Original Article Open Access

Orientation to receive feedback among medical and nursing students of Shahid Beheshti University of Medical Sciences, 2019

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Article Info

Article history:
Received 09 Ape 2020
Accepted 01 Dec 2020
Published 02 Jan 2021
Keywords:
Feedback,
Orientation to Feedback
Student
Clinical Training

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Abstract

Background & Objective: Providing and receiving feedback during clinical training is one of the indicators of effective teaching and better learning. Different factors are related with efficacy of feedback that may refer to teachers or students. This study aimed at orientation of medical and nursing students to receive feedback in their clinical training course.

Materials and Methods: This is a descriptive study that was done on 495 students (278 medicine and 217 nursing students) who were selected by quota and convenience sampling. The data collection tool was feedback orientation scale that was completed by students in a self-administered method. Validity and reliability of the questionnaire were determined by content validity and internal consistency (α = 0.90), respectively. The results were analyzed by SPSS software (Ver. 16) using T-Test, ANOVA statistical tests.

Results: In this study, orientation to receive feedback was more than mean score and was significantly higher in nursing students in comparison with medical students (P=0.031, t=-2.94). As well, the students as starters tended more to receive feedback than interns (P=0.01, t=-2.46). There was a significant relationship between the orientation to receive feedback with students' age, grade point and interest in the major (P <0.05).

Conclusion: With considering of difference in students' orientation to receive feedback and to help for more effectiveness of feedback, it is necessary to improve attitude of some students who have a poor orientation to feedback. As a result, the status of more acceptance of feedback will provide to them.

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Introduction

Clinical education is the basis and foundation of medical education and one of the most important professional education criteria, playing a significant role in the consolidation of student learning. In practice, medical sciences students spend more than 50% of their time in the clinic (1). Accordingly, clinical education provides a unique opportunity for preparing students in terms of acquiring professional identity and skills (2). Clinical education's failure to provide the necessary skills for proper healthcare provision by students will lead to an unfavorable response to the health system's needs (3). Most individuals need performance assessment during their learning process. In fact, this need forms the motivation for progress and the desire for pursuing results from learning in the person and paves the way for learning endeavors in students (4). In this regard, a solution is to provide feedback to students. In general, feedback is described as information regarding the students' performance that is provided to reinforce reflection on their performance (4). An example would be a professor giving information to students after observing their performance during the course of clinical education with the aim of correcting or improving their performance (4, 5). The provision of constructive feedback enhances the teaching-learning process and is necessary for growth, providing a path, and increasing self-confidence, motivation, and self-esteem in students (6).

According to the literature, timely and effective feedback provision will increase students' performance quality and generate a sense of

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[DOR: 20.1001.1.22519521.1399.13.39.5.6]
[DOI: 10.29252/edcj.13.39.60]

competence in them (7). On the other hand, lack of feedback by teachers will result in uncorrected errors, unreinforced performance, lack of obtaining clinical competence and feelings of bewilderment, and confusion in learners (8). This increases the importance of professors' attention to giving effective feedback to students more than ever. Despite the significance of this issue, feedback is rarely provided or not provided at all in clinical education or is not based on standard principles (9) and there are some controversies about feedback provision to students (10). In some studies, while teachers believed that they were providing effective feedback to students, the learners complained about the lack of feedback provision in clinical education (11). In a research on the surgery students' perception of feedback, although 90% of the teachers believed that they were providing effective feedback, but only 17% of residents agreed with this claim (12).

Therefore, various factors seem to be involved in the provision and receiving of feedback and its effectiveness. Factors such as fear of broken teacher-student relationship, fear of negative assessment of students by teachers, and professors' concern about the reaction of students (e.g., aggressive, defensive, or embarrassed mood) have turn feedback provision into "walking on thin ice", thereby discouraging professors from seriousness in feedback provision (13). On the other hand, some studies have indicated a lack of effective use of feedback by most medical students (14). Therefore, both giving (by the teacher) and receiving (by the student) feedback play a role in the area of provision and receiving feedback. For instance, students' internal motivation for learning, which creates a goal-oriented attitude and desire to achieve success and encourages the person to try harder and get higher scores, can play a role in receiving feedback (5). Basically, exploratory behavior and willingness to receive feedback is a valuable source for the promotion and advancement of people in the fields of work and education, which leads to better adaptability, learning, and performance in the individual (15).

