

# Final-year dental students' perceptions of verbal feedback in the clinical setting

SADJ JULY 2025, Vol. 80 No.6 P300-311

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## ABSTRACT

Verbal feedback has been shown to improve student learning and performance, increase professional collaborative dialogue and communication, and develop student identity and self-worth.

## Purpose

To explore final year dental students' perceptions of verbal feedback practices within the clinical setting.

## Methods:

A cross-sectional, exploratory descriptive quantitative study with additional open-ended, qualitative responses was employed in a cohort of 71 final-year dental students. The questionnaire investigated four main constructs i.e. the nature of feedback, the value of feedback, the clinical environment and supervisor-specific factors which impact on verbal feedback practices.

## Results:

Data was analysed using both quantitative and qualitative approaches. Thematic analysis of the open-ended written responses was conducted. The findings indicated that students are aware of the multiple benefits of verbal feedback for the improvement of both their theoretical knowledge and clinical skills, but they felt that not enough time is devoted to verbal feedback practices following their clinical sessions. The importance of mutual respect,

professionalism and autonomy of thought were emphasised as key variables which underpin successful verbal feedback.

## Conclusion

This study highlighted the importance of raising awareness within the faculty regarding the various forms of feedback and the need for effective action plans to improve student learning and performance.

## Key words

Formative assessment, feedback, clinical assessment, clinical teaching, clinical environment

## INTRODUCTION

Assessment drives student learning (Wass, van der Vleuten, Shatzer & Jones, 2001; Downing & Yudkowsky, 2009) and for dental students, verbal feedback from clinical supervisors regarding knowledge and clinical skills should form a large part of the formative assessment (Boud, 1990; Black & Wiliam, 1998; Downing & Yudkowsky, 2009; Schuwirth & van der Vleuten, 2014). Formative assessment, or assessment 'for learning', should take on a strong focus in education as it is vital for student learning (Boud, 1990; Black & Wiliam, 1998; Downing & Yudkowsky, 2009; Schuwirth & van der Vleuten, 2014), especially in the clinical context where clinical skills are acquired (Rolfe & Sanson-Fisher, 2002; Taylor, Grey & Satterthwaite, 2013). These clinical skills will ultimately have an impact on patient management.

Students should receive constant and meaningful advice and feedback from supervisors in a supportive and educationally conducive learning environment, to promote active engagement, student interest and active learning during the execution of clinical tasks (Rolfe & Sanson-Fisher, 2002; Taylor *et al.*, 2013). This facilitates a deeper approach to learning (Rushton, 2005) and simultaneously promotes reflective practices among students with regards to self-appraisal (Mubuuke, Louw & van Schalkwyk, 2017). Feedback is therefore essential for dental students following the treatment of their patients in the clinical area as it gives students the chance to compare differences and similarities between their actual performances and the target performance (Boud & Molloy, 2013; Musick, 2014). It allows them to identify their strengths and weaknesses in terms of their performance and with respect to meeting the learning objectives successfully. It also gives clinical teachers a better indication of which aspects of the content need more attention in terms of learning and teaching activities, which may need more explicit direction and which may possibly require more emphasis in terms of those sections which are felt to be less understood by students (Boud, 1990; Black & Wiliam, 1998).

The dental degree programme is a five-year course. At the Dental Faculty of \*\*\*, students typically enter the clinical area in the middle of their third year, when they start to treat patients.

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### Acknowledgments

Dr Elize Archer, Dr Allison Ruark; Tonya Esterhuizen, CHPE Stellenbosch University

### Conflict of interest

None to declare (financial, personal or professional).

This continues until the end of their final year. Students have therefore been exposed to verbal feedback on their clinical performance since their third year of study. Final year dental students typically attend ten clinical sessions per week. This offers clinical supervisors ample opportunity to provide feedback regarding student performance, improvement and progression in terms of their clinical skills, knowledge acquisition and application in a practical sense.

High quality feedback is vital for work-based learning in health professions education, as the nature of the student-teacher interaction has a direct effect on student performance levels and learning outcomes (Holmboe, Sherbino, Long, Swing, & Frank, 2010; Morris & Blaney, 2010; Boud & Molloy, 2012) and therefore directly impacts on patient outcomes. The inability of students to be able to improve their clinical competency and learn from their mistakes would have negative consequences for dental care delivery to patients.

High quality feedback is, per definition, as much about effective delivery from the supervisor as it is about the interpretation and value of the feedback when it is received by the student (Boud, 1990). Verbal feedback should result in active student involvement, which aims to facilitate the development of a suitable and practical plan of performance enhancement (Sadler, 1989; Hattie & Timperley, 2007; Molloy & Boud, 2013) by narrowing the chasm that exists between what students know and what is expected of them in terms of knowledge and skills (Sadler, 1989; Hattie & Timperley, 2007; Kaufman, 2003; Molloy & Boud, 2013). The action plan is a crucial component of delivering high quality feedback, which maximises the educational impact of the feedback received (Ende, Pomerantz & Erickson, 1995; Blatt, Confessore, Kallenberg & Greenberg, 2008; Hamburger *et al.*, 2011; Pelgrim, Kramer, Morkink & van der Vleuten, 2012) and should be constructed via the conversational duality and active collaborative dialogue between student and educator (Johnson *et al.*, 2016). It should also improve aspects such as critical reflective thought, reasoning and problem-solving skills of students (McDade, 1995; Popil, 2011). The quality of the student-educator relationship can therefore have a noticeable effect on stimulating student emotions (Molloy & Boud, 2013) by either improving or limiting the potential for learning (Hattie & Timperley, 2007; Carless, 2013).

