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Assessment of The Status of Perceived Feedback Provision in Clinical Education of Undergraduate Midwifery Students at Ahvaz University of Medical Sciences, Iran

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Abstract

Background: Developing and building clinical competencies in health science students is the fundamental goal of education, and meaningful and principled feedback is essential for learners to access constructive and useful information.

Objectives: The main aim of this study is to investigate the status of perceived feedback in clinical education (PFCE) provision among undergraduate midwifery students at Ahvaz University of Medical Sciences, Iran.

Methods: In this study, 74 undergraduate midwifery students in the fourth, sixth, and eighth semesters of Ahvaz University of Medical Sciences were selected by simple random sampling method and were engaged in clinical learning in three educational departments including maternity, health, and women. All students completed a demographic characteristics questionnaire once and completed the PFCE questionnaire for each of the clinical education departments. Finally, the findings were analyzed using SPSS-Ver.26 software.

Results: The findings showed that the factor "students' academic semester" is an influential factor in students' PFCE scores ($P < 0.05$), while the factor "educational departments" does not have a significant effect on students' PFCE scores ($P > 0.05$). In addition, in evaluating the simultaneous effect of academic semester and educational department, only the average PFCE score of fourth-semester students had a significant difference between the two educational departments of women and health ($P < 0.05$), and no significant difference was observed between other educational departments ($P > 0.05$). Also, the average PFCE scores of sixth- and eighth-semester students showed that there was no significant difference between any of the educational departments ($P > 0.05$).

Conclusions: Based on the findings, it can be said that in order to receive a better and more effective PFCE, it is necessary to consider factors related to learners, the most important of which include learners' interest, their academic level and skills, learners' gender, learners' perception of themselves and the teacher, and learners' perception of the feedback content. Among the different educational sectors, the health sector, especially for lower semester students (fourth and sixth), had a lower PFCE score than other educational sectors, while the highest PFCE score was obtained for the maternity sector. Encouraging teachers to increase learners' awareness of the high importance of all educational fields can improve students' PFCE levels for educational fields that are less important to them.

Keywords: Midwifery Students, Perceived Feedback, Clinical Education, Medical Sciences, Learning Process

1. Background

Clinical education (CE) is the foundation of medical education and one of the most important criteria of professional education that plays a very important role in consolidating students' learning (1). Teaching and learning are important aspects of CE, and internship plays a significant role in providing this, as it is considered the heart of medical education (2). In order to be aware of the progress in learning, the instructor should inform the learners about their progress (3). This process is carried out in the form of formative and summative assessment (4).

Summative assessment in higher education is carried out by assigning a grade to the learner at the end of a semester, course or educational program and its purpose is to determine the extent to which students have achieved the expected outcomes. While formative assessment is a process that occurs during the course, program or educational semester and should be

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accompanied by feedback (1) and its purpose is to monitor the learning process during education and provide feedback to learners (4, 5).

Feedback is defined as an interactive process aimed at making the learner aware of his/her performance (3). Feedback is a cost-effective approach to increase learners' attitudes towards learning and acceptance of outcome-based learning concepts. Feedback is a two-way process, where the trainer and the learner agree on the learning outcome against the criterion (6). The learner's perception, understanding of the goal and beliefs about feedback are the most important determinants of learning outcomes (7). In the absence of effective feedback, good practice is not reinforced, poor performance is not corrected and the path to improvement is not identified. It is a fundamental motivational factor in the acquisition and development of clinical skills, communication skills and immediate professional behaviours (8). Also, in challenging cases, learners gain a better understanding of their competence by receiving feedback from (9). In addition to the positive outcomes of feedback for learners, trainers also gain information to modify training and recommend individual or group remedial actions (10).

Feedback is provided in various forms; the most important forms of feedback include written, verbal, mixed, and workplace-based assessment feedback (11), with verbal feedback being considered an important and effective component of clinical education (12). Feedback affects three domains: Cognitive, behavioral, and emotional (13). In the cognitive domain, studies have shown that feedback will change learners' thought processes in terms of clarity and understanding of thought processes (14). The most common outcome of feedback that leads to changes in learners' performance and feedback seeking can be found in the behavioral domain (14). In the emotional domain, results have shown that feedback affects learners' motivation and self-confidence (15). Research on learners' perceptions of this strategy has been reported to be very effective. Most learners state that feedback is best provided during their clinical practice or immediately after the learning experience. In this situation, the incorrect behavior is corrected before it becomes established, and in this way, the learner will have sufficient opportunity to use the feedback to improve his/her subsequent performance (16).