With regard to the mentioned points and since most studies have focused on the status of feedback provision by professors and related factors and given the scarcity of research on students' motivation and willingness as the main recipients of feedback, the present study aimed to evaluate the attitude of nursing and medical students to receiving feedback in order to have a more comprehensive understanding on the topic of feedback and its ruling conditions in clinical education environments. Also the results of this study will be used in educational planning in order to change the current status of feedback providing and receiving.

Materials and Methods

This was an analytical-descriptive study performed in 2019 at Shahid Beheshti University of Medical Sciences. The research population included all general practitioner and nursing students, and subjects were selected by quota and convenience sampling from eligible students. The inclusion criteria were pre-intern or intern medical students and nursing students in the apprenticeship stage (third-sixth semester) and internship (seventh-eighth semester). The total sample size was estimated at 495 individuals at a 95% confidence interval and 80% test power using the Morgan table. The percentage of each group of students was calculated relative to the total number of individuals. So, 278 medical students and 217 nursing students were entered into the study. Data were collected using the feedback orientation scale (FOS) by Linderbaum and Levy (2010). This 20-item tool is scored based on a five-point Likert scale (from one=completely disagree to five=completely agree) and the score range was 20-100, where a higher score is indicative of the better attitude of students to receiving feedback (4). Given the lack of use of the mentioned scale in national studies, the author's permission was received to translate the tool from English to Persian by a

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proficient translator and then re-translate it into English by another person who did not have access to the original scale. Afterwards, the translated text was matched with the original scale and was checked and approved for consistency in terms of content and meanings. In the next stage, the content validity of the tool was confirmed based on the opinions of 10 medical education experts, and the content validity ratio (CVR) and content validity index (CVI) was estimated at 0.78 and 0.92, respectively. Moreover, the reliability of the tool was evaluated by the internal consistency method in a pilot study on 20 students, who were not included in the current research (α=0.9). Following receiving a code of ethics and permission from related officials, the researcher referred to the research setting (i.e., nursing and medical schools and hospitals of Shahid Beheshti University of Medical Sciences) and selected the subjects through convenience sampling and based on the inclusion criteria. First, the research objectives were explained to the students, and written informed consent was obtained from all participants prior to the research. Afterwards, FOS was completed by the students through self-report, and the data collection process continued until the calculated sample size in each quota was completed. Data analysis was performed in SPSS version 16 using descriptive statistics (to describe participants) and inferential statistics (to respond to the research objectives), t-test (to compare the mean score of attitude among medical and nursing students at two apprenticeship and internship levels), and t-test and ANOVA (to determine the statistical significance of mean attitude scores based on students' educational and individual characteristics). It is notable that a P-value of 0.05 was considered statistically significant.

Results

In this study, the mean age of the participants was 22.66±2.29 years, and 51.2% of the subjects were female. Moreover, the majority of the students were single (84.4%). The descriptive results are shown in Table 1. Based on the students' major and individual and educational characteristics of them, there was a homogeneity between the two groups in this regard. In addition, 45.4% of students believed in the high effect of feedback on learning, but only 14.2% of them claimed that they always received feedback from their teachers. Furthermore, 26.3% considered the teachers' feedback to be useful (Table 1).

Table 1: Personal and educational characteristics of the students

Variable \ Major		Medicine N (%)	Nursing N (%)	Total N (%)
Gender	Female	136 (48.9)	116 (53.4)	252 (50.9)
	Male	142 (51.1)	101 (46.6)	243 (49.1)
Marital status	Single	225 (80.9)	191 (88.8)	416 (84.4)
	Married	53 (19.1)	26 (11.2)	79 (15.6)
Interest in major	High	164 (59)	85 (39.2)	249 (50.3)
	Moderate	104 (37.4)	106 (48.8)	210 (42.4)
	Low	10 (3.6)	26 (12)	36 (7.3)
Age (year)	mean±sd	23.72±6.29	21.29±2.19	22.66±2.29
GPA	mean±sd	16.64±1.38	16.41±1.72	16.54±1.54

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According to the results, the attitude towards receiving feedback was above average in both medicine and nursing students. Moreover, the independent t-test results were indicative of a significant difference between the field of study and attitude toward receiving feedback (t=-2.468, *P*=0.01). In addition, attitude to receiving feedback was higher in apprenticeship, compared to the internship (t=-2.940, *P*=0.03) (Table 2).