It is well accepted that feedback should be given as timeously as possible (Lara, Mogensen, & Markuns, 2016), soon after the learning event and based on first-hand observations between the student and educator in a detailed, specific and clearly understandable manner for the student (Johnson *et al.*, 2016). It should be directed to actions and behaviours which can be changed and not towards personal attributes of the student (Ende, 1983; Kluger & DeNisi, 1996; Lara *et al.*, 2016). Feedback should aim to be transparent and predictable in nature, which reduces student anxiety associated with the evaluation and assessment process by allowing students to be able to readily identify what is expected from the feedback encounter (Rudolph, Simon, Raemer, & Eppich, 2008).

Face-to-face verbal feedback is not always beneficial for students or their learning and poor quality feedback may cause harm to students personally and not improve their performance (Litzelman, Stratos, Marriott, Lazaridis, & Skeff, 1998; Veloski, Boex, Grasberger, Evans & Wolfson, 2006; Hattie & Timperley, 2007; Sargeant, Mann, Sinclair, van der

Vleuten & Metsemakers, 2007; Ivers *et al.*, 2012). Several reasons have been put forth to explain this, including poor credibility of the educator; lack of relevance of the feedback given (Bing-You, Paterson & Levine, 1997; Lockyer, Violato & Fidler, 2003; Johnson *et al.*, 2016); poor comprehension of the feedback content (Bing-You *et al.*, 1997; Sargeant, Mann & Ferrier, 2005; Johnson *et al.*, 2016); and feelings of being unfairly treated, judged or victimised on the student's part (Hewson & Little, 1998; Sargeant *et al.*, 2005; Sargeant *et al.*, 2008; Moss, Derman & Clement, 2012).

The readiness of students to receive, accept and utilise feedback to effect the necessary changes in their behaviour to improve their clinical performance (Deci & Ryan, 2000), is affected by their perception of feedback and how they are able to engage with the process (Holmboe *et al.*, 2010; Morris & Blaney, 2010; Boud & Molloy, 2012). This is concurrently dependent on a multitude of factors which include the learning environment (Carless, 2013), and the nature and value of feedback (Johnson *et al.*, 2016). Issues such as the supervisor's role, behaviour (Carless, 2013) and credibility (Bing-You *et al.*, 1997; Johnson *et al.*, 2016), the content that is included in the feedback (Sargeant *et al.*, 2005; Johnson *et al.*, 2016) and how the content is relayed (Valcke, 2001; Lara *et al.*, 2016), are similarly important during feedback.

The limiting nature of the dental clinical area is not always a suitable environment in which high quality feedback can take place. This could affect how feedback is perceived, accepted and used by students to learn and grow— personally and professionally. Resource and time constraints limit the opportunities for practicing effective formative assessment and feedback (Yorke, 2003; Gibbs, 2006; Price, Handley, Millar, & O'Donovan, 2010). At present, this is very applicable to the South African and \*\*\* contexts in particular and the delivery of goal-directed and impact-driven, high quality verbal feedback should therefore be prioritised as it remains a cornerstone of learning and teaching and quality assurance.

In order to make meaningful changes, it is important to determine the aspects of verbal feedback which are perceived by final year dental students as being valuable influences and determinants of their clinical performance and progress following a clinical session, and what their perceptions are of the clinical environment and the clinical supervisors who provide them with feedback. This would highlight strengths, weaknesses and inadequacies and help with the development of a successful feedback implementation plan which could promote student learning and considerably improve performance. This feedback plan could further develop the working relationship between the student and educator, improve clinical teaching and ultimately raise the standards of dental care delivery for patients.

The aim of the study was thus to examine the perceptions of final-year dental students as to the quality of feedback provided to them after their clinical sessions with respect to four main constructs, namely:

- i. the nature of feedback,
- ii. the value of feedback,
- iii. the clinical environment in which feedback takes place, and
- iv. the influence of supervisor-specific factors on how feedback is received by students.

## METHODS

A cross-sectional, exploratory descriptive quantitative study was employed in a cohort of final year dental students at \*\*\* Dental Faculty. A structured questionnaire was used which included additional open-ended questions to record qualitative responses for each of the four constructs being investigated.

The design of the questionnaire was broadly based on validated survey instruments (Stalmeijer, Dolmans, Wolfhagen, Muijtjens & Scherpbier, 2010; Johnson *et al.*, 2016) but a more context-specific and detailed instrument was constructed for use in this study. The four main constructs in the questionnaire were formulated by synthesising a variety of appropriate research articles relating to feedback (Nicol & Macfarlane-Dick, 2006; Hattie & Timperley, 2007; Cantillon & Sargeant, 2008; Stalmeijer *et al.*, 2010; Ansary *et al.*, 2011; Boud & Molloy, 2013; van de Ridder, McGaghie, Stokking & Ten Cate, 2015; Johnson *et al.*, 2016.). Under each construct, a series of specific statements (or items) were populated from the above readings. Questions based on the researcher's experience with students were also included. These represented additional broad categories within the pre-defined constructs.

A Likert scale questionnaire was used, whereby a series of pertinent statements (or items) relating to the specific study objectives, were posed to students for their response (Rowe & Wood, 2008; Losby & Wetmore, 2012; Artino, La Rochelle, Dezee, & Gehlbach, 2014). This instrument employed a four-point itemised rating scale (Maclellan, 2001) to measure students' responses (Artino *et al.*, 2014). The four labels included 'strongly agree', 'agree', 'disagree' and 'strongly disagree', with the exclusion of a fifth rating label of 'not sure' or 'sometimes' with the explicit intention of eliciting more specific responses from the participants.

