

DOES FEEDBACK HAVE A ROLE IN IMPROVING THE LEARNING AND ASSESSMENT IN FIRST PROFESSIONAL MEDICAL STUDENTS: A QUESTIONNAIRE BASED STUDY IN ANATOMY

Monika Lalit ^{*1}, Sanjay Piplani ², Anupama Mahajan ³.

^{*1} Associate Prof, Dept. of Anatomy, Sri Guru Ram Das Institute Of Medical Sciences & Research (SGRDIMS&R), Amritsar, Punjab, India.

² Professor, Dept. of Pathology, SGRDIMS&R, Amritsar, Punjab, India.

³ Professor & Head, Dept. of Anatomy, SGRDIMS&R, Amritsar, Punjab, India.

ABSTRACT

Introduction: Feedback is considered as a potential instrument for revamping the system of education, and plays a major role in learning. It is the specific information about the comparison between a students' observed performance and a standard, given with the intent to improve the students' performance. Thus it is intended to improve skills or change behaviour, rather than being an estimate of the students' worth.

Materials and Methods: This observational study was performed on 150 first-year medical students in the Department of Anatomy. Three sets of questionnaires were developed. First set of questionnaire included questions to assess the students' perception about the importance and need for feedback in the learning process, second set contained questions about the contents of feedback and third set had questions about the process of feedback. The data were compiled and analyzed.

Results: In General, 48.66% of students indicated receiving some sort of feedback, 28% not receiving feedback and 23.33% could not decide whether they had received any kind of feedback. 82.66% students indicated that feedback was important for their learning and 86.66% expressed their need for regular feedback. Majority of the students expressed their interest in receiving feedback after their formative and summative assessments. 92.66% agreed with the statement that feedback is more effective when negative information is sandwiched between positive information. 85.33% and 76.66% preferred receiving one-to-one and interactive feedback respectively.

Conclusion: Feedback simplifies the improvement process of self-assessment in learning, provides the opportunities to exercise regulating students' own learning standards.

KEY WORDS: Communication, Feedback, Performace, Self-Assessment, Student's learning.

Corresponding Author: Dr Monika Lalit, House No.- 24, Lane 5, Gopal Nagar, Majitha Road Amritsar 143001, Punjab, India. Ph No.- 9814325454 E-Mail: monika.lalit@yahoo.com

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INTRODUCTION

Feedback is the oldest tool known to mankind to improve communication and enhance quality of process as well as outcome in education system [1,2]. It is considered as a vital approach to facilitate students' development as independent learners in order to monitor, evaluate and

regulate their own learning [3]. In the setting of clinical medical education, feedback refers to information describing students' performance in a given activity that is intended to guide their future performance in the same or related activity[1].

Medical educators frequently believe that they

convey feedback to medical trainees, whereas trainees report that feedback is rare [4].

Majority of the students express their interest in receiving feedback on their performance [5] and consider provision of feedback as a major factor that could facilitate their learning [6]. However students claim a lack of adequate, timely feedback and their teachers claim that students fail to apply the advice given [7]. Some students do not like the feedback specially the negative points and take it personally. The term feedback is often misunderstood as an exercise to criticize or judge a person but it is an honest opinion about the 'act' and not a 'person' given in a palatable manner to improve his/her performance [8]. The main purpose of feedback is to help the students to correct their mistakes so as to improve their competence. Studies have shown that feedback has the ability to enhance students' performance and render them feel confident and competent in their role, especially if the feedback is immediate. It allows for reflection in practice and offers the students opportunity to meet standards [9]. Numerous factors have been shown to be associated with the provision of feedback, which include assessor's perception and training [10]. Students vary in their utilization of feedback, when offered. Females and better students are keener to seek out feedback that might be expected to help them continue to do better. [11].

Feedback works at all stages of learning. Before starting instruction, feedback about previous knowledge helps in better planning. Feedback during instruction helps in monitoring the progress of learning. After the instruction, feedback is a must to assess the learning outcome. With the body of knowledge of Anatomy expanded by leaps and bounds, there is a need to provide a regular feedback to make the students a better learner. The aim of this study was to explore the views of first professional medical students regarding the importance, content and process of feedback.

