,01	2,18	1,10	1,95	1,2
Item 12	1,97	1,04	2,48	0,87	2,51	0,95	2,32	0,98
Item 13	2,08	0,99	2,53	0,91	2,47	0,85	2,36	0,94
Item 14	1,43	1,13	1,08	1,06	1,61	1,21	1,37	1,15
Item 15	1,75	1,22	1,67	1,11	1,44	1,07	1,62	1,14
Item 16	2,27	1,02	2,22	0,94	2,26	1,14	2,25	1,03
Item 17	2,2	1,00	2,45	0,91	2,11	1,11	2,25	1,02
Item 18	1,72	1,03	1,82	1,11	1,86	1,16	1,8	1,09
Item 19	2,95	1,06	3,13	0,89	3,04	0,93	3,04	0,96
Item 20	2,52	0,75	2,38	0,94	2,28	0,90	2,4	0,87
Item 21	2,6	0,87	2,77	0,98	2,74	1,06	2,7	0,97
Mean	2,37	0,36	2,47	0,36	2,34	0,39	2,39	0,37

residence, and year of study ranged between the items of the two questionnaires, which signified that they were no more related to stress than evaluation of teaching. At the two extremes were item 20 of the evaluation of teaching ("are you satisfied in general with the clinical practice teaching you receive") and item 1 of the questionnaire on stress ("communication with teachers"). They demonstrated a very strong negative correlation and well summarized the overall trend of the results: a general problem with the clinical practice teaching which was related to a communication problem with teachers.

#### DISCUSSION

According to the first aim of this study, we found that the predominant stress factors were "the quantity of tasks to perform in clinical practice," "the waiting time before opinion from teachers," "the administrative part," "recurrent computer problems," "insufficient clinical treatment time," and "the examinations." Most of these items are known to be stressful, notably "the quantity of tasks to perform in clinical practice," "insufficient clinical treatment time," and "the examinations."<sup>[24-26]</sup>

Other key findings were:

- A negative correlation between the perceived stress and the students' satisfaction in the teaching received
- Nearly 65% of the students found that daily stress was demotivating
- The 5<sup>th</sup> year students were lore stressed than the 4<sup>th</sup> and 6<sup>th</sup> years
- About 54% of students claimed to be satisfied with their studies, while the majority did not feel that they were correctly and fairly assessed
- For examination modes, students firstly preferred MCQs.

The examinations sanctioning the end of a study cycle certainly appear to be unavoidable but could be improved in their form and mode to change this failing found in nearly all curriculums followed in countries worldwide. It would therefore be interesting to reconsider these modes of examinations and assessments by teachers, which could lead to an improvement in the management of stress linked to studies. Moreover, another important finding was that there was no significant difference found between perceived stress among males and among females. Certain studies<sup>[22,3]</sup> have found that females were more stressed than males. However, this result was not always verified.<sup>[27-29]</sup> Several items particularly highlight shortcomings and potential improvements in teaching ("to have class handouts available," "to have written corrections of all tests," and "to have clinical staff with clinical cases"). Regarding the clinical treatment assessment part, it is clear that the students no longer



Figure 1: Correlation between perceived stress and the level of satisfaction with the clinical teaching

wish to have an entirely quantitative assessment by quotas but rather a qualitative assessment which would take behavior, patient monitoring, and the quality of care given into account. This problem led us to consult the literature, and we found several medical teaching programs particularly adapted to the approach by skills, and which could be a solution to the identified limitations within the approach by targets. Even if the literature refers to numerous studies on the level and sources of stress associated with teaching in Dentistry, none compared this stress with the structuring of studies. The model of stress has served as a framework to operationalize the issue of students' adaptation to university pedagogical conditions. It is interesting to note that a third of students take the Dentistry stream by default because their ranking in the trials has not allowed them to choose Medicine. This seems to be experienced by students as an extra stress factor for the remainder of their studies. The motivation for the choice of the Dentistry stream seems indeed to be perceived by students as an extra stress factor.<sup>[30]</sup> The study by Myint et al.<sup>[20]</sup> is similar to our study, since the authors simultaneously evaluated the stress and work environment of dental students. The difference lies within the level of measuring tools used: "Depression Anxiety Stress Scale" for perceived stress and "Dundee Ready Education Environment Measure" for perception of the work environment. As was found in this study, they found a negative correlation between the two questionnaires (r = -0.16), but it was not statistically significant (P = 0.21), as opposed to our study (r = -0.28; P = 0.0001). However, this study evaluated only 61 students (178 students in our study), which could explain the lack of statistical strength.