The questionnaire was piloted amongst a group of eight fourth-year dental students to examine its degree of acceptance in terms of comprehension, clarity, length and time taken to complete the questionnaire. The pilot study also provided a better indication of the type and detail of written responses to be expected from students and identify where changes should be made to the original questionnaire format and/ or statements to improve its rigor. After considering the results from the pilot study, minor changes were made to the questionnaire before sending the final version for professional formatting.

### Target population

Convenience sampling of the entire final year class of 78 dental students was done.

### Data collection and management

Hard copies of the questionnaire were distributed to the final year dental class. The purpose of the questionnaire and the mechanism of the instrument was explained to the class who were provided with an information sheet. Informed consent forms were completed by the students. Students were instructed to deposit their anonymously completed questionnaires and consent forms into two separate sealed boxes. To limit the extent to which students might feel coerced or pressured into completing the questionnaire, the researcher did not remain in the room while the questionnaires were being completed, but was available to clarify questions if the need arose. An appointed research assistant remained

in the room and ensured that the completed questionnaires and consent forms were collected separately.

The Student Feedback Unit at the Centre for Teaching and Learning at \*\*\* formatted the questionnaire and captured the data, thereby ensuring better control of the correctness and accuracy of the data capturing. Quantitative data was captured on an Excel spreadsheet. The responses from the open-ended (qualitative) questions were captured in a Word document.

### Data analysis

For quantitative data, statistical analysis was conducted by a bio-statistician using IBM SPSS version 25 (IBM, 2017) to analyse the data. Sample responses to the individual items were described using frequency tables. Scores were created by averaging the responses to the items in each scale. Missing values were very few, but they were dealt with by assigning the sample mean to the missing value for that item prior to calculating the scores.

Qualitative data analysis took place with the active assistance from the survey specialist consulted with, in order to improve the trustworthiness of the interpretations made. A combined, adaptable and flexible approach of both deductive and inductive analysis was employed for the open-ended questions, using the six-phase method of thematic analysis by Braun & Clarke (2006). Data was collated as relevant to each verbal code in an inductive manner and open-coding of as many individual perspectives, attitudes, emotions, experiences and incidents as possible was done (Gale, Heath, Cameron, Rashid & Redwood, 2013), whereby descriptive phrases could be coded for, which are strongly linked to the data obtained from the study (Braun & Clarke, 2006). Codes were then collated into categories as determined deductively by the questionnaire, but also inductively as new categories emerged within each of the four constructs in an iterative manner (Auerbach & Silverstein, 2003).

### Ethical considerations

Approval for the study was obtained from \*\*\* Ethics Committee (Reference number: S18/02/026) as well as from the Registrar's Office of \*\*\* (Reference number: UWCRP120318CP).

Study participants were provided with a comprehensive information sheet attached to the questionnaire, as well as detailed informed consent forms with explicit details of the benefits and reasons for participating in the study. Participation in the study was voluntary without any consequences for non-participation.

All data was stored in securely-locked cabinets and/ or password-protected computers for the duration of the project. Electronic files of quantitative data will be kept for five years, then destroyed. As all questionnaires were completed anonymously by students, no identifying information (such as names, ages, contact details or student numbers) were stored with the data and hence no de-identification methods were required.

### Results

A total of 71 students out of a class of 78 participated in the study. Seven students were not present in the class on the day that the questionnaire was administered.

**Table I:** Frequency Table for the nature of feedback provided by clinical supervisors.

Item on Questionnaire	Strongly agree		Agree		Disagree		Strongly disagree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
1. I usually do not receive feedback from my supervisor after my clinical session.	18	25.4%	40	56.3%	12	16.9%	1	1.4%
2. Feedback gives me an opportunity to interact with my supervisor in a positive way.	24	33.8%	42	59.2%	5	7.0%	0	0.0%
3. The feedback I receive is usually based on my past performance and not on current performance.	13	18.3%	16	22.5%	37	52.1%	5	7.0%
4. Feedback from my supervisor has a negative effect on my emotional state.	10	14.3%	19	27.1%	31	44.3%	10	14.3%
5. I want feedback after my clinical session.		80.0%	13	18.6%	1	1.4%	0	0.0%
6. Not enough time is devoted to feedback after my clinical session.	24	33.8%	33	46.5%	13	18.3%	1	1.4%

Frequency tables were constructed on their original scales for the items under the four proposed constructs. The total count and percentage of responses for each item/ question/ statement is indicated within the specific construct based on the four-point Likert scale. These tables refer to the first objective of the study, which is to examine what the students' perceptions of verbal feedback practices are in terms of the four main constructs.

The findings of the open-ended questions are presented under each of the four main proposed constructs as detailed in the questionnaire. This includes a summary of the main categories identified after coding the written responses with the number and percentage of respondents in the identified categories. A table depicts the data for each construct. Additionally, under each category, students' written responses have been included to better clarify and give meaning to the data in support of the main identified categories, where the number and category correspond to that in the respective tables.

### Nature of feedback

From Table I, 81.7% (n=18+40) of students agreed that they do not usually receive feedback after their clinical session (item 1); while all but one student (98.6%) agreed that they wanted feedback (item 5). In fact, 80% strongly agreed that they wanted feedback (item 5). Approximately 80% (n=24+33) of students who felt that not enough time is devoted to feedback after their clinical session (item 6), while 93% (n=24+42) agreed that feedback creates an opportunity to positively interact with their supervisor (item 2). It was encouraging to see that majority of students (58.6%) disagreed that feedback affects their emotional state negatively (item 4), and 59.1% (n=37+5) disagreed with the statement that feedback is based more on their past performances (item 3).

