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Oral versus written feedback delivery to nursing students in clinical education: A randomized controlled trial

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Abstract

Background: Feedback delivery is deemed as a key element during a students' clinical education. It keeps students on track to meet their goal and increase students' motivation and confidence.

Objective: The aim of this study was to compare the quality of feedback delivery in oral versus written feedback delivery to nursing students in clinical education.

Methods: A randomized controlled trial was conducted between February and August 2012 in the city of Bojnurd in Iran. Using purposive sampling, last semester's nursing students (n=44) had been randomly assigned to oral and written feedback delivery groups. Three Instructors received orientation and training on methods of feedback delivery before study initiation. Then, they gave necessary oral and written feedback to the students. Clinical settings of the study included coronary care, surgical, and neonatal units of hospitals. Data collection tools were quality of feedback delivery, students' satisfaction questionnaire and students' reactions checklist. Data were analyzed using SPSS version 11.5 with chi-square test and the t-test.

Results: Most of the students (52%, n=23) were male. There were no significant differences between the scores of quality of oral and written feedback delivery ($p>0.05$). The study did not show a difference of satisfaction level between the oral and written feedback groups. The relationship between students' reactions and feedback type at the confidence level of 90% was significant, so that students who received oral feedback showed more severe reactions as compared to the written feedback group.

Conclusion: According to the results, the type of feedback is not an important factor in clinical education quality and satisfaction level. They may achieve a better outcome by focusing on the other aspects of quality of feedback delivery rather than feedback type.

Trial registration: The trial was registered at the Iranian Registration Center for Clinical Trials with the Irct id: (IRCT: 201111128076N1).

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Keywords: Feedback; Clinical; Education; Teaching; Methods

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1. Introduction

Feedback delivery is deemed as a key element in the teaching process (1) and feedback is at the heart of medical education too (2), particularly during a students' clinical education. Feedback in clinical education is defined as providing the students with particular information about their observed practice, and comparing it with a standard to improve student's achievement (3-5). If appropriately delivered, feedback yields positive impact on the students' practice and achievement. Also, it may increase students' motivation and confidence, whereas improper feedback can lead to loss of inducement (4). Evidence indicates the undeniable effect of feedback on learning outcomes, but the delivery methods of feedback may yield different results (6). Different teaching encounters call for different types of feedback (2). Feedback may be given in written form or orally during clinical teaching. The instructor delivers written feedback through documentation of a student's observed practice, while she gives oral feedback by verbally passing information about the student's practice. Oral feedback allows free discussion about the practice, and provides prompt response for questions, reducing ambiguities related to an event (7). Some studies support the benefits of informal prompt oral feedback (8). But written feedback allows the student and the instructor to pursue the issue later. Also, it provides the possibility of creating a lasting record of information for both the supervisee and the supervisor. Whether written feedback is more ethical than oral feedback, is a matter of controversy (9). During clinical education, instructors must decide whether oral or written feedback would be more effective for an individual student (7, 10). Various aspects of feedback delivery, such as quantity, delivery time, features, satisfaction levels, and impediments have been discussed in literature. Almost all studies have indicated the important role of instructors in providing their learners with meaningful feedback, and in turn, the learners' role in actively seeking feedback (3, 11, 12). Elnicki and colleagues studied a six-month program in which private face-to-face feedback was provided during the clinical practice of internal medicine assistants. The faculty stated the need for expending more time for this type of feedback, and that it was the most taxing part of their job (13). Opila indicated that oral feedback merely improved documentation charts and was ineffective in other aspects of the student's clinical practice (14). Also, the study conducted by Bing-you and colleagues, which aimed to determine the benefits of written feedback delivered during a one-year teaching period for residents, demonstrated that written feedback can develop the educational skills of senior students (15). The evidence shows the topic of feedback delivery in clinical education, particularly in the field of nursing still needs more critical probation, and there are some challenges about it. There are controversies regarding the two methods of feedback delivery, and the vagueness regarding "how to deliver appropriate feedback" has resulted in the failure of instructors to accomplish the most important component of their teaching activities (16). Thus, this study was conducted to compare quality of feedback delivery, nursing students' satisfaction and reactions to oral versus written feedback delivery to nursing students in clinical education.

2. Material and Methods

2.1. Trial design

A randomized controlled trial was conducted between February and August 2012.