#### STRENGTHS OF THE STUDY

This is the first study to appraise the stress perceived by students, according to their level of satisfaction in the



**Figure 2:** Principal component analysis of parts 2 and 3 of the questionnaire. resid: residence location; year: year of study; st1 to st25: items of the 2<sup>nd</sup> part of the questionnaire (evaluation of perceived stress); and q1 to q21: items of the 3<sup>rd</sup> part of the questionnaire (evaluation of the pedagogy)

#### Table 3: List of items of the Evaluation of Teaching Questionnaire that are most strongly correlated to perceived stress

Items	Correlation coefficient,
	P-value, kappa coefficient
Do you have written corrections	<i>r</i> =0.18, <i>P</i> =0.02, к=0.80
after the examinations?	
Was the number of hours in clinical	<i>r</i> =-0.25, <i>P</i> =0.0006, к=0.83
practice satisfactory?	
Are you generally satisfied with the	<i>r</i> =-0.26, <i>P</i> =0.0002, к=0.42
clinical teaching you receive?	

teaching received. It was found that, the more students were stressed, the less satisfied they were with the structuring of their studies.

- The response rate of the questionnaire was very high (99.4%)
- The sample size was sufficient to show a significant relationship between stress and work environment.

#### LIMITATIONS OF THE STUDY

Concerning the size of the sample of the present study, it can be considered a maximum size since we surveyed all students of Dentistry in Montpellier who took part in clinical practice. Subsequently, selection bias was nonexistent since the study was exhaustive. However, the question of the temporal representativeness of this student cohort can be posed, which would enable confirming if the perceived trends in this study are confirmed over time and can be generalized for a whole generation of students. However, the conclusions drawn from this inquiry must be limited to the Faculty of Dentistry of Montpellier: the external validation of the study is not proven given that it depends on the type of teaching locally in place. However, these results are partly encountered in the literature and highlight a common shortcoming with many pedagogical styles worldwide.[31,32] The commonly encountered biases found in auto-questionnaires relate to honesty in responses to personal questions. Knowing that these questionnaires were anonymous, this bias was supposedly minimal. Furthermore, the students had no reason to falsify their responses as they were not in a situation whereby they were assessed or judged. However, it was rather the opposite since they could freely give their opinion. Finally, the underlying question about the biased or inexact evaluation of measured stress has been optimized using validated questionnaires.

#### **CONCLUSION**

We have been able to target the different reasons for dissatisfaction and the major sources of perceived stress by students at the Montpellier Faculty. This study has brought to light peculiarities, if not dysfunctions, in terms of clinical teaching, with a stress level correlated to this dissatisfaction perceived by students regarding the pedagogy in place today. As one might have suspected, students find examinations too stressful and the quotas requested in clinical practice are too high. Since validated questionnaires were used, implications in the context of this study are reliable, and their findings may lead to a better studying environment. The results of this study underline the importance of implementing new pedagogical tools to combat and reduce the level of stress, as well as to reorganize the structuring within the center for dental care to improve working and student learning conditions. Future research directions could be designed to confirm these encouraging results by means of nationwide surveys and to compare different geographical environments.

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#### **CONFLICTS OF INTEREST**

There are no conflicts of interest.

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**<** S97

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S98

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### Appendix

Appendix 1: Global questionnaire addressed to dental students

#### First part: Sociodemographic and Residential Questions

- 1. Gender:
- 2. Year of study:  $\Box 4^{th} \Box 5^{th} \Box 6^{th}$
- 3. Where do your parents live? City:
- 4. Living conditions:  $\Box$  alone  $\Box$  with flatmates  $\Box$  with your family  $\Box$  other
- 5. Means of transportation to go to the dental school?
  - □ bus/train □ bike □ by foot □ car □ other
- 6. How long does it take to go from your accommodation to the dental school?

#### □ <5 min □ between 5 and 20 minutes □ >20 minutes

- 7. Do you have a student job?:  $\Box$  Yes  $\Box$  No
- 8. If yes, for what reasons? (multiple answers are possible)

□ Financial difficulties □ Experience □ Pocket money □ Others

- 9. Are you satisfied with your studies?
  - $\Box$  0 (not at all satisfied)  $\Box$  1  $\Box$  2  $\Box$  3 c 4  $\Box$  5  $\Box$  6  $\Box$  7  $\Box$  8  $\Box$  9  $\Box$  10 (very satisfied)
- 10. Have you ever repeated an academic year?  $\Box$  Yes  $\Box$  No
- 11. Was "dentistry" your first choice?  $\Box$  Yes  $\Box$  No
- 12. Do you feel overwhelmed by your studies?  $\Box$  Yes  $\Box$  No
- 13. The stress you perceive is:  $\Box$  stimulating  $\Box$  not stimulating
- 14. Are you anxious about your future career?  $\Box$  Not at all  $\Box$  A little  $\Box$  A lot