The categories in Table II were created after coding the written responses to the open-ended question on the questionnaire, which asked students to 'Describe in your

**Table II:** Open-ended responses for the nature of feedback, as relating to the above question.

CATEGORIES	NUMBER (n=71)	%
1 Feedback should focus on both positive and negative aspects	51	71.8
2 Feedback should be based on current student performance	45	63.4
3 Feedback should be done immediately after the clinical session	37	52.1
4 Feedback should include an improvement plan	33	46.5
5 Feedback should be a motivation/ reason for the clinical mark	27	38.0
6 Discussion/ communication is needed and is important	24	33.8
7 Should only involve the student and supervisor/ one-on-one basis	23	32.4
8 Feedback must be given professionally/ non-confrontationally/ fairly	17	23.9
9 Too much negative feedback is given	14	19.7
10 Not enough feedback is given and more time is needed for feedback	13	18.3
11 Verbal feedback can have an emotional strain on students	9	12.7
12 Supervisors should listen more during feedback	8	11.3

own words what you consider to be optimal feedback, including how feedback is offered, who offers it, and when.' It is important to note that not all students provided responses for this section of the questionnaire.

A selection of individual student responses in the form of direct quotations, within the main identified categories are listed below.

- Feedback should focus on both positive and negative aspects of student performance:

*"Optimal feedback would consist of the positive and negative parts of my clinical session..., whereby I can assess... the positive and negative aspects of my session with my supervisor."*

- Feedback should be based on current student performance:

*"Supervisors need to consciously put effort into evaluating clinical performance of a student on the day and not just evaluating a student based on their past or their perceptions."*

- Feedback should be done immediately after the clinical session:

*"Feedback should be given post-session; enough time should be made available for that... and this should be done after every session."*

- Feedback should include an improvement plan:

*"...I would like to know: Basically, if you, as the supervisor, were also my employer at the time, would*

*you be willing to allow me to work on your patients and if not, why not and how could I improve?"*

- Feedback should be a motivation / reason for the clinical mark:

*"Some supervisors may need to motivate their choice of clinical mark better, as it does appear as if some of them are giving the same marks routinely without correlating the mark with the verbal feedback (e.g. the verbal feedback may be positive for the session but the clinical mark does not reflect this)."*

- Discussion / communication is needed and is important:

*"I enjoy it when supervisors ask me to reflect on my own performance, as it opens the discussion to healthy debates."*

- Too much negative feedback is given:

*"Having feedback about just the negative things from supervisors doesn't do anyone good, because we tend to end up doubting our every move / decision in the clinics because we are being constantly told that we suck."*

#### Value of feedback

All but five students (93%) agreed that feedback is valuable for them in developing their skills (item 7), with a combined 80.3% (n=45+12) agreeing that this feedback is useful for them (item 9). Roughly 50% disagreed that the verbal feedback received is usually clear and specific (item 10). With regards to the identification of student strengths and weaknesses (items 12 and 13, respectively), the data

Table III: Frequency Table for the value of feedback, as reported

Item on Questionnaire	Strongly agree		Agree		Disagree		Strongly disagree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
7. Feedback from my supervisor is not valuable in developing my skills.	2	2.8%	3	4.2%	31	43.7%	35	49.3%
8. Feedback from my supervisor helps me to identify where I need to improve.	42	59.2%	26	36.6%	2	2.8%	1	1.4%
9. The verbal feedback I receive is usually not helpful to me.	6	8.5%	8	11.3%	45	63.4%	12	16.9%
10. The verbal feedback I receive is usually clear and specific.	2	2.8%	31	43.7%	32	45.1%	6	8.5%
11. My supervisor does not usually ask me to reflect on my own performance after the session.	16	22.9%	38	54.3%	14	20.0%	2	2.9%
12. My supervisor identifies my strengths during feedback.	2	2.8%	20	28.2%	34	47.9%	15	21.1%
13. My supervisor identifies my weaknesses during feedback.	12	16.9%	48	67.6%	8	11.3%	3	4.2%
14. My supervisor helps me to develop an action plan for improving my performance.	1	1.4%	15	21.2%	37	52.1%	18	25.4%
15. I consider this action plan to be the most important part of receiving feedback.	21	29.6%	43	60.6%	6	8.5%	1	1.4%
16. My supervisor rarely helps me to set goals for future clinical sessions.	25	35.2%	35	49.3%	11	15.5%	0	0.0%
17. The feedback provided promotes critical thinking and problem-solving after my clinical session.	11	15.7%	35	50.0%	22	31.4%	2	2.9%

18. I find it difficult to use the criticism from feedback in a constructive way to improve my performance.	5	7.1%	9	12.9%	41	58.6%	15	21.4%
19. I usually don't want to be asked my opinion about my own performance after a clinical session.	7	9.9%	20	28.2%	28	39.4%	16	22.5%
20. The feedback I receive is not usually an accurate reflection of my performance during a clinical session.	11	15.5%	32	45.1%	25	35.2%	3	4.2%
21. It is equally important to receive feedback about both my theoretical knowledge and clinical performance after my clinical session.	27	38.6%	35	50.0%	7	10.0%	1	1.4%
22. I do not always receive verbal feedback about my theoretical knowledge after my clinical session.	23	32.4%	42	59.2%	6	8.5%	0	0.0%

suggests that clinical teachers are more inclined to identify student weaknesses, as agreed by 84.5% (n=12+48) of students, than they are to identify their strengths, as only agreed by 31% (n=2+20) of students.