2.2. Participants

Settings of the study included coronary care, surgical and neonatal units of hospitals in the city of Bojnurd in Iran. A purposive sample of last semester students, including all students in the course (n=44) were randomly assigned to 3 oral, (n=22) and 3 written (n=22) feedback subgroups, while each subgroup included 7 to 8 students. Also, 3 instructors were recruited in the study, to teach the students (Figure 1).

2.3. Selection criteria

Inclusion criteria were senior nursing students, and for instructors, at least two years of clinical training experience and having a master's degree.

Exclusion criteria were students' absenteeism in training and interruption in the process of training by the instructors for any reason.

2.4. Interventions

Three instructors were recruited into the study, each of whom was scheduled to teach two groups of students, using oral feedback to one group and written feedback to another. Before the initiation of clinical teaching, the instructors received more training regarding the structure of feedback sessions based on the principles of effective feedback delivery. The instructors were then asked to practice and demonstrate what they had learned about feedback delivery in a simulated situation. Two researchers assessed how instructors delivered the feedback using a standardized feedback checklist. Approximately 80% of the checklist items were satisfactorily met by the instructors and a mean

Phi consistency coefficient of 0.84 was attained by the assessors. Thus, the two groups were similar, based on feedback delivery by the instructors. Each instructor delivered the planned feedback method for each student individually in respective sub-groups, at least once a day, as soon as the need for feedback was felt, during the nine days of clinical program. Students had to complete the whole clinical program as well as feedback sessions in order to be included in the study. Data gathering tools included a unique questionnaire for students both in the oral and written feedback groups; and a questionnaire plus a daily checklist for instructors. The students' questionnaire contained three sections. The first section was allotted to the students' demographic data; the second and third sections were comprised of eleven questions about standardized factors for feedback delivery that they received, and one item about students' satisfaction on a 5-point Likert type rating scale (1= Very low; 2=Low; 3= Moderate; 4=High; 5=Very high). Higher score indicated higher quality of feedback. This questionnaire was completed by each student on the last day of clinical instruction. The instructors used a checklist that contained three short-answers and "yes/no" questions related to conducting feedback sessions. The instructors recorded the number of student objections and negative reactions by students after receiving feedback. This checklist was completed at the end of each day during the nine days of clinical program. The content validity of the instruments was confirmed by consulting six teaching-learning field experts and making necessary modifications. Because quality of feedback was completed by students, face validity was assessed by them. The reliability was assessed through test-retest immediately after feedback delivery and then, seven days after that (r=0.87).

2.5. Statistical methods

Data were analyzed using SPSS (version 11.5). Descriptive and analytical statistical procedures were used and p-value of less than 0.05 was considered as statistical significance. Non-parametric tests were applied when the distribution of the variables were not normal. Characteristics of the subjects were compared between groups using the chi-square test for categorical variables and the t-test for continuous variables. Independent samples t-tests were used to compare the mean scores for quality of feedback delivery between oral versus written feedback groups.

2.6. Research ethics

The study was registered at the Iranian Registration Center for Clinical Trials (IRCT: 201111128076N1). Permission was acquired from the Ethics Committee of North Khorasan University of Medical Sciences (89/p/209). Also, informed consent was obtained from all participants. The students were assured regarding confidentiality, and that the research process would not affect their final course evaluation. Also, while giving their consent, they were informed that if they wished to know the results, they would be sent to them. Student satisfaction for the study was obtained and purposes of the study were explained to them.