#### Second part: Stress Questionnaire

Please indicate the level of stress that you experience with regard to different aspects from the following fields using classification levels indicated below:

#### **0=Not stressful**

**1=Slightly stressful** 

2=Moderately stressful

3=Highly stressful

#### 4=Extremely stressful

1. Amount of assigned coursework:

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

2. Clinical tasks requested (quotas):

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

3. Examinations:

4. Competition with classmates:

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

- 5. Combining theoretical knowledge with clinical practice:
  0 1 2 3 4
  6. Transition from preclinical to clinical year:
  - $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$
- 7. Manual dexterity and manual skill acquisition:
  0 1 2 3 4
- 8. Fear of making mistakes on patients:
  0 1 2 3 4
- 9. Patients' delay and missing appointments:
  0 1 2 3 4
- 10. Communication with patients:  $\Box \ 0 \ \Box \ 1 \ \Box \ 2 \ \Box \ 3 \ \Box \ 4$
- 11. Insufficient clinical treatment time:  $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$
- 12. Differences in opinion between the teaching staff:  $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$
- 13. Waiting period before teachers' opinion:  $\Box \ 0 \ \Box \ 1 \ \Box \ 2 \ \Box \ 3 \ \Box \ 4$
- 14. Communication with teachers:
- 15. Pressure from teachers:
  - $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$
- 16. Managing treatment plans of complex cases alone:

Please indicate the level of stress:

- 0=Not stressful
- 1=Slightly stressful
- 2=Moderately stressful
- 3=Highly stressful

# 4=Extremely stressful

17. Availability of dental chairs:

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

18. Communication with dental laboratory technicians and managing delivery times:

- 19. Laboratory workload:
- 20. Administrative part:
  - $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$

- 21. Material availability and waiting time for sterilization:
  □ 0 □ 1 □ 2 □ 3 □ 4
- 22. Quality of distributed material:  $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$
- 23. Computer problems (printer, software, etc):
  □ 0 □ 1 □ 2 □ 3 □ 4
- Working environment (noisy treatment room, X-ray room availability)
  □ 0 □ 1 □ 2 □ 3 □ 4
- 25. Number of different tasks to carry out (product, laboratory, X-ray, operating room to assist teachers, etc):
  □ 0 □ 1 □ 2 □ 3 □ 4

# Third part: Satisfaction Questionnaire Exploring Clinical Organization and Teaching Methodologies

Please indicate the level of satisfaction:

## 0=Totally disagree 1=Disagree 2=No opinion 3=Agree 4=Totally agree

## **Theoretical Classes**

The number of hours of lectures was sufficient:

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Seeing your examination results, do you feel you studied hard enough?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Use of different teaching materials (PowerPoint, photographs, videos):

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Is exchange with teaching staff satisfactory during classes?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Was your diligence toward courses good?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

There are enough photographs used in classes:

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

There are enough videos in classes:

 $\Box \ 0 \ \Box \ 1 \ \Box \ 2 \ \Box \ 3 \ \Box \ 4$ 

Would you like photocopied class handouts available?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Would you like to have written corrections of all examinations?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Do you need to carry out research to complete your lessons? (library, internet, etc)

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Is the level of difficulty of the examinations adapted to what was taught in the course?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Is the availability of teachers to respond to your requests sufficient?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Are you satisfied with the theoretical training received?

 $\Box \ 0 \ \Box \ 1 \ \Box \ 2 \ \Box \ 3 \ \Box \ 4$ 

# **About Clinical Practice**

Clinical time was sufficient for the requested number of clinical treatment quotas:

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Do you feel the work you do is properly and fairly assessed?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Do teachers motivate you to do your best in clinical practice?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Are teachers clear in their expectations of your clinical work?

 $\Box \ 0 \ \Box \ 1 \ \Box \ 2 \ \Box \ 3 \ \Box \ 4$ 

Are the teachers sufficiently present and available during clinical sessions?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Could briefing sessions by clinical staff (photographs and videos) help you with your clinical practice?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

Are you satisfied with your clinical training in general?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

# **Other questions**

Did you find your studies stimulating?

 $\Box 0 \Box 1 \Box 2 \Box 3 \Box 4$ 

1. Give an order of preference (from 1 to 5) for the different types of teaching modes:

- □ Lecture course
- $\Box$  Online course
- □ Tutorials
- □ Hands-on workshop
- □ Handout material

Give an order of preference (from 1 to 3) for the different types of examinations:

 $\hfill\square$  Multiple choice

 $\hfill\square$  Open answer

 $\hfill\square$  Editorial point

Would you like to be evaluated in a clinic?

□ Qualitatively

- □ Quantitatively
- $\square$  Both