Items 15, 16, 17, 19 and 20 relate to student performance and improvement. Although a combined 90.2% (n=21+43) of students agreed that an action plan is an important part of receiving feedback and for future improvement (item 15), only 22.5% (n=1+15) agreed that their supervisors help them to develop such a plan (item 14). A total of 84.5% (n=25+35) of students agreed that supervisors rarely assist them in setting goals for future clinical sessions (item 16), while only 14 students (20%) agreed that they experience difficulty in using verbal feedback in a constructive way to improve their performance (item 18). Majority of students (61.9%) agreed that they would have appreciated being asked their opinions about their own performance (item 19).

With respect to the value of feedback for student learning, approximately two thirds (65.7%) of students agreed that feedback promotes critical thinking and problem-solving (item 17). An overwhelming 88.6% (n=27+35) agreed that it was equally important to receive feedback regarding their knowledge and skills (item 21), but again only 6 students (8.5%) agreed to receiving verbal feedback about their theoretical knowledge after a clinical session (item 22). Reflective practice has well accepted benefits for learning, but 77.2% (n=16+38) of students agreed that supervisors do not usually ask them to reflect on their own performance after a clinical session (item 11).

Table IV is a summary of the main categories identified after coding the students' written responses to the statement 'Describe in your own words what you consider to be valuable and useful feedback', as posed in the student questionnaire.

Table IV: Open-ended responses of students' opinions of what valuable feedback is.

CATEGORIES		NUMBER (n=71)	%
1	Feedback identifies areas of improvement	60	84.5
2	Feedback provides constructive advice on how to improve	59	83.1
3	Feedback should identify both strengths and weaknesses	41	57.8
4	Feedback increases student encouragement/ motivation/ self-confidence	31	43.7
5	Feedback improves learning, understanding and knowledge	29	40.9
6	Feedback improves clinical skills/ being a better clinician/ clinical progress	20	28.2
7	Feedback/ advice on future patient treatment/ management	17	23.9
8	Feedback promotes professionalism/ prepares students for the real world	11	15.5
9	Feedback is important for an action plan/ goal setting/ provides solutions	11	15.5
10	Feedback allows students to learn from mistakes (clinically)	10	14.1
11	Feedback facilitates the reproduction of good work	9	12.7
12	Feedback builds relationships (between student and supervisor)	6	8.5

Illustrative quotes taken from the qualitative data set and which motivated the creation of the above listed categories include the following:

1. Feedback identifies areas of improvement:  
*"If a student is really struggling, feedback must always be given so that they know where they are going wrong and where they must improve."*
2. Feedback provides constructive advice on how to improve:  
*"It's feedback that shows you how you can improve or change certain things so that you don't encounter the same problem in future..."*
3. Feedback should identify both strengths and weaknesses:  
*"Valuable and useful feedback for me would be a supervisor helping me identify my strengths and weaknesses and giving me constructive advice on how to overcome my weaknesses or problem areas I may have in clinics, and filling in the gaps in my knowledge."*
4. Feedback increases student encouragement/ motivation/ self-confidence:  
*"Valuable feedback can be motivational for students... Useful feedback is when a lecturer motivates the students on how they can improve their work in future."*

*"It is nice to hear that you are doing right or where you are performing good – it boosts confidence, which is needed to continue performing good."*

5. Feedback improves learning, understanding and knowledge:  
*"Useful feedback helps me learn new things (techniques, management of cases). Optimal feedback must be given just to make a student learn more..."*
6. Feedback improves clinical skills/ being a better clinician / clinical progress:  
*"Valuable feedback is feedback that will mould you into becoming a better dentist with the right clinical ability. Useful feedback would be feedback that would improve my clinical skills as a clinician."*

### The clinical environment

Although 52.1% of students agreed with item 23, that the clinical environment is not best suited to receiving verbal feedback, roughly 80% (n=22+34) agreed that they can actively learn within this environment (item 24) and 50.7% disagreed that receiving feedback in the clinical environment makes them feel uncomfortable (item 25). Considering item 27, 26.8% of students strongly agreed and 49.3% agreed that their privacy and confidentiality is not fully respected within the clinical setting.

**Table V:** Frequency Table for the role of the clinical environment in feedback practices.

Item on Questionnaire	Strongly agree		Agree		Disagree		Strongly disagree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
The clinical environment is not conducive (best suited) to receive meaningful feedback.	9	12.7%	37	52.1%	23	32.4%	2	2.8%
The clinical environment is one in which I can actively learn through communication with my supervisor.	22	31.4%	34	48.6%	12	17.1%	2	2.9%
Receiving feedback in the clinical area makes me feel uncomfortable.	7	9.9%	22	31.0%	36	50.7%	6	8.5%
My privacy and confidentiality is not fully respected during feedback within the clinical areas	19	26.8%	35	49.3%	15	21.1%	2	2.8%

**Table VI:** Open-ended responses of important aspects regarding the clinical environment.

CATEGORIES	NUMBER (n=71)	%
1 Receiving feedback in the presence of patients is uncomfortable	42	59.2
2 Privacy / confidentiality is important (one-on-one) and/ or lacking	42	59.2
3 Receiving feedback in the presence of supervisors is uncomfortable	31	43.7
4 Receiving feedback in the presence of students is uncomfortable	31	43.7
5 Limited time is available for feedback in the clinical area	16	22.5
6 Feedback administration in the clinic results in embarrassment/ stress/ anxiety for students	15	21.1
7 Receiving feedback in the clinical area is inherently uncomfortable	13	18.3
8 Respect/ dignity is important (mutual) in the clinical area	12	16.9
9 Professionalism during feedback is important in the clinical area	8	11.3
10 Feedback administration affects the relationship between student and patient	8	11.3
11 Patient's feel uncomfortable when feedback is offered in the clinical area	7	9.9

The question posed to the students in the questionnaire under the construct of the clinical environment was 'Describe in your own words what you consider to be important aspects (positive and/ or negative) of the environment in which verbal feedback is given to you (i.e. the clinical area).'