MATERIALS AND METHODS

A feedback questionnaire study was designed to assess and evaluate the attitude of the first professional MBBS students towards the role of feedback. The study was carried out in the

Department of Anatomy at Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, comprising of 150 First Professional MBBS students during the period of 2 months.

Data Collection:

Methodologies of some relevant published researches were reviewed and relevant questions and points were selected for utilization in the questionnaire of this study. [1,12] Three sets of questionnaires were developed. First set of questionnaire included questions to assess the students' perception about the importance and the need for feedback in the learning process and whether feedback should follow certain or all forms of assessments. (Table 1, Figure 1) Second set of questionnaire contained questions that aimed to explore students' perception about the contents of the feedback (Table 2, Figure 2) and the third set had questions about the process of feedback. (Table 3, Figure 3)

The motivation of this study came from realization when students consecutively scored less marks in the substages in spite of putting extra efforts in the dissection hall teaching. The study took them to appear in the assessment exams and then visit the dissection hall where feedback sessions were organized. After that they were handed over the questionnaires for their responses to know whether these sessions were of any help in betterment of their understanding of the subject. Based on responses to questionnaire, three grades were given as Agree, Disagree and Neutral. The set 1 questionnaire consisted of a matrix of 9 statements, set 2 consisted of 6 statements and set 3 consisted of 5 statements that covered a range of students' perception in the form of questionnaire responses towards feedback. The students were requested to tick only those statements with which they were in full agreement.

Data Analysis:

Various reactions and views among participated students were collected. The data thus obtained were analysed using the computer program SPSS version 17.1. Descriptive statistics like means and frequencies of the replies was determined for each item of the questionnaire.

RESULTS

In General, before distributing the questionnaire, 73 students (48.66%) indicated receiving some sort of feedback. 42 (28%) students indicated not receiving feedback at all and 35 students (23.33%) could not decide whether they had received any kind of feedback.

In relation to students' perception about the importance and need of feedback (Table 1, Figure 1)

110 students (73.33%) were in favour that feedback is helpful for the them in rating their own learning standards Whereas 35 (23.33%) did not agree to it and 5 (3.33%) remained neutral.

124 students (82.66%) indicated that feedback was important for their learning and 130 (86.66%) expressed their need for regular feedback during their study and only about 23 (15.33%) and 13 students (8.66%) disagreed that feedback is important for learning or for the need for regular feedback.

The majority of the students i.e. 128 (85.33%) and 132 (88%) expressed their interest in receiving feedback after their formative and summative assessments respectively whereas 134 (89.33%) wished to receive immediate feedback after any kind of students' assessment like viva voce during table teaching/substages/final stages.

107 students (71.33%) were in favour that the feedback provided them the opportunity to close the gap between current and desired performance of them. 14 students (9.33%) could not decide so and 29 students (19.33%) did not agree to this. 108 students (72%) believed that feedback is effective as a process of motivating the students to utilize the feedback they have received. 118 (78.66%) students were of opinion that feedback should be well timed and at the right moment.

In relation to students' perception on the content of the feedback (Table 2, Figure 2) 129 (86%) and 114 (76%) students disagree with the statements that feedback should have only positive points or only negative points about their performances respectively. Whereas about 139 students (92.66%) agreed with the statement that the feedback is more effective when negative information is sandwiched between

positive information -98 students (65.33%) were in favour that feedback is more effective when it is relevant and meaningful.- 132 students (88%) indicated their wish to include in the feedback a guide on how to improve their future performance.

127 (84.66%) believed that feedback provides quality information to students to ensure their learning.

In relation to students' perception on the process of feedback (Table 3, Figure 3)

128 students (85.33%) and 115 students (76.66%) preferred receiving one-to one feedback and interactive feedback respectively which was more than the feedback that was conveyed in groups by 31 (20.66%) students or both types by 80 students (53.33%) and written feedback by 61 students (40.66%).

Fig. 1: showing students' perception about the importance and need of feedback.

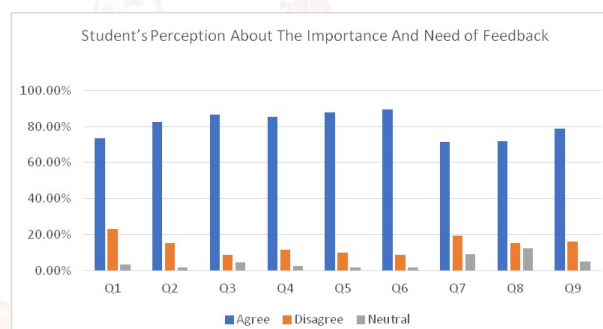


Fig. 2: students' perception on the content of the feedback.