Table 2: Attitude of the students to receiving feedback according to the major and the clinical education phase

Major / Clinical education phase	Medicine	Nursing	Total	Significance
Apprenticeship	74.14±11.09	74.63±11.68	74.68±11.05	*P*=0.03
Internship	72.57±10.21	72.81±9.25	71.36±10.84	T=-2.940
Total	71.64±10.85	74.14±11.09	73.11±9.05	
Significance	*P*=0.01			
	T=-2.468			

The status of students' attitude to receiving feedback was assessed based on individual and educational characteristics, which had a significant relationship with age, GPA, and interest in the field of study (*P*<0.05) (Table 3).

Table 3. Attitude of the students to receiving feedback according to personal and educational characteristics

Variable / Major		Mean±Sd	Significance
Gender	Female	73.31±10.82	*P*=0.551
	Male	72.01±11.21	T=1.28
Marital status	Single	72.65±11.16	*P*=0.711
	Married	73.13±9.55	T=0.15
Interest in major	High	74.78±11.73	*P*=0.000
	Moderate	71.63±9.47	ANOVA=2.51
	Low	64.12±9.81	
Age (year)	mean±sd	72.2±6.29	*P*=0.006
			T=0.78
GPA	mean±sd	74.54±7.54	*P*=0.000
			T=0.87

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Discussion

The present study aimed to evaluate medical students' attitude to receiving feedback in clinical education courses. According to the results, students' attitude to receiving feedback from teachers was above average. However, it was claimed that feedback was not always provided by teachers and the received feedback was not very useful. This showed that despite students' interest in and positive attitude toward receiving feedback in the improvement of their clinical performance, the status of feedback provision by professors was not suitable and lacked the necessary effectiveness. This was confirmed by similar national studies. In a research performed to evaluate the status of feedback provision in clinical education, while most teachers (38%) claimed that feedback was frequently provided to students, only 27% of learners agreed to this claim and just 18.2% of them found the feedback to be constructive and useful (16). In a study by Haghani et al., in the opinion of students in clinical education, the principles of providing feedback were not observed to the desired and expected level (17). This could be due to various reasons, such as professors' insufficient knowledge about the concept of feedback (1), lack of skills in providing feedback, inadequacy in the student-professor ratio in clinical education settings, ineffective interpersonal teacher-student relationships (16, 18), short duration of clinical training, professors' preoccupation with other matters (8, 18), professors' insufficient knowledge of how to provide feedback, unfavorable educational environment (8, 19), no insight about the power of feedback in promoting learning and lack of skills in applying the principles of providing effective feedback. All of the mentioned factors lead to the rare use of feedback to improve students' learning (20). Accordingly, and given the fact that feedback is an important part of learners' growth and progress, it is recommended that proper attention be paid to feedback by clinical faculty members and suitable tools be used to provide effective feedback (21).

According to the results of the present research, nursing students had a higher attitude toward receiving feedback in clinical education, compared to medical students. This could be due to the lack of continuous and permanent interaction of medical professors with students because of their responsibility of in the clinic and the large number of patients who should be visited and treated. This probably has a negative impact on the quantity and quality of feedback provided by teachers and could be associated with medical students' lower desire to receive feedback. On the other hand, the clinical education model in nursing is developed in a way that professors only have the responsibility of training students in the clinic. Therefore, they have more time to work on students and give them feedback, which can increase nursing students' attitude to receiving feedback. Moreover, the results demonstrated that junior students and those in apprenticeship clinical education courses had a better attitude to and interest in receiving feedback. A research revealed higher attitude, orientation, and satisfaction of general medical students during clinical education, compared to senior assistants. In fact, assistants feel they need less feedback due to higher experience and autonomy. Meanwhile, general medical students have less experience in this area and more dependent on their teachers, which results in their higher need and desire to receive feedback (22). In other words, junior students, who are passing their apprenticeship phase and are at the beginning of learning clinical skills, are more interested in receiving feedback from teachers due to the newness of the issues and lack of sufficient knowledge, eagerness to learn new skills, fear, concern about doing things wrong, the need for learning details to achieve mastery in clinical abilities and educational goals.