1. Receiving feedback in the presence of patients is uncomfortable:

*"Feedback should be given to each student away from their patients, as the fear of judgement/ disappointment has an emotional impact on the student."*

2. Privacy / confidentiality is important (one-on-one) and/ or lacking:

*"Privacy and respect is important. It is much nicer when the supervisor gives you feedback in your cubicle compared to outside your cubicle..."*  
*"...sometimes confidentiality is not maintained as other students hear this and more importantly, other supervisors hear this..."*

3. Receiving feedback in the presence of supervisors is uncomfortable:

*"Supervisors often engage in discussion with other supervisors about students during feedback. In essence, your performance is no longer between your supervisor and yourself."*  
*"Everyone hears the feedback that you receive during your session and some supervisors may use this against you at your next session."*

4. Receiving feedback in the presence of students is uncomfortable:

*"I think that any feedback is best given in private rather than at the back of the clinical area, where other students can hear everything. It makes me a little bit uncomfortable."*

5. Limited time is available for feedback in the clinical area:

*"There aren't enough supervisors, therefore sometimes there isn't enough time for decent feedback or the supervisors are too rushed to give meaningful feedback."*

6. Feedback administration in the clinic results in embarrassment/ stress/ anxiety for students:

*"I think that if you had a bad session, then getting feedback in the clinical area may cause more stress and anxiety."*

#### Supervisor-specific factors on feedback

A combined 70% (n=15+34) of students agreed that supervisors do not always provide feedback in a respectful manner to them (item 28). Linked to this, items 29 and 38 highlighted that a large proportion of students agreed that their supervisor's attitude towards them affected their performance positively.

Respectively, 56.3% and 57.7% of students strongly agreed that the mood (item 31) and tone (item 32) of their supervisor affected how they perceive and value the feedback given

Table VII: Frequency Table for supervisor-specific factors which pertain to verbal feedback.

Item on Questionnaire	Strongly agree		Agree		Disagree		Strongly disagree	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
27. My supervisor does not always provide feedback to me in a respectful manner.	15	21.4%	34	48.6%	20	28.6%	1	1.4%
28. My supervisor's attitude towards me during feedback affects my future performance in a positive way.	8	11.4%	38	54.3%	20	28.6%	4	5.7%
29. The relationship between me and my supervisor affects how I perceive feedback given to me.	20	28.6%	38	54.3%	12	17.1%	0	0.0%
30. The mood of my supervisor affects how I perceive the feedback given.	40	56.3%	27	38.0%	4	5.6%	0	0.0%
31. The tone that my supervisor uses in delivering feedback has a direct influence on how I value the feedback.	41	57.7%	27	38.0%	3	4.2%	0	0.0%
32. I feel that supervisors are negatively biased towards me in a personal way when delivering verbal feedback.	18	25.4%	19	26.8%	28	39.4%	6	8.5%
33. I find it difficult to approach my supervisors during the clinical session to ask for advice.	11	15.7%	28	40.0%	25	35.7%	6	8.5%
34. My supervisor usually acts in a professional manner when delivering feedback to me.	1	1.4%	48	67.6%	19	26.8%	3	4.2%
35. I often feel victimised or belittled by my supervisor during feedback.	10	14.1%	25	35.2%	29	40.8%	7	9.9%
36. I feel there is little consistency in feedback between different supervisors.	38	53.5%	28	39.4%	5	7.0%	0	0.0%
37. My supervisor's attitude towards me affects me during feedback and affects my future performance in a negative way.	18	25.4%	23	32.4%	29	40.8%	1	1.4%

to them. This further translates into 82.9% (n=20+38) of students who agreed that the relationship between them and their supervisor affects their perception of verbal feedback (item 30). A combined 52.2% (n=18+19) of students agreed that supervisors were negatively biased towards them when giving them verbal feedback (item 33), while a combined 49.3% (n=10+25) agreed that they often feel victimised or belittled by their supervisor during feedback (item 36). Majority of students (55.7%) felt that their supervisors are difficult to approach during a clinical session (item 34), despite 69% agreeing that supervisors act in a professional manner when delivering feedback to them (item 35). The results indicate that 53.5% of students strongly agreed and 39.4% agreed that there is little consistency between supervisors (item 37).

Within this construct, eighteen categories were identified after coding students written responses to the open-ended question posed on the questionnaire, namely *'Describe in your own words what your personal experiences are with your supervisor(s) when they give you verbal feedback in the clinical area – both good and bad.'*

1. Experiences of belittling/ demeaning/ criticism/ victimisation/ rudeness:

*"A lot of supervisors have a habit of belittling you in front of your patients and you end up feeling embarrassed and the patient loses trust and confidence in you, thereby losing confidence and self-esteem in yourself. Feedback should always be given in a positive manner, never belittling a student and making them feel useless. It should be motivational."*

*"I feel if I question supervisors (during feedback), then I would be victimised or disliked and could affect my future marks."*

2. Professionalism and respect are important for feedback:

*"The way in which the feedback is given should be respectful and kind. Supervisors never know what is going on in a student's life or day."*

3. Negative biases/ judgements from supervisors during feedback:

*"Feedback and marks are often given based on who the supervisor is and whether the student is well liked, not on the quality of the work that is produced."*