The lack of adequate amounts of effective feedback in the clinical setting has been identified as a significant and persistent problem in medical education (7). On the other hand, feedback that is delivered in an unprofessional and ineffective manner can also lead to learner demotivation (16). Medical education faculty are largely familiar with the concept and principles of feedback provision, but often underuse it, which may be influenced by a number of factors, such as learning culture, peer and learner relationships, and emotional responses to feedback (17). Learners who receive feedback feel more confident and perform better. Such learners are exposed to this strategy from an early age and eagerly await feedback in order to improve their learning and psychomotor skills (18). In medical schools, there are learners who are more interested in their final assessment and show little interest in feedback (19). Feedback-seeking behavior in the clinical setting improves learning, especially if the instructor provides an environment for improvement. Educators need to ensure that learners understand the message of feedback (20) Learners may not use feedback effectively due to misconceptions or limited understanding of how to use this feedback for improvement, and there needs to be a shared understanding by both instructors and learners of the future implications of feedback (21).

2. Objectives

This research helps to address the gap between the actual and desired perception of feedback in the CE course, which is necessary to create an educational alliance between learners and instructors for better learning. Therefore, the aim of this study is to investigate the status of PFCE provision among undergraduate midwifery students at Ahvaz University of Medical Sciences, Iran.

3. Methods

3.1. Study Design and Sampling

This descriptive-analytical study was conducted on undergraduate midwifery students of the Faculty of Nursing and Midwifery after obtaining permission from the Vice Chancellor for Research of Ahvaz University of Medical Sciences and approval from the Ethics Committee. After obtaining the necessary permissions, the researcher invited eligible students to the study after providing explanations about the objectives of the study and noting that the questionnaire would be anonymous and completely confidential and that individuals were allowed to withdraw from completing the questionnaire at any stage. Then, written consent was obtained and a demographic profile form and a questionnaire on 'Perceived Feedback in Clinical Education' were presented. The questionnaires were provided to the students after completing the internship. Each student completed the questionnaire

for each course, separately from the instructors with whom they had completed the internship units in the field. The estimated time to complete the questionnaire was 30 minutes. In this study, 74 students were selected by simple random sampling method and responded to three questionnaires on three sections including maternity ward, gynecology, and health. Inclusion criteria included fourth, sixth, and eighth semester students, willingness to participate in the study, and participation in the relevant internship for the first time. Exclusion criteria included failure to complete the internship and internship unit.

3.2. Data Collection Tools

3.2.1. Demographic Questionnaire

This questionnaire was prepared by the researcher and included demographic variables such as age, academic semester, previous semester's grade point average, interest in the field of study, place of residence, etc. The qualitative content validity of this form was confirmed by 10 members of the academic board of Ahvaz University of Medical Sciences, Iran.

3.2.2. Perceived Feedback in Clinical Education Questionnaire

This questionnaire was developed by Haghani et al., and its dimensions include the components of “provision methods of feedback,” “provision skills of feedback,” and “provision content of feedback” (22). This questionnaire consists of 25 questions on a five-point Likert scale (never = 1 to always = 5). Based on the findings of the study by Haghani et al., the face validity of the questionnaire was confirmed by professors and experts in medical and midwifery education at Isfahan University of Medical Sciences, Iran. In addition, the reliability of the questionnaire was determined to be 0.86 using the Cronbach's alpha method based on the findings of the aforementioned study (22).

3.3. Statistical Analysis

SPSS-Ver.26 software was used to analyze the data obtained from this study. Considering that three groups of students completed the questionnaire for three locations, the Two-way repeated measures ANOVA method was used at a significant level ($\alpha = 0.05$).

4. Results

In this study, 74 students responded to three questionnaires about the three departments of maternity, gynecology, and health. Of these, 15 (20.3%) were in the fourth semester, 29 (39.2%) were in the sixth semester, and 30 (40.5%) were in the eighth semester (Table 1). Based on the findings of the two-way repeated measures analysis of variance, the P-value for the Mauchly test was calculated to be 0.001, which is less than 0.05. Therefore, it can be said that the variance of differences, the difference between the scores assigned by each student to each educational department, is not homogeneous.

The findings of the present study showed that the interaction effect of the total PFCE score of students and study groups was significant ($P = 0.032$) (Table 2). Given the significance of the interaction effect of "group * total PFCE score of students", it was analyzed separately for each group of students, the findings of which are presented in Table 2. The findings showed that the total PFCE score of fourth and eighth semester students is an influential factor ($P < 0.05$), but for sixth semester students this factor is not influential ($P > 0.05$). The findings showed that the influence of different educational departments on obtaining students' PFCE scores is not an influential factor ($P < 0.05$) (Table 3). Based on the results presented in Table (4), the average PFCE score of fourth semester students had a significant difference only between the two educational departments of gynecology and health ($P < 0.05$), and there was no significant difference between the average PFCE scores obtained between other educational departments ($P > 0.05$). In addition, the average PFCE scores of sixth and eighth semester students showed that there was no significant difference between any of the educational departments ($P > 0.05$) (Table 4).

