Original Article

Journal of Advances in Medical Education & Professionalism

Feedback is good or bad? Medical residents' points of view on feedback in clinical education

LEILA BAZRAFKAN[1], GHOLAM HOSSAIN GHASSEMI[1], PARISA NABEIEI[2]

[1]*Esfahan University of Medical Sciences, Esfahan, Iran;* [2]*Education Development Center, Shiraz University of Medical Sciences, Shiraz, Iran*

Abstract

Introduction: Feedback is very important in education and can help quality in the training process and orient the trainees in clinical contexts. This study aimed to assess the residents' points of view about feedback in clinical education at Shiraz University of Medical Sciences.

Methods: The sample of this study included 170 medical residents attending medical workshops in Shiraz University of Medical Sciences. The residents filled a valid and reliable questionnaire containing 21 items on their perceptions of the feedback they got throughout the workshops. The data were analyzed using SPSS version 14.

Results: The study revealed that residents, generally, have a positive perception of feedback in their training. The highest score belonged to the items such as "feedback was applicable to future work", "feedback corrected my behavior", "feedback worked as a motivation for education" and "feedback was specific in one subject". Residents who had a negative feedback experience also increased their efforts to learn. The Surgery residents acquired the highest scores while radiology residents got the lowest. The difference between these groups was statistically significant (P = 0.000).

Conclusion: The highest mean score belonged to internal medicine residents. This shows that residents believe that obstetrics & gynecology ward is a ward in which the formative assessment is much more powerful in comparison to the other three major wards. The surgery ward received the lowest score for formative assessment and this shows that the feedback in surgery ward is very low.

Keywords: Feedback, Medical residents, Shiraz medical school, Point of view, Clinical teaching

Corresponding author:
Leila Bazrafkan,
Address: Education Development Center, Sina-Sadra Halls Complex, Neshat Ave., Shiraz, Iran.
Email: bazrafkanl@sums.ac.ir

Please cite this paper as:
Bazrafkan L, Ghassemi Gh H, Nabeiei P. Feedback is good or bad? Medical residents' points of view on feedback in clinical education. *J. Adv Med&Prof.* 2013;**1**(2):51-54.

Introduction

Feedback is a valuable tool and an essential part of knowledge transfer processing in many areas, especially in the clinical education (1). It can provide guidance on how students perform their tasks and duties and how teachers can help trainees at an adequate level (2). Feedback is most effective when students believe it is useful, with high quality information, to adapt the teaching to meet their needs (3). It also helps students to monitor their own progress as they get feedback from their peers and the teachers. Moreover, students also find opportunity to revise and refine their thinking by means of feedback (4, 5). Feedback is divided into two dimensions, positive feedback and negative feedback. These two types of feedback are conceptually distinguished by their underlying factor structures. It is argued that negative feedback has more complex patterns than positive (6). Mass in 2001 evaluated the effectiveness of written and oral feedback. The results showed that residents found written feedback more useful. The authors also concluded that a feedback and award system can lead to improved resident teaching performance as well as enhanced perception of residents' role as teachers and greater resident satisfaction (7). Sicaja in 2006 tried to evaluate self-assessed level of clinical skills of graduating medical students at Zagreb University School of Medicine and compared it with the clinical skill level expected by their teachers and that defined by a criterion standard. The study included all medical students (n=252) graduating from Zagreb Medical School in the 2004-2005 academic

year. Participants were grouped according to their descriptive characteristics for further comparison (8). The response rate was 91% for students and 70% for faculty members. Students' self-assessment scores in all nine groups of clinical skills were lower than those defined by the criterion standard and those expected by teachers. Students who had additional clinical skills training had higher scores. Teachers' expectations did not vary according to their sex, academic position, or specialty. Students' self assessed level of clinical skills was lower than that expected by their teachers. Education during clinical rotations is not focused on acquiring clinical skills, and additional clinical skills training has a positive influence on students' self assessed level of clinical skills. There was no consensus among teachers on the required level of students' clinical skills (9). In 2007 Lewis et al. tried to examine the effectiveness of providing formative feedback for summative computer-aided assessment. Two groups of first-year undergraduate life science students in pharmacy and neuroscience who were studying an e-learning package in a common pharmacology module were presented with a computer-based summative assessment. A sheet with individualized feedback derived from each of the 5 result sections of the assessment was provided to each student. Students were asked via a questionnaire to evaluate the form and method of feedback. The students were able to reflect on their performance and use the feedback provided to guide their future study or revision (10). The aim of this study was to investigate the medical residents' points of view in different specialties on feedback in clinical education in Shiraz University of Medical Sciences.

