



Effectiveness of Morning Report Sessions of Cardiology Wards at Teaching Hospitals of Mashhad University of Medical Sciences (2012-2013)

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Abstract

Introduction: Morning report is an important teaching method for interns and externs. Achieving the objectives of morning report affects future performance. This descriptive cross-sectional study was conducted to analyze the effectiveness of morning reports.

Methods: Viewpoints of 85 interns and externs at the cardiology wards of teaching hospitals of Mashhad University of Medical Sciences in the academic year of 2012-2013 were investigated. The instrument for data collection was a researcher-made questionnaire. Data were analyzed by chi-square and independent t-test. Effectiveness was defined as the rate of the achievement of the goals of morning reports based on dividing the total score of the questionnaire (54 scores) into three parts of 0-17 (poor effectiveness), 18-36 (moderate effectiveness) and 37-54 (good effectiveness).

Results: The effectiveness of morning report sessions without the presence of residents was reported as moderate in hospital A, and the effectiveness of morning report sessions with the presence of residents in hospital B was reported as moderate in the opinion of interns and poor in the view of externs. There was no significant difference between the viewpoints of interns in hospitals A and B with regard to the effectiveness of morning report sessions ($p=0.169$).

Conclusion: Results indicate that the higher academic level of subjects discussed in morning reports with presence of residents caused a reduction in the participation rate of interns and externs, thereby decreasing their learning and satisfaction. However, without the presence of residents, the students' feelings of fear and anxiety were reduced and their satisfaction was heightened.

Introduction

Morning report is a conference that is run with the attendance of clinical teachers and students; the team responsible for the night shift reports the clinical issues of several inpatients during this shift and the participants discuss how to properly manage these patients.¹ Morning reports, along with clinical rounds and outpatient training, are common and valuable methods in clinical education. The main objectives of morning reports are teaching the application of evidence in the process of diagnosis and treatment of patients, promotion of problem solving skills

and improvement of oral presentation and discussion in students.² Other objectives of morning report include assessment of knowledge, attitude and performance of students, identification of medical errors, exchange of information during shift change and increasing social investment within the medical team.³ Regular and active attendance in all theoretical or practical courses and instructional sessions, including morning report sessions, is one of the main duties of interns and externs, cited in the regulations concerning the duties of students of general

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medicine.⁴ In the project designed to determine the criteria and indices of clinical education in teaching hospitals and centers in 2009, externs were responsible for presentation of patients in 3% of cases, and attendance of externs in morning report sessions was mandatory in 90% of cases.² However, although interns and externs are the main audience in morning report sessions, the satisfaction and use of their abilities have not yet been examined.

Analyzing the studies carried out in this regard, it can be argued that, although interns and externs are the regular audience of morning report sessions, in sessions in which residents of different levels attend the academic level of sessions is high and most of the discussions are compatible with the educational level of this group, and interns and externs, in particular, benefit very little.⁵⁻⁸ As an example, in the study carried out by Haghdoost, the minimum role of students and interns was reported to be modified.⁹ Afshari also reported that the teachers' ideas about morning report sessions were not compatible with those of students at different levels.¹⁰ Despite running specialty and subspecialty programs for the residents, lack of morning report sessions for residents and simultaneous attendance of residents, interns and externs creates a greater gap between different academic levels and makes morning report sessions less applicable for the entire audience. Every attempt made to promote education should be supported and reinforced. Given the significance and status of morning reports for medical students' education, the first step to be taken to enhance the quality of this educational method is analysis of its various dimensions.¹¹

In the cardiology ward of hospital A, morning report sessions were held for the interns and externs without the presence of residents. They believed that, owing to accepting the responsibility of morning reports independent of residents, their accuracy in clinical issues and patients was increased and, as a result, students more precisely considered patient-oriented education from the very beginning of education. In the cardiology ward of hospital B, however, as usual, morning report sessions were held with attendance of residents, interns and externs. Having searched various sources, no morning report sessions were found to be the same as those of hospital A. Thus, the present study was aimed to compare two methods of running morning report sessions, possibly to provide more evidence about the applicability of morning reports for all the audience and to achieve the intended objectives, some of which were discussed in previous studies.¹²

The present research was carried out to determine the effectiveness of two types of morning report sessions based on the opinions of interns and externs and to introduce a pattern to run morning report sessions according to the instructional considerations of Iranian universities of medical sciences.