5. Discussion

The findings showed that the factor “students’ academic semester” is an influential factor in students’ PFCE scores, while the factor “different educational departments” does not have a significant effect on students’ PFCE scores. In addition, in evaluating the simultaneous effect of academic semester and educational department, only the average PFCE score of the fourth semester had a significant difference between the two educational departments of gynecology and health, and no significant difference was observed between the other educational departments. Also, the average PFCE scores of students of the sixth and eighth semesters showed that there was no significant difference between any of the educational departments. Students with different academic semesters differ in terms of age, gender, level of interest, level of understanding of feedback, academic level and skill, and perception of themselves and their teachers.

Table 1. Perceived Feedback Score in Clinical Education of Students in Different Educational Departments

Educational Departments	Number of Samples	Mean ± SD
Fourth semester		
Maternity	15	53.40 ± 10.669
Gynecology	15	54.27 ± 8.353
Health	15	46.47 ± 7.809
Sixth semester		
Maternity	29	55.72 ± 13.234
Gynecology	29	55.52 ± 11.816
Health	29	55.31 ± 12.784
Eighth semester		
Maternity	30	56.97 ± 16.370
Gynecology	30	48.53 ± 13.688
Health	30	53.67 ± 11.868

Table 2. Analysis of Variance of Perceived Feedback Score in Clinical Education Between Different Student Groups Based on Academic Semester

Students by Academic Semester	Mean Square	df	F	P-Value
Fourth semester	274.156	2	4.194	0.026
Sixth semester	1.614	1.538	0.018	0.960
Eighth semester	541.811	2	3.764	0.029
Total	337.029	3.410	2.897	0.032

Abbreviation: DF, degrees of freedom.

Table 3. Analysis of Variance of Perceived Feedback Score in Clinical Education Between Different Student Groups Based on Educational Sector

Educational Departments	Mean Square	df	F	P-Value
Maternity	63.631	2	0.317	0.730
Gynecology	391.260	2	2.692	0.075
Health	403.397	2	3.010	0.056

Therefore, based on the findings, it can be said that in order to receive a better and more effective PFCE, it is necessary to pay attention to factors related to learners, which include learners' interest, academic level and skill, gender of learners, Learner's perception of himself and the teacher, and Learner's perception of the feedback content (23).

Since humans are usually more satisfied with praise and compliments, most learners are more likely to receive positive feedback (PF) (24). Learners who develop a better relationship with their teachers by receiving encouragement and praise are more satisfied with their teacher's performance (25). Therefore, providing PF along with encouragement and praise increases learners' willingness to receive PF. Therefore, teachers should pay attention to the academic level, skill level, and age group of each group of students in different academic semesters to increase learners' willingness to receive PF. Based on the results of a previous study, students in higher years were more dissatisfied with the feedback situation in education (26). On the other hand, teachers provide more feedback to weak learners and neglect strong students with higher academic levels and abilities. Therefore, in order for learners to receive better feedback, teachers need to provide almost the same feedback to all learners, considering all learners. The findings of a review study conducted by Hattie and Timperley showed that teachers mainly provide feedback to male learners about their low effort and undesirable behavior, but to female learners they mainly provide feedback on their competence characteristics such as orderliness and neatness of writing. However, it should be noted that the gender of the teacher can also be effective in providing feedback

Table 4. Pairwise Comparison of Different Educational Sectors in Terms of Perceived Feedback in Students Clinical Education

Educational Departments	95% CI	P-Value	SE	Mean-Difference
Fourth semester students				
Maternity- gynecology	(-9.992, 8.259)	1.000	3.358	-0.867
Maternity- health	(-1.342, 15.208)	0.117	3.045	6.933
Health- gynecology	(1.368, 14.232)	0.016	2.367	7.800
Sixth semester students				
Maternity- gynecology	(-5.695, 6.523)	1.000	2.541	0.207
Maternity- health	(-5.695, 6.523)	1.000	2.399	0.414
Health- gynecology	(-3.573, 3.986)	1.000	1.484	0.207
Eighth semester students				
Maternity- gynecology	(-0.631, 17.498)	0.075	3.567	8.433
Maternity- health	(-4.547, 11.148)	0.882	3.089	3.300
Health- gynecology	(-11.624, 1.358)	0.162	2.555	-5.133

Abbreviations: SE, standard error; CI, confidence interval

to boys and girls (27). The learner's understanding of the content of the feedback is an important factor in its effectiveness, and the teacher should be aware of how the learner perceives it. In this regard, the teacher should provide feedback in a way that the learner can understand it well and easily (27). Another effective factor for better understanding of the feedback provided by the learner is the extent to which the learner knows their teacher. At the beginning of an educational period, when the learner and the teacher know each other less, it is more difficult for the learner to understand the teacher's messages, but over time they gain a better understanding of the feedback (28). In the present study, for 2 out of 3 clinical training sections, students' feedback scores increased from the eighth semester compared to the fourth and sixth semesters. The factor of "overall self-perception" can also have a large impact on the amount of feedback perceived by learners. Based on the findings of the study by Hattie and Timperley, it has been determined that individuals with low self-confidence, when receiving PF, are satisfied with the same level of performance and are unlikely to strive for a higher level of performance or enriched goals (27).