Methods

In this descriptive study, the participants consisted of 150 residents at Shiraz University of Medical Sciences through September 2012. An anonymous questionnaire included twenty-one questions that evaluated the residents' points of view about the importance of feedback in their education. The participants were asked to answer 5-point Likert scale items from always (5), often (4), sometimes (3), seldom (2) to never (1). In order to assess the applicability and accuracy of this attitude survey, a pilot study was conducted. The purpose of the pilot study was to establish the validity and reliability of the instrument. The sample population for the pilot study consisted of 20 residents comparable to the study sample. The validity of questionnaire was confirmed by specialists and the consensus of four reference texts (11-15). The reliability of the test was found to be 0.84, using alpha Cronbach coefficient. Also, two more open questions were added to assess the students' opinions on quality of their feedback and suggestions. Differences in means were tested using the Mann-Whitney *U*-test. Confidence intervals (CIs) were set at 95%. Differences in categorical variables were tested by chi-square analysis. Statistical significance was set at $p \leq 0.05$. The data were analyzed using SPSS.

Results

Overall 120 residents attended the study. The distribution of the residents was not equal in all specialty areas. The residents in these specialties were involved: internal medicine, surgery (urology, orthopedic, general surgery, and neurosurgery) ophthalmology, ENT, obstetrics & gynecology,), pediatrics, anesthesia, radiology, dermatology, psychiatry, Rehabilitation and community medicine. 51 residents (42.9%) were women, and 68 were men (57.1%).

The results showed that most residents (74%) perceived feedback in clinical situation positively. 25% of the residents believed that the justice is always observed between all the residents while 21% never believed this. The highest scores belonged to some of items such as "feedback was applicable to future work", "feedback corrected my behavior", "feedback worked as a motivation for education" and "feedback was specific in one subject". Residents who had a negative feedback experience also increased their efforts to learn. The surgery residents acquired the highest scores the radiology residents got the lowest score. The difference between these groups was statistically significant (P = 0.007).

Discussion

The aim of this study was to investigate residents' perception of feedback in clinical education and to highlight the importance of feedback in clinical settings. The analysis of the data suggested that the residents perceived feedback in a positive and constructive way. Learning can, of course, take place when students perceive feedback as a learning contributory factor and not just a judgment of their level of achievement. Some studies emphasize that negative feedback can result in loss of confidence and students are sensitive to critical comments about their performance and view their assignments as self-expression. Specifically, when faculties provide negative feedback, students may have difficulty in separating criticism of self from criticism of their work (16-17). Students acknowledged the value of feedback in encouraging them to self assessment and improving their learning. However, their comments suggested that feedback was not effective enough as it should be. Many studies maintain that feedback should encourage self-reflection, raise self-awareness

Table 1. Distribution of the residents' ranking on feedback

N	Your Feedback	Always (%)	Often (%)	Sometimes (%)	Seldom (%)	never (%)
1	was constructive	52.1	29.4	12.6	3.4	2.5
2	was as expected	40.3	39.5	5.9	10.1	4.2
3	worked as a motivation for education	9.2	12.6	7.6	31.1	39.5
4	emphasized postgraduate skills	42	40.3	8.4	6.7	2.5
5	corrected my thinking	34.5	48.7	6.7	7.6	2.5
6	corrected my performance	55.5	38.6	2.5	1.7	1.7
7	corrected my behavior	55.5	29.4	3.4	5	6.7
8	made me feel shame	44.5	34.5	9.2	8.4	3.4
9	was applicable to future work	7.6	5	5	36.1	46.2
10	was specific to one subject	2.5	6.8	9.3	44.9	36.4
11	was more concerned with clinical skills	52.9	31.9	9.2	4.2	1.7
12	was limited to one or two items only	66.1	27.9	3.4	1.7	0.8
13	was to correct behavior	47.9	43.7	2.5	4.2	1.7
14	was concerned with the time & place	38.7	50.4	6.7	2.6	1.7
15	encouraged me to assess myself	43.7	38.7	5	9.2	3.4
16	was clear	37.8	35.3	4.2	14.3	8.4
17	considered security	37	16.8	4.2	16.8	25.2
18	considered justice	32.8	35.3	4.2	16.8	10.9
19	was positive	42.9	41.2	5	6.7	4.2
20	was negative	45.4	39.5	6.7	5.9	2.5
21	was overall useful	49.6	38.7	7.6	3.4	0.8

and help learners plan for future learning and practice (3, 12). This article also expanded on existing work by exploring students' perception of the impact of this type of assessment strategy on clerkship learning. Residents appreciated the learning value of formative assessment, in particular, the role of feedback in informing them of their own level of competence and guiding them regarding personal learning needs. The vast majority also attributed an improvement in clinical reasoning skills to the use of BPEs, the basis of the assessment strategy. This represents a better student appreciation of the educational value of this strategy than previously reported (18) and highlights the importance of determining perceptions within specific contexts of implementation rather than assuming similar perceptions worldwide (19, 20).