Materials and Methods

This descriptive cross-sectional study was conducted in the cardiology wards of two teaching hospital of Mashhad University of Medical Science in the academic year 2012-

2013. The statistical populations included the interns and externs that attended the morning report sessions at the cardiology wards of these hospitals. The participants qualified for inclusion in the study were the interns and externs who were passing the cardiology ward program and had participated in at least two morning report sessions. The exclusion criteria from the study included guest and transferred interns and externs (due to possible effects of conditions on responses), incomplete response to questionnaires and lack of tendency to cooperate and complete the questionnaires. The required sample consisted of 46 interns and 40 externs. Using a census technique, all the qualified participants who had attended morning report sessions were included in the study. Before the start of the sessions, the researcher attended where the morning report sessions were held in each hospital, distributed the questionnaires among the interns and externs who tended to participate in the study and collected the questionnaires at the end of the morning report sessions. The instrument for data collection included a researcher-made questionnaire that consisted of three sections. The first section was about educational objectives that included 9 items and was rated based on a Likert scale from 0 to 3 (0=completely disagree, 1=relatively disagree, 2=relatively agree, 3= completely agree). The second section included medical capabilities and consisted of 22 items, with a score of 0 for lack of selection and score of 1 for selection of each item. The third section was comprised of educational capabilities and included 8 items, with a score of 0 for lack of selection and a score of 1 for selection of each item. The total score of the questionnaire was 54. The scores <18, 18-36 and >36 were classified as poor effectiveness, moderate effectiveness and good effectiveness, respectively.

The content and face validity indices of the questionnaire were confirmed according to the expert views of authorities of medical education and morning report, and the reliability of the given questionnaire was approved through test-retest method ($r=0.129$).

For the sake of ethical considerations, the questionnaires were completed anonymously and the participants were ensured about the confidentiality of the collected data. The data collected about the hospitals were confidentially filed and the names of hospitals were coded in the present study. Data were analyzed by SPSS-16 software and descriptive and inferential statistics such as chi-square and independent t-test. $P<0.05$ was considered significant.

Ethical Considerations

This paper is based on a M.Sc. dissertation in medical education, the ethical approval has been obtained by the Research Committee of Medical School, Mashhad University of Medical Sciences (No: 536A).

Results

This study involved 45 interns, 27 (60%) interns from hospital A and 18 (40%) interns from hospital B, and 40 externs, 18 (45%) externs from hospital A and 22 (55%) externs from hospital B. Table 1 shows the effectiveness of morning report sessions.

The results of chi-square test indicated no significant difference between the views of interns of hospitals A and B concerning the effectiveness of morning report sessions ($p=0.169$). However, there was a significant difference between the opinions of externs in hospitals A and B ($p=0.000$). Also, there was a significant difference between the total score of interns and externs in hospital A (morning report without the presence of residents) ($p=0.000$). Moreover, no significant difference was reported between the total score of interns and externs in hospital B (morning report with the presence of residents) ($p=0.531$). Table 2 depicts a comparison of the viewpoints of interns and externs of the cardiology wards at teaching hospitals of Mashhad University of Medical Sciences regarding achievement of educational objectives in the morning report sessions.

Table 3 compares the viewpoints of interns and externs of the cardiology wards at teaching hospitals of Mashhad University of Medical Sciences about their medical capabilities by attending morning report sessions.

In table 4 we compare the viewpoints of interns and externs of the cardiology wards at teaching hospitals of Mashhad University of Medical Sciences about promotion of their medical abilities by attending morning report sessions.

Discussion

According to Creemers and Scheerens, effectiveness refers to goal attainment, and the attainment of educational goals is considered the central concept of educational effectiveness. They also note that educational goals were

the basis for the choice of output criteria in empirical educational effectiveness research.¹³ However, based on the literature, no study has been reported on this topic to compare the obtained results. According to the opinion of interns and externs of the cardiology ward in hospital A, the effectiveness of morning report sessions without the presence of residents was reported to be moderate, and in the opinion of interns of the cardiology ward in hospital B, the effectiveness of morning report sessions with attendance of residents was moderate. However, based on the views of externs in hospital B, the effectiveness of morning report sessions with the presence of residents was reported to be poor.

Achievement of educational objectives and promotion of medical and educational capabilities of interns attending morning report sessions without the presence of residents in hospital A were reported to be higher than those of the interns attending morning report sessions with the presence of residents in hospital B. However, the general effectiveness of both morning report sessions was moderate in the opinion of interns, and the interns of both hospitals had a rather similar viewpoint about the effectiveness of morning report sessions with and without the presence of residents. The similar opinion of interns attending morning report sessions with and without the presence of residents can be the result of the lower academic gap between interns and residents than between externs and residents, as well as easier adaptability of interns with the subjects presented by residents in morning report sessions, which resulted in more involvement in learning the issues related to patients.

Table 1. Effectiveness of morning report sessions with and without the presence of residents in the opinion of interns and externs

Morning report sessions	Hospital	Academic level	SD±Mean	Effectiveness
Without attendance of residents	A	Interns	22.95±1.70	Moderate
		Externs	32.82±1.83	Moderate
With attendance of residents	B	Interns	19.37±1.70	Moderate
		Externs	17.87±1.59	Poor