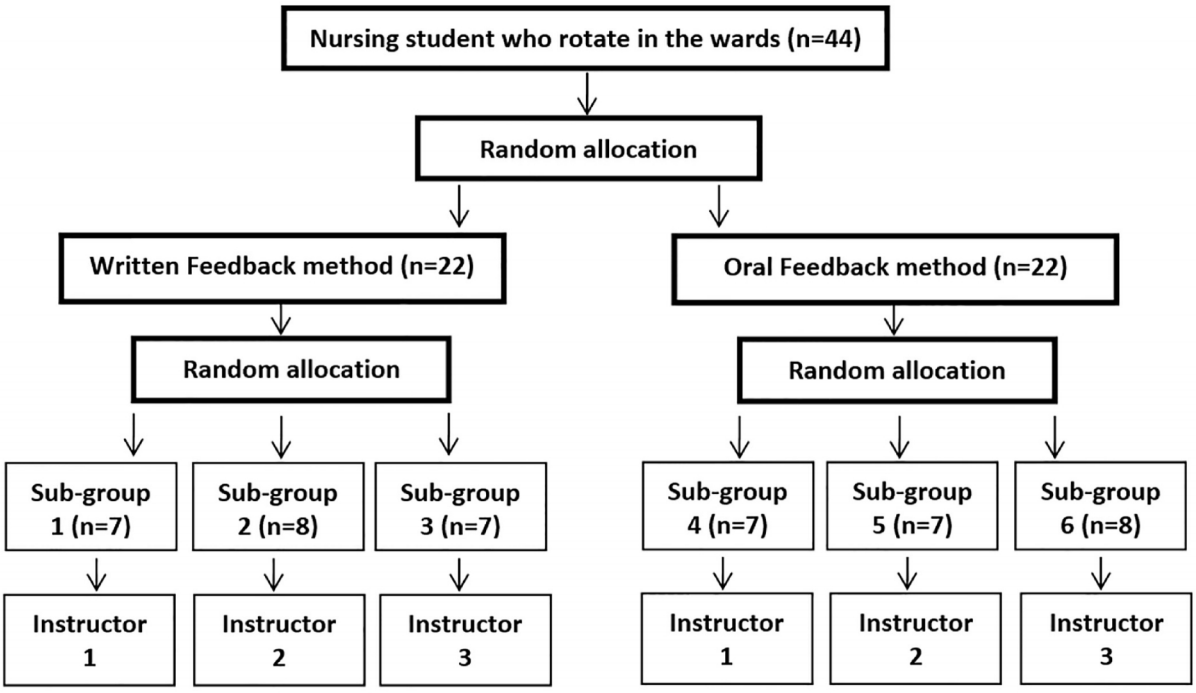

Figure 1. CONSORT flow diagram of trial

3. Results

Samples included 21 (8%) female and 23 (52 %) male students. Total students' mean age was 22.8±1.0 years. Three instructors hold an MSc. degree and have at least 2 years' experience in clinical teaching. Table 1 shows demographic characteristics of students. Table 2 shows no significant difference in quality of feedback delivery scores between the two groups (p=0.11). The satisfaction levels were not significantly different between the oral versus written groups in all students, according to the Mann-Whitney test (Table 3). The number of objections per day in the oral feedback groups ranged from 1 to 3 with a mean of 1.38, while this was just 1 in the written feedback groups. The frequency of negative reactions is shown in (Table 4). Thirty-three (21.3%) students in the oral feedback groups and 26 (14.4%) students in the written feedback groups showed negative reactions after receiving feedback; this difference was not statistically significant (p=0.101). A Chi-square test showed statistically significant relationship (p=0.07) between the students' reactions and the feedback type, at the confidence level of 90% (when all types of reactions were combined). Students who received oral feedback showed more severe reactions as compared to those in the written feedback groups (Table 5).

Table 1. Students' demographic characteristics

Groups	Age; Mean (SD)	*GPA; Mean (SD)	Sex; n (%)	
			Male	Female
Oral Feedback	24.08 (4.40)	17.66 (1.08)	8 (37)	14 (63)
Written Feedback	24.56 (4.15)	16.84 (1.18)	15 (68)	7 (32)
Test Result	Mann - Whitney U =238.5; Z=-1.5; p=0.133	Mann - Whitney U=302, Z=-1.5, p=0.133	X2=3.92, df=1, p=0.048	

*Grand Point Average

Table 2. Quality of feedback delivery scores by students

Questions	Written Feedback Mean±SD	Oral Feedback Mean±SD	p-value
To what extent was privacy observed?	3.05±0.75	2.86±1.04	0.35
How useful was the feedback?	2.54±0.88	2.90±0.97	0.26
How complete was the understanding of the concept of delivered feedback?	2.83±0.92	2.86±0.77	0.07
To what extent was the personality of the student questioned and judged?	2.16±1.09	2.9±2.09	0.67
How clearly was the feedback stated?	2.75±0.64	2.86±0.83	0.62
To what extent was the humiliation of the student?	3.1±0.66	2.63±1.21	0.23
To what extent were written or verbal overtones noticed?	3.00±0.91	2.80±0.90	0.49
To what extent was the student's reaction considered?	3.44±4.43	2.67±0.89	0.42
To what extent did the student show a negative reaction?	2.00±1.06	2.45±2.34	0.15
How important do you think the role of the instructors is?	3.52±0.75	3.36±0.65	0.46
How satisfied are you with the delivered feedback during the current education?	2.94±0.78	2.89±0.86	0.85
Mean of total scores	2.82±0.54	3.07±0.41	0.11

Feedback quality score: 1= Very low; 2=Low; 3= Moderate; 4=High; 5=Very high.
Questions 4 and 9 were reversely scored.