Conclusion

The inability of this study to demonstrate a relationship between feedback and better academic performance may reflect the lack of a true control group in the study, the bias of the summative assessment composition (focus on knowledge acquisition rather than clinical competence) or a need for more sustained feedback before a measurable impact on performance can be expected to be observed. So due to the results, we recommend that staff development in student evaluation domain be necessary.

References

1. Cantillon, P. oan Sargeant, J. Giving feedback in clinical settings. BMJ. 2008; 337: 1992-94.
2. Nicol, DJ. Macfarlane-Dick, D. Formative assessment and self regulated learning: A model and seven principles of good feedback practice. Stud High Edu. 2006; 31(2):199-218.
3. Sergeant, J. Kaplan, M. Van Der Velton, C. Metsemakers, J. Self-Assessment: Practice and Feedback within a Social Context. Journal of continuing education in health professions. 2008; 28(1):47–54.
4. Coverdale, JH. Ismail, N. Mian, A. Dewey, C. Toolbox for Evaluating Residents as Teachers. Acad Psychiatry. 2010; 34(4): 298-301.
5. Veloski, J. Boex, JR. Grasberger, MJ. Evans, A. Wolfson, DB. Systematic review of the literature on assessment, feedback and physicians clinical performance. Med Teacher. 2006; 28:117-28.
6. Menachery, EP. Knight, AM. Kolodner, K. Wright, SM. Physician characteristics associated with proficiency in feedback skills. J Gen Intern Med. 2006; 21:440-6.
7. Mass, S. Shah, SS. Daly, SX. Sultana, CJ. Effect of feedback on obstetrics and gynecology residents' teaching performance and attitudes. J Reprot Med. 2001; 46(7): 669-74.
8. Carrillo-de-la-Peca, MT. Baillиs, E. Caseras, X. Martıınez, A. Ortet, G. Pйrez, J. Formative assessment and academic achievement in pre graduate students of health sciences. Adv Health Sci Educ Theory Pract. 2007.
9. Sicaja, M. Romić, D. Prka, Z. Medical students' clinical skills do not match their teachers' expectations: survey at Zagreb University School of Medicine, Croatia. Croat Med J. 2006; 47(1):169-75.
10. Lewis, DJ. Sewell, RD. Providing formative feedback from a summative computer-aided assessment. Am J Pharm Educ. 2007; 71(2):33.
11. Rees, C. Shepherd, M. Students' and assessors' attitudes towards students' self-assessment of their personal and professional behaviors. Med Educ. 2005; 39:30-9.
12. Mamede, S. Schmidt, H. The structure of reflective practice

in medicine. Med Educ. 2004; 38:1302–1308.
13. Elnicki, DM. Kolarik, R. Bardella, I. Third-year medical students' perceptions of effective teaching behaviors in a multidisciplinary ambulatory clerkship. Acad Med. 2003; 78(8):8159.
14. Tan, K. Conceptions of self-assessment: What is needed for long-term learning? In: Boud, D. Falchikov, N. Rethinking Assessment in Higher Education. New York, NY: Routledge; 2007:114–127.
15. Henderson, P. Ferguson-Smith, AC. Johnson, MH. Developing essential professional skills: a framework for teaching and learning about feedback .BMC Med Educ .2005; 5:11.
16. Sargeant, J. Mann, K. Sinclair, D. van der Vleuten, C. Metsemakers, J. Challenges in multi-source feedback: Intended and unintended outcomes. Med Educ. 2007;41:583–591.
17. Dudek, NL. Marks, MB. Regehr, G. Failure to fail: perspectives of clinical supervisors. Acad Med. 2005; 80:S84-7.
18. Elnicki, DM. Kolarik, R. Bardella, I. Third-year medical students 'perceptions of effective teaching behaviors in a multidisciplinary ambulatory clerkship. Acad Med. 2003; 78(8):815-9.
19. Liberman, AS. Liberman, M. Steinert, Y. McLeod, P. Meterissian, S. Surgery residents and attending surgeons have different perceptions of feedback. Med Teacher 2005; 27:470-7.
20. Krasne, S. Wimmers, PF. Relan, A. Drake, TA. Differential effects of two types of formative assessment in predicting performance of firstyear medical students. Adv Health Sci Educ Theory Pract. 2006; 11(2):155-71.