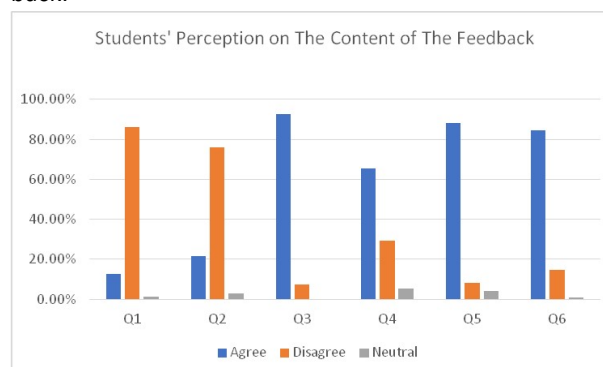


Fig. 3: perception on the process of the feedback.

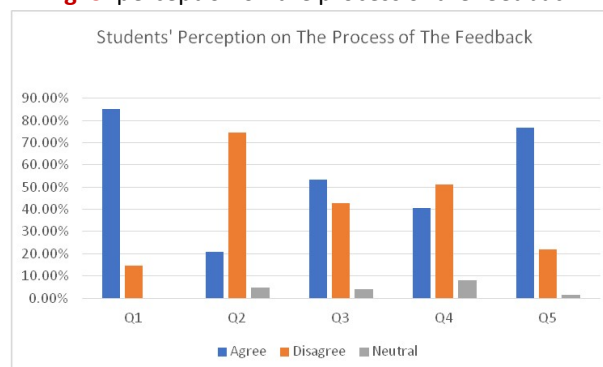


Table 1: statements in questionnaire to assess students' perception about the importance and need of feedback in anatomy

S. No.	Feedback Questions on Importance and Need	Agree	Disagree	Neutral
1	Feedback is helpful for the students in rating their own learning standards.	110 (73.33%)	35 (23.33%)	5 (3.33%)
2	Feedback is important for students' learning.	124 (82.66%)	23 (15.33%)	3 (2%)
3	Feedback should be offered regularly.	130 (86.66%)	13 (8.66%)	7 (4.66%)
4	All formative assessments should be followed by feedback.	128 (85.33%)	18 (11.84%)	4 (2.66%)
5	All summative assessments should be followed by feedback.	132 (88%)	15 (10%)	3 (2%)
6	Feedback should be given immediately after students' performance like viva voce during table teaching/substages/final stages.	134 (89.33%)	13 (8.66%)	3 (2%)
7	Feedback provided the students the opportunity to close the gap between current and desired performance.	107 (71.33%)	29 (19.33%)	14 (9.33%)
8	Feedback is effective as a process of motivating the students to utilize the feedback they have received.	108 (72%)	23 (15.33%)	19 (12.66%)
9	Feedback should be well timed and at the right moment.	118 (78.66%)	24 (16%)	8 (5.33%)

Table 2: statements in questionnaire to assess students' perception on the content of the feedback in anatomy

S. No.	Feedback Questions On The Content	Agree	Disagree	Neutral
1	Feedback is more effective when it contains only positive points about student's performance like appreciates what was done well?	19(12.66%)	129(86%)	2(1.33%)
2	Feedback is more effective when it contains only deficiencies or negative points about student's performance .	32(21.33%)	114(76%)	4(2.66%)
3	Feedback is more effective when negative information is sandwiched between positive information	139(92.66%)	11(7.33%)	0
4	Feedback is more effective when it is relevant, meaningful and understood by the student before it can be used to make productive improvements.	98(65.33%)	44(29.33%)	8(5.33%)
5	Feedback is like a guide on how to improve students' future performance.	132(88%)	12(8%)	6(4%)
6	Feedback provides quality information to students to ensure their learning	127(84.66%)	22(14.66%)	1(0.66%)

Table 3: statements in questionnaire to assess students' perception on the process of the feedback in anatomy.