4. Tone of the supervisor is important during feedback:

*"Feedback should be carried out in a positive tone and encouraging manner. Feedback should in no way be directed at clashing personalities or done in a degrading manner for the whole world to hear."*

*"It (optimal feedback) does not depend so much on what they (supervisors) say, but how they say it."*

5. Supervisor's mood is important and affects feedback:

*"I also feel that the supervisor's mood impacts their judgement and attitude towards you. Also, I have seen others supervisors discuss us in the clinic in a condescending way. If supervisors are allowed to be moody, so should we. Supervisors come with all their moods and problems but we, as students, are not allowed to have a bad day."*

6. Supervisors develop pre-conceived impressions of students:

*"Sometimes supervisors have a pre-conceived idea of your work...and this affects how they speak to me and whether they are prepared to help me improve during feedback."*

7. Supervisors discuss students amongst themselves:

*"...instead of discussing it (feedback) with the student, they (supervisor) discuss issues with other staff members in front of the students. This is belittling and affects us negatively."*

8. Supervisor attitude (positive / negative) affects feedback experience:

Table VIII: Open-ended responses of supervisor-specific factors which students rated as being important to them.

CATEGORIES	NUMBER (n=71)	%
1 Experiences of belittling/ demeaning/ criticism/ victimisation/ rudeness	41	57.8
2 Professionalism and respect are important for feedback	36	50.7
3 Negative biases/ judgements from supervisors during feedback	35	49.3
4 Tone of the supervisor is important during feedback	29	40.9
5 Supervisor's mood is important and affects feedback	21	29.6
6 Supervisors develop pre-conceived impressions of students	16	22.5
7 Supervisors discuss students amongst themselves	15	21.1
8 Supervisor attitude (positive/ negative) affects feedback experience	15	21.1
9 Supervisors become defensive/ assert their power and/ or authority	11	15.5
10 Supervisor approachability/ ability to listen is important for feedback	10	14.1
11 Fairness/ patience/ transparency/ objectivity is important	9	12.7
12 Lack of consistency in feedback between supervisors	8	11.3
13 Feedback results in stress/ anxiety/ depression	8	11.3
14 Supervisors are too rushed/ should be more eager to teach	8	11.3
15 Supervisors must not make feedback personal	6	8.5

*"There's a supervisor who always gives me negative remarks and attitude during feedback – it affects my clinical performance negatively and I end up hating that clinic or session."*

## DISCUSSION

The most pertinent results will be discussed under each of the proposed four constructs namely, the nature of feedback, the value of feedback, the effect of supervisor-specific factors on feedback and the influence of the clinical environment on student perceptions of verbal feedback practices.

### Nature of feedback

As noted in Table II, students are aware of what constitutes good verbal feedback and actively seek it from their supervisors. Feedback should include a practical action/ performance improvement plan (Sadler, 1989; Hattie & Timperley, 2007; Molloy & Boud, 2013) and must be both detailed and specific (Johnson *et al.*, 2016). From the qualitative written responses in Table 2, students are clearly focussed on the manner in which verbal feedback is delivered to them.

Considering the nature of verbal feedback practices within the context of this study, several key issues have been highlighted. Majority of students ( $\pm 80\%$ ) felt that they did not receive enough feedback after their clinical sessions and also felt that not enough time is made available for effective feedback (Table I). Similar findings were reported by Price *et al.* (2010). This might be as much a reflection of resource constraints in higher education and healthcare professions as reported by Yorke (2003) and Gibbs (2006), as it is about the cramped nature of the dental programme itself and the limiting nature of the clinical dental environment.

It is evident that students are acutely aware of the importance and lack of privacy, the lack of confidentiality and the fact that there are too few supervisors and insufficient time within the clinical setting. There are certain additional key factors which supervisors need to pay explicit attention to. This includes respect and professionalism. Carless (2013) reported that fostering a learning environment of respect, trust and support is vital for the project of learning, by ensuring the psychological safety of students. Based on the findings of the present study, the spin-off of receiving verbal feedback in the clinical setting undoubtedly has effects on both students and their patients, which makes both parties feel uncomfortable, embarrassed, anxious and affects their inter-personal and professional working relationship. As a result of this, many students in this study recommended that verbal feedback be given to them in private on a one-to-one basis, after the patient has been dismissed.

Despite the numerous negative implications of receiving verbal feedback in the clinical area in front of a patient, many students did mention several positive effects this has on them. These included getting immediate feedback from supervisors with active demonstrations of tasks in a bid to promote practical learning and teaching, while receiving constructive feedback on their clinical performance. High quality feedback is essential for work-based learning (Holmboe *et al.*, 2010; Morris & Blaney, 2010; Boud & Molloy, 2012) and impacts directly on patient management.

### Value of feedback

It is evident that students within this study cohort are distinctly aware of the numerous benefits of verbal feedback,

with approximately 90% of the students stating that receiving feedback is valuable for the development of their skills (Table III). A similar proportion felt that feedback should be given on both their knowledge and clinical skills, so that they can actively learn and improve from the feedback session. This aspect of self-improvement featured very highly within the open-ended written responses.

Other benefits of feedback include improved encouragement and motivation (Ten Cate, Kusurkar & Williams, 2011; Ten Cate, 2013), building their own self-confidence (Johnson *et al.*, 2016) and improving the relationship between students and their supervisors (Murray, 1997; Carless, 2013) through active discussion, communication and debate (Johnson *et al.*, 2016). The fact that 61.9% of students (Table III) would like to be asked their opinions about their own performance after a clinical session, indicates that students welcome engaging in dialogue and actively seek it from their supervisors. Once again, in this study, the issue of professionalism was identified as a key emergent category within this construct.