Table 2. Comparison of educational objectives in the morning report sessions

Educational objectives of morning reports	Interns of hospital A	Interns of hospital B	Externs of hospital A	Externs of hospital B
	(morning report without attendance of residents)	(morning report with attendance of residents)	(morning report without attendance of residents)	(morning report with attendance of residents)
	Appropriate participation	80.7%	76.5%	94.5%
Appropriate teaching and learning	70.3%	55.5%	94.5%	36.4%
Appropriate role of students in running morning report sessions	62.9%	50.0%	83.3%	19.1%
Compatibility of the content of morning report with the courses taken by the students	84.6%	76.5%	94.5%	40.9%
Students' feeling of fear and anxiety	66.6%	88.9%	55.5%	71.4%
Fulfilling the educational objectives of morning reports for students	46.1%	41.2%	83.3%	23.8%
Students' satisfaction with morning report sessions	59.2%	50.0%	94.4%	28.6%
Specifity of students' responsibilities	62.9%	50.0%	83.4%	31.1%
Providing feedback to students	55.5%	50.0%	52.9%	18.1%

Table 3. Comparison of medical capabilities of interns and externs

Medical capabilities	Interns of hospital A (morning report without attendance of residents)	Interns of hospital B (morning report with attendance of residents)	Externs of hospital A (morning report without attendance of residents)	Externs of hospital B (morning report with attendance of residents)
Communication	48.1%	44.4%	72.2%	40.9%
Planning for patient management	25.9%	22.2%	55.6%	36.4%
Promotion of clinical decision-making skill	44.4%	38.9%	77.8%	54.5%
Disease prognosis	14.8%	16.7%	44.4%	18.2%
Patients' examination	33.3%	38.9%	66.7%	27.3%
Monitoring and tracking patients	22.2%	22.2%	38.9%	18.2%
Disease diagnosis and differential diagnosis	63.0%	66.7%	94.4%	86.4%
Indications of hospitalization	40.7%	27.8%	72.2%	45.5%
Taking medical history	74.1%	66.6%	94.4%	72.72%
Prevention	3.7%	0%	22.2%	4.5%
Recording clinical information in patients' files	0%	0%	27.8%	18.2%
Semiology of patients	29.6%	33.3%	55.6%	27.3%
Epidemiology of diseases	0%	0%	11.1%	22.7%
Patients' care	3.7%	0%	50.0%	22.7%
Application of medical advice	3.7%	0%	33.3%	22.7%
Evidence-based treatment	14.8%	16.7%	16.7%	0%
Logical prescription of drugs	18.5%	16.7%	27.8%	22.7%
Interpretation of laboratory tests	48.1%	38.9%	72.2%	40.9%
Logical application of tests	25.9%	22.2%	55.6%	36.4%
Defending the patient's rights	0%	0%	77.8%	54.5%
Professional ethics	11.1%	5.6%	44.4%	18.2%
Patients' referral	18.5%	11.1%	66.7%	27.3%

Table 4. Comparison of educational capabilities of interns and externs

Educational capabilities	Interns of hospital A (morning report without attendance of residents)	Interns of hospital B (morning report with attendance of residents)	Externs of hospital A (morning report without attendance of residents)	Externs of hospital B (morning report with attendance of residents)
Reinforcement of presentation skill	66.7%	72.2%	66.7%	72.2%
Direct self-learning	22.2%	22.2%	55.6%	22.2%
Problem solving	22.2%	16.7%	55.6%	16.7%
Successful management of group sessions	25.9%	27.8%	33.3%	18.2%
Participation in discussions	40.7%	27.8%	83.3%	18.2%
Development of consciousness-raising	14.8%	0%	38.9%	50.0%
Research	0%	0%	16.7%	0%
Application of evidence in diagnosis and treatment process	25.9%	22.2%	16.7%	63.6%

Therefore, participation in morning report sessions with or without the presence of residents did not make a significant difference to them. Of course, the manner of holding morning report sessions affects the opinion of interns about the effectiveness of morning report sessions, and their opinion may change by enhancing the quality of morning report sessions without the presence of residents. The externs of hospitals A and B expressed different views about the effectiveness of morning report sessions with and without the presence of residents. They reported a higher effectiveness of morning report sessions for externs without the presence of residents. Given the lower academic level of externs and higher level of the subjects discussed in morning report sessions with the presence of residents, the participation rate of externs was low and they did not

have much responsibility. This, in turn, caused a reduction in students' learning, followed by their dissatisfaction. However, in the morning report sessions without the presence of residents, lack of residents' presence at different levels left the special subjects that externs had not much information about undiscussed, and made the content of morning report sessions more compatible with the courses that externs had passed. Therefore, the feeling of fear and anxiety of the students, who are the main audience of these sessions, was reduced and their satisfaction was enhanced. There was a dramatic disagreement among the interns and externs over the effectiveness of morning report sessions without the presence of residents in hospital A. The externs showed they achieved more educational objectives in the morning reports than interns, and their medical and

educational capabilities were more enhanced than interns. There was no significant difference between the views of interns and externs attending morning report sessions with the presence of residents in hospital B, because there was not much opportunity for their participation and learning; however, the effectiveness of these sessions for externs was less than that of interns. The low tendency to complete the questionnaire due to the time-consuming nature of the questionnaire for respondents was one of the limitations of the present study, which was overcome by making a clear and concise questionnaire with high validity and reliability, ease of completion and short time to complete.

Competing Interests

The authors declare that there are no conflicts of interest.

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