S. No.	Feedback Questions On The Process	Agree	Disagree	Neutral
1	Feedback should be one-to-one.	128(85.33%)	22(14.66%)	0
2	Feedback should be given in groups.	31(20.66%)	112(74.66%)	7(4.66%)
3	Feedback should be given both one-to-one and in groups.	80(53.33%)	64(42.66%)	6(4%)
4	It should be a written feedback	61(40.66%)	77(51.33%)	12(8%)
5	Feedback is more effective when it allows for response and interaction	115(76.66%)	33(22%)	2(1.33%)

DISCUSSION

Before attempting the questionnaire 28% students indicated having not received any feedback at all and 23.33% could not decide

whether they had received any kind of feedback whereas only 48.66% indicated receiving some sort of feedback. This identifies an important issue related to the clarity of the concept and

process of feedback, both to students as well as the faculty. 86.66% of students indicated that feedback should be offered regularly. This view highlights the reported difference in the perception between faculty and students regarding frequency of feedback in clinical training [6,9]. To ensure the provision of regular feedback activities requires establishing an in-built system and procedures that monitor the frequency and utilization of the offered feedback. The majority of the students in our study indicated their preference to have immediate feedback after their formative and summative assessments. These findings concur with the findings of AlHaqwi (2012) [12]. Feedback, to be effective, should be given immediately after students' observed behavior or performance [9,13]. Devi et al (2012) Studied the role of structured feedback on the examination performance combined with the opportunities for self-reflection in the form of 'reflection in learning'. and the key findings mentioned that the students' perceptions were highly positive in favour of feedback, which helped them in improving their examination performance [14].

As depicted from Table 1, 72% of students indicated that feedback is effective as a process of motivating the students and simplifies the improvement process of self-assessment or reflections in learning which supports the findings of AlHaqwi (2012) where students indicated their need to receive balanced feedback that includes their strengths and weaknesses and a guide for how to develop their competencies [12]. Such an approach is essential to get the optional benefit of feedback [15,16].

As depicted from Students' perception on the content of the feedback in Table 2, majority of the students disagree with that statements that feedback is more effective when it contains only positive or only negative points about students' performance. In general positive feedback is more accurately perceived and recalled than negative feedback. However individuals given only positive feedback tend to become complacent [17].

There is evidence that individuals with high self-esteem donot perceive negative points as clearly as they perceive positive points, therefore those high in self-esteem respond less to

negative information than those in low self-esteem. Conversely, individuals low in self-esteem respond more to negative information [18,19]. As evident from Table 2 that 92.66% of the students agreed that while giving feedback negative information is sandwiched between positive information. i.e. feedback should have points about their good performance as well as about their weaknesses. It concurs with the findings that the feedback is more effective when feedback conversation begins and end with complementary information [20].

As depicted from Table 3, the students in the present study preferred receiving one-to one feedback and interactive feedback which was more than the feedback that was conveyed in groups or both types and written feedback. This form may be associated with less tension when compared with the verbal and group feedback. However, in order to give effective feedback, different forms should be used and tailored to the needs and acceptability of the learners. This should be done repeatedly and incorporated within the curriculum [21]. Wen et al. (2015) explored characteristics of feedback in the reflective dialogue group given to medical students and found that structured narrative reflective writing when combined with group discussions with a tutor and peers facilitates much deeper reflection [22].

Whereas Dekker et al. (2013) explored the characteristics of written feedback that are perceived aseffective for stimulating students' reflection, behaviour and the key findings were thatfeedback comments should be formulated as a question, in positive tone and tailored to the students' reflective level to make a better impact [23].

Feedback is about communication, Given correctly, constructive feedback enable the students to develop an analytical approach to learning and can improve learning outcomes and competence also [24].

A review in 1998 showed that constructive feedback produced significantly better learning outcomes in a wide variety of learning situations [25]. Knowles (1980) showed that adult learners welcome feedback when it is based on their performance and tailored to their goals [26].

CONCLUSION

Repeated instances of feedback are necessary to change one's self perception and behaviour. Currently the trend in revised curriculum and instructional improvement programme demand several instances of feedback. The results of our study illustrate that medical students recognized the importance of the feedback in their learning and professional development, as they expressed their interest in receiving a regular feedback and found that feedback is more effective when it is considered as a process and is essential in allowing a student to remain on course in reaching a goal.

Conflicts of Interests: None

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