Table 3. Frequency of students' satisfaction level in groups

Level of satisfaction	Written Feedback; n (%)	Oral Feedback; n (%)	Total; n (%)	Test Result
High/Very High	17 (77.1)	11 (50)	28 (63.7)	X2=3.83; df=3; p=0.28
Moderate	4 (18.2)	6 (27.3)	10 (22.7)	
Low	1 (4.5)	2 (9.1)	3 (6.8)	
Never	(0.0)	3 (13.6)	3 (6.8)	

Table 4. Frequency of negative reactions in groups

Reactions	Written Feedback; n (%)	Oral Feedback; n (%)
Dispute/Argument	-	5 (15.2)
Weeping/Crying	-	1 (3)
Intimidation	2 (7.7)	-
Undue Self-defensiveness	8 (30.8)	6 (18.1)
Insult	-	2 (6.1)
Denial	5 (19.2)	10 (30.3)
Confrontation	3 (11.5)	-
Inattention	8 (30.8)	9 (27.3)

Table 5. Severity of negative reactions in groups

Reactions	Written Feedback; n (%)	Oral Feedback; n (%)
Mild Reaction	24 (92.3)	25 (75.8)
Severe Reaction	2 (7.7)	8 (24.2)

4. Discussion

This study showed that there is no significant difference between the scores of quality of oral and written feedback delivery. Similar to this finding, Elnicki and colleagues stated that the oral, face-to-face versus written feedback groups showed no significant difference; and none of the assistants who received written feedback, asked for more oral feedback sessions (13). Also, Giles and colleagues demonstrated that nursing students regard the feedback as an important element of their learning, and they believed that written feedback must be included in most assignments. They considered this concordant with the findings of other studies in which students valued feedback which possesses quality and quantity. They also found that vague statements, as well as incongruity of comments, assessment criteria, and grades could daunt the students and hinder their learning. To enhance understanding and utility of written feedback for students, they recommended using simple vocabulary and expressions (17). Feedback is usually delivered through informal sessions and in a constant and diverse fashion during clinical teaching; while both of these studies only examined formal feedback sessions. This may have produced the similarity in results. Another finding of the present study was that there were no significant differences in students' satisfaction level between the two groups. The student satisfaction rates in both written and oral groups were the same, even though some studies show that the students prefer face-to-face oral feedback during their clinical education (8, 18). The similarity of satisfaction level in both groups could be the result of using the same instructor for each paired group of oral and written feedback in the present study, so that they could deliver feedback to their students while keeping the same communicational ambience. Previous study showed that written feedback is a more effective technique in teaching methods than the audio-verbal feedback (19). But, the students' satisfaction depends more on "how" the feedback is delivered (concerning its different aspects) rather than its "type" (13). Giles and colleagues regard satisfaction as an unreliable indicator for quality or effectiveness of feedback (17). In another study, Boehler et al. showed that feedback containing praise and compliments can increase students' satisfaction; however, learning and performance will not improve, unless specific feedback about how to improve is given (20). Based on this, it can be inferred that to deliver more effective feedback, clinical educators might put their efforts to other aspects of feedback delivery rather than its type; though it warrants more scrutiny. The total number of severe negative reactions in the oral feedback group was significantly higher (at the confidence level of 90%) than that of the written feedback group ($p=0.07$). This finding is congruent with previous studies, and is probably associated with the exaggeration of events and/or immediate uncontrolled reactions during the oral feedback session (3, 21, 22). We believe that assigning the same instructor for both written and oral groups may increase the strength of the present study by limiting confounders. The short period of clinical instruction, time constraints, and the repetition of feedback delivery have probably influenced the outcomes. The rapport and interaction between students within the groups during instruction period could have possibly influenced the results. Moreover, the present study assessed nursing students in their final year of program; so, this could reduce generality of the results. As the literature demonstrates, written feedback could be more effective in the development of students' educational skills in their last year of studies (15). Also, it is evident that students benefit from different types of feedback delivery in different stages of their educational programs (7). Similar studies on different groups of students with larger sample size are suggested.

5. Conclusions

This study showed no difference between qualities of feedback delivery in oral versus written feedback delivery. Due to importance of feedback delivery in clinical education, we suggest further studies focusing on different aspects of feedback delivery, including its outcomes, grade of student, educational achievement and promoting performance.

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Trial registration:

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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