The results of the present study showed that for students in the fourth and sixth semesters, the average PFCE score from the three educational sections from highest to lowest is maternity, gynecology, and health, respectively, and for students in the eighth semester, it is maternity, health, and gynecology, respectively. The findings indicate that students in the fourth and sixth semesters receive less PFCE due to their main field and their less interest in the health sciences. However, the findings indicate that with the increase in their academic level and higher understanding of their field of study, it is clear that their average PFCE score in the eighth semester in the health section increases. For all three groups of students evaluated, the PFCE score in the maternity section has the highest level compared to the other two sections, which could be due to the higher interest, sensitivity, and attention that students have towards this section compared to other educational sections. Therefore, encouraging students by teachers and instructors to give importance to all course and educational content can be a useful strategy for increasing PFCE in the health sector.

Other similar studies have been conducted on the subject discussed in the present study. Haghani et al. evaluated PFCE of midwifery students in Isfahan University of Medical Sciences, and its findings showed that the average score of PFCE in the three areas examined, from the lowest to the highest, was related to feedback provision skills, feedback provision method, and feedback content, respectively. The average score of PFCE by students did not differ significantly in different areas related to different courses. In addition, the findings showed that the principles of feedback provision in the three areas evaluated were not at a desirable level (22).

In another study by Ahmadi and Afshari, midwifery students' perspectives on the impact of instructor feedback on improving the level of education in the Clinical Skills Centers (CSCs) were evaluated (29). The findings of the study showed that The majority of the students (69.8%) had a positive view about learning in n CSCs, 77.8% felt they had a moderate to high level of knowledge about CSC, and 88.9% believed that they should review their learnings before starting a new

session in CSC. They mostly believed that the old and poor quality models are the most important problems they encountered (66.7%.). Students alleged that getting feedback from lecturers improves learning, but they preferred to receive it privately (29).

Safaei Koochaksaraei et al. (2019) assessed the status of PFCE provision from the perspective of nursing and midwifery faculty and students, as well as its associated factors. The findings of the study showed that 73.2% of students and 74% of professors rated the status of PFCE provision as average, and there was no significant difference between their views. In addition, the most common type of feedback used was verbal and individual feedback. Based on the findings of the study, it was identified that the most important factors associated with the lack of effective feedback provision from the perspective of professors and students were insufficient academic mastery of the teacher, lack of knowledge and lack of feedback provision skills by the teacher, large number of students, and short duration of internship with a teacher (30). Possible differences in the findings of previous studies with the present study could be due to different study objectives, different statistical populations and sample sizes, differences in the field and scientific discipline of the learners, etc.

5.1. Limitations

The low willingness of students to participate in the study was one of the main limitations of the present study, and an attempt was made to increase their level of participation and willingness to participate in the study by providing them with the necessary explanations and expressing the usefulness of the results of this study for improving the teaching method. In addition, another limitation of the present study was the low sample size.

5.2. Conclusions

The findings showed that the factor "students' academic semester" is an influential factor in the students' PFCE score. Although the average PFCE score among different educational departments has a slight difference, this difference was not significant. Students with different academic semesters differ in terms of age, gender, level of interest, level of feedback understanding, academic level and skill, and perception of themselves and their teachers. Therefore, based on the findings, it can be said that in order to receive better and effective PFCE, it is necessary to pay attention to factors related to learners, the most important of which include learners' interest, academic level and skill, gender of learners, Learner's perception of themselves and the teacher, and Learner's perception of the feedback content. Among the different educational departments, the health department, especially for lower semester students (fourth and sixth), had a lower PFCE score than other educational departments, while the highest PFCE score was obtained for the maternity department. Encouraging educators to increase learners' awareness of the high importance of all educational fields can improve students' PFCE levels for educational fields they perceive as less important.

Footnotes

Authors' Contribution: S. M, H. B., and F. Z: Study design, data collection and data analysis, writing and revision of original and revised manuscript; F. M. and S. T.: Study design, supervision, investigation, methodology, project administration, data curation, writing and revision of original and revised manuscript; S. G.: Statistical analysis.

Conflict of Interests Statement: Authors confirm that there are no relevant financial or non-financial competing interests to this study.

Data Availability: The dataset presented in the study is available on request from the corresponding author during submission or after publication.

Ethical Approval: The study protocol was approved by the Ethics Committee of Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran, (Ethical code: IR.AJUMS.REC.1402.620).

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