In the current research, there was a reverse association between students' age and their attitude toward receiving feedback, which is consistent with the aforementioned results. Other studies have

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claimed that students' level of intellectual maturity and previous experiences are effective factors for accepting feedback (23). It seems through increasing age and boosting the experience and knowledge of students, the importance of complying with the standards decreases in views of the learners. In addition, they consider teachers' feedback to be due to their different method of teaching instead of a point for improving their performance, thereby recognize feedback to be stressful and disruptive in performing their usual tasks (5). Therefore, they are less eager to receive feedback from teachers. This not only increases clinical professors' responsibilities during the apprenticeship and emphasizes the need to empower faculty involved in educating undergraduate students to provide effective feedback in accordance with standard principles, but also, it raises the risk of overlooking feedback provision and the feeling of not needing to deliver feedback to senior students and those in the internship period for improving or correcting their performance. Therefore, it is necessary to develop measures to change the attitude of students and professors so that both groups pay attention to the necessity and importance of receiving and providing feedback in promoting clinical performance throughout the clinical education, including apprenticeships and internships. By doing so, professors will more focus on the responsibility of feedback provision and students will better accept feedback provided by teachers.

According to the results of the present research, there was a significant relationship between students' attitudes to receiving feedback and a higher GPA and interest in the field of study. In another research, students who were highly interested in learning showed an innate motivation to receive more feedback. In other words, interest helps students to learn better as a personal reinforcement source and increases their motivation to receive feedback (24). However, there was no significant difference between male and female students in terms of attitude to receiving feedback. Nonetheless, the total mean score of female subjects was higher than male participants. Other studies have introduced individual differences (e.g., gender) as effective factors for access to feedback, perception of feedback, and acting based on the provided feedback (25, 26), and some studies have found a significant relationship between female gender and better viewpoint of students about receiving and learning from feedback (27). Therefore, male subjects seem to be less eager to receive feedback, which can affect their level of acceptance of feedback and effectiveness of feedback. As such, professors should pay more attention to male students and those with lower GPAs and improper educational performance, and students who are not that interested in their field of study. For these individuals, more proper techniques should be used to provide feedback and increase their acceptance and exploratory behavior by enhancing their clinical performance.

Given the limited national studies on the assessment of students' attitude to receiving feedback, and since the present research was performed only on medical and nursing students, it is recommended that more researches be performed in this area and other clinical fields to provide comprehensive scientific evidence in this regard. In addition, since the current research was a quantitative and self-report study, it is suggested that students' internal motivation and desire to receive feedback and related factors be determined in a qualitative research. Moreover, it is recommended that future studies be performed on the relationship between students' attitude and desire to receive feedback with their educational performance so that our findings could be completed and it could provide a more comprehensive viewpoint about this area to researchers and educational officials.

Conclusion

According to the results of the present study, the participants had a proper attitude to receiving

feedback, and the majority of students believed in the high impact of feedback on their learning. As the desire to receive feedback increases its acceptance and effectiveness, it is recommended that this internal potential of students be used by education planners and authorities to optimally improve their learning through scientific and practical empowerment of teachers in the area of feedback provision and eliminating problems in this area. On the other hand, the efforts of professors will be fruitless as long as learners are not able to receive and use feedback and are not willing to do so. Accordingly, it is better to design the conditions and policies in such a way that the student is obliged to seek and receive feedback and provide incentives and strategies to increase students' exploratory behavior to receive feedback, especially in medical students, as well as senior students or those who are less interested in their field and have lower GPA.

Acknowledgments

This article was extracted from a master's thesis in the field of medical education at Shahid Beheshti University of Medical Sciences (code of ethics: IR.SBMU.SME.REC.1397.015). Hereby, we extend our gratitude to all educational officials and students for assisting us in performing the research.

Conflicts of Interest: The authors declare that there are no conflicts of interest.

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Imanipour M, Razaghi Z, Khajeh K. Orientation to receive feedback among medical and nursing students of Shahid Beheshti University of Medical Sciences, 2019. J Med Educ Dev. 2020; 13 (39) :56-63

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