It is of concern that 84.5% of students stated that supervisors rarely assist them in setting goals for future clinical session (Table III), but encouraging that only 14 students (20%) experienced difficulty in using verbal feedback to improve their performance (Table III). Unfortunately, with regards to the action plan, 77.5% of students reported that supervisors did not help them to develop an effective action plan, while roughly 90% were of the opinion that this action plan is the most important aspect of the feedback process (Table III). The value of the improvement plan was again highlighted in the study from the open-ended written responses, where 15.5% of students commented that such a plan is an important part of receiving feedback (Table IV).

Despite 77.2% of students (Table III) mentioning that their supervisors do not ask them to reflect on their own work after a clinical session, some students did identify reflective practice as one of the benefits of receiving verbal feedback in their written responses.

### The clinical environment

The dental clinical workplace is a very dynamic space and therefore closely associated with how the nature of feedback practices could be perceived by students. Even though more than half of the students in this study indicated that this environment is not ideally suited to receiving verbal feedback, 80% still felt that actively learning could take place (Table V). The learning environment must be educationally conducive to promote active engagement and active learning with clinical tasks. This might explain why close to 60% of students in this study did not feel uncomfortable receiving feedback in the clinical setting. However, a similar proportion did feel uncomfortable when feedback was provided in the presence of their patients (Table VI).

### The influence of supervisor-specific factors on feedback

When looking at the data (both quantitative and qualitative) within the supervisor-specific construct, one cannot but notice that dental students have highlighted several shortcomings within the faculty's verbal feedback practices. Due to these perceptions and student experiences, many students reported emotions of increased stress and anxiety associated with the feedback process. Not only do students become defensive, but this study also confirmed findings

from other studies that students perceived supervisors to become defensive as well during verbal feedback (Ende *et al.*, 1995; Hewson & Little, 1998; Blatt *et al.*, 2008; Kogan *et al.*, 2012).

An overwhelming 70% of students (Table VII) responded that supervisors do not always provide feedback in a respectful manner, with the majority commenting that their supervisor's mood and tone affects how they perceive feedback. In this study, six students (8.5%) mentioned in their open-ended written responses, that some supervisors make feedback personal (Table VIII). The notion that effective communication and collaboration is essential for optimal feedback has been reported by Johnson *et al.* (2016), which cultivates respect for each other's perceptions and opinions. The need for mutual respect was confirmed across all the constructs of this study.

Similarly, it is of concern that a combined 52.2% of students felt a negative bias from supervisors towards them during feedback (Table VII), and 49.3% experienced negative emotions of belittling, victimisation and/ or rudeness (Table VIII). This might explain why the majority of students (55.7%) felt that their supervisors are difficult to approach during a clinical session (Table VII). The fact that 82.9% of students responded that the relationship between them and their supervisor played a role in how they perceived verbal feedback (Table VII) implies that improving this relationship could translate into more positive student perceptions of feedback.

## SUMMARY OF FINDINGS

Considering this study in its entirety and taking the data across all four constructs into account, there are numerous over-arching themes which can be identified and which bear valuable contextual relevance for feedback practices within the faculty. These include:

- The lack of time and necessity for additional time for effective verbal feedback
- The importance of professionalism during feedback,
- The fact that supervisors need to listen more to students,
- The awareness of supervisors regarding students' emotional needs (stress, anxiety),
- The importance of effective communication, dialogue and debate.
- The effect of feedback practices on the relationship between student and supervisor, and vice-versa.

## CONCLUSION

The findings of this study suggest that the above listed over-arching themes could be a good starting point for the faculty to develop an acceptable and effective feedback policy for students. It would seem as though all these themes relate directly to issues which educators have control over and can change. Having this valuable knowledge and insight into students' perceptions of feedback, would enable clinical supervisors to have a better understanding as to where strengths and weaknesses lie when delivering feedback to students in the clinical area and to be more aware of issues which affect how students receive, regard and apply any feedback given to them. In this way, the educational vision and mission can be strengthened, by improving the inter-professional relationship between student and supervisor through better communication, collaboration and meaningful

interaction while fostering intentions of self-regulated and self-directed student learning and performance improvement.

While recognising the primary goal of being patient-centred in every clinical interaction, a recommendation arising from the study is that educators should also remain student-centred in their approach to teaching, which includes engaging with students positively during verbal feedback, as feedback represents a crucial opportunity to enhance student learning. Losing sight of the effects of what educators' actions and behaviours could potentially be having on students, would simply detract from the perceived and intended benefits and advantages of feedback.

Given the information-rich data generated from the open-ended questions in this study, it seems that by attending to the interpersonal actions and behaviours of supervisors, much could be achieved and improved upon, with the effect of reducing the negative impact of the clinical environment on verbal feedback practices.

Being able to improve on the faculty's feedback practices and reinforce those which are already aligned with high quality education (of which there are many), poses exciting opportunities for growth and development in terms of staff development. Paying attention to what dental students are saying about their experiences with verbal feedback in the clinical setting not only shows respect for their opinions and fosters greater inclusivity, but also reinforces that the faculty and university are progressive and forward thinking.

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## CPD questionnaire on page 336

The Continuing Professional Development (CPD) section provides for twenty general questions and five ethics questions. The section provides members with a valuable source of CPD points whilst also achieving the objective of CPD, to assure continuing education. The importance of continuing professional development should not be underestimated, it is a career-long obligation for practicing professionals.

