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Quality of Morning Reports and its Related Factors at Kurdistan University of Medical Sciences in the Academic Year 2014-2015

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Abstract

Background and Objective: Morning report is a common and valuable method (Gold Standard) in clinical education. It has some characteristics and standards that, when properly applied, will play an effective role in students' clinical learning.

Materials and Methods: A total of 196 apprentices, interns and residents participated in this descriptive-analytical study. The data were gathered by a researcher-made questionnaire which its validity and reliability were confirmed by experts' views and Cronbach's alpha, respectively. Data analysis was performed by SPSS (version 20) using descriptive and inferential statistics.P≤0.05 was considered significant.

Results: The majority of participants believed the order of meetings, duration of meetings, and venues were at an average level. They also rated the seating of the teachers in the meeting and the type of diseases introduced to be at a good level. Presence of experts from other disciplines was found to be at the poorest level. 88% of students reported the overall usefulness of the morning reports to be average, and only 2% believed the morning reports' usefulness to be appropriate, while 10 % evaluated the usefulness range as inappropriate for them. The maximum level of satisfaction was reported for infectious diseases morning report sessions.

Conclusion: In general, the quality of morning reports from the perspective of the students was average. Considering the importance of morning reports in medical education, more attention is recommended to be paid to promotion of its quality.

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Introduction

Clinical education is presented via various methods in treatment environments, among which morning report has long been the basis of the training programs for medical students (1). Morning report has been recognized as one of the most significant practices in medical sciences (2). It is a common and worthwhile practice in medical education along with the grand rounds. Morning report is an educational process in which the participants discuss a patient's problems and make an attempt to dissolve a diagnostic puzzle. The patients' introduction can range from a short discussion about each of the patients admitted in the previous night to a complete introduction of a new inpatient, or interesting and unusual findings (3). The main applications of morning report include achievement of an overall view of the activities performed in the ward, analysis of different diagnostic and therapeutic aspects of patients, evaluation of the residents' performance, assessment of the services provided to patients, recognition of unfavorable events and their causes, and interaction among the medical staff (4).

Although morning reports include a wide range of objectives, their major objective is education (5, 6). Morning report is an appropriate tool for transferring an educational experience that is considered a major stage in progressing toward professionalism for the less experienced learners (7).

Regular and efficient assessment is the best approach to evaluate the success of any educational means. One of the assessment methods in medical education is evaluating the viewpoints of students, teachers and graduates of medical faculties about the trainings presented at schools of medicine (8).

It seems that morning reports with various structural and content characteristics affect the audience differently (9). Hence, morning report can provide an appropriate opportunity to learn practical points about the management of inpatients or outpatients. Obviously, due to the limited time, only a purposeful and planned use of this opportunity can lead to learning (10).

Morning report is one of the requirements in internal medicine, surgery, pediatrics, obstetrics and gynecology, psychiatry, cardiology, infectious diseases, and neurology departments at Kurdistan University of Medical Sciences, which is held with the attendance of apprentices, interns, and residents. It is impotent for the universities with the rank and size of this university to critically evaluate such an important educational strategy. However, there is no clear evidence about the quality of morning reports in these departments.

Therefore, the present study was carried out to evaluate the quality of morning reports at Kurdistan University of Medical Sciences.

Materials and Methods

This descriptive-analytical study was carried out at Kurdistan University of Medical Sciences in the academic year 2014-2015. The study was reviewed and approved by the ethics committee of the Research Council of the Kurdistan University of Medical Sciences (Project & Ethic Code: MUK.REC.1393.116) .The study sample comprised of all the apprentices, interns and residents who attended the morning reports. All the apprentices and interns were in the last week of their program in the given department and the residents had passed at least three months of their training program because they needed to have enough experience about the morning report, to be able to present comprehensive information about it, and to provide relevant information about the morning report of their given field in the last week.

Four major departments, including internal medicine, pediatrics, obstetrics and surgery and four minor departments, including cardiology, infectious diseases, psychiatry and neurology were selected in this study because only these departments held the morning report meetings regularly and their apprentices and interns were on duty. The exclusion criteria in this study were incomplete responding to questionnaires and students' unwillingness to continue to participate in the study. The study sample was equal to the study population because all the population was recruited using a census method.

Having prepared a table of entrance guide and final exam for apprentices and interns of the eight departments, which included the number of students and opening and closing dates of the program, the researchers attended the morning report site in the last week of each program and distributed the questionnaire among the apprentices, interns and residents who were willing to attend the meetings. The researchers collected the completed questionnaires at the end of the meeting.

The data were collected by a researcher-made questionnaire consisting of three sections: the first section was about the structure of morning report meeting (19 items), the second section was about the content of morning report (8 items), and the third section revolved around the students' gain of the content of meetings (30 items). The overall quality was determined according to the total score; scores <50% of total score were considered to be of poor quality, 50-75% of moderate quality, and >75% of good quality. The validity and reliability of the

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questionnaire were confirmed based on the opinion of experts and Cronbach's alpha (0.85), respectively.

The obtained data were fed into SPSS (version 20) and analyzed by descriptive statistics, including mean, standard deviation, ratio and confidence interval, and inferential statistics, including chi-square and Fisher's exact tests.

Results

Based on the obtained results, from a total of 196 participants, 84 (43%) samples were apprentices, 79 (40%) were interns and 33 (17%) were residents.

The analysis of the students' viewpoint about the morning report structure showed that the medical students reported an average level for most aspects of morning reports such as the order of meetings, duration of meetings, venue, etc. Regarding the teachers' seating in the meeting and type of diseases introduced, a larger number of these aspects were found to be at a good level. However, the attendance of experts from other disciplines was reported to be at a poor level considering the opinion of 50% of the participants (Table 1).

Table 1: Structure of morning reports from the perspective of the medical students at Kurdistan University of Medical Sciences (2014-2015)

Structure of morning reports	Good number (%)	Average number (%)	Poor number (%)
order of meetings	60(30.00)	130(67.00)	6(3.00)
duration of meeting	59(30.00)	132(67.50)	5(2.50)
venue in terms of distance to ward	68(34.00)	117(60.00)	11(6.00)
educational facilities	18(9.20)	147(74.80)	31(16.00)
correct use of educational facilities	15(8.00)	158(81.00)	23(11.00)
management of meetings	37(19.00)	152(77.50)	7(3.50)
teachers' seating in the meeting	50(25.50)	139(71.00)	7(3.50)
number of patients presented fully in the meeting	43(22.00)	135(69.00)	18(9.00)
type of diseases introduced fully in meeting	49(25.00)	135(69.00)	12(6.00)
attendance of experts from other disciplines	9(5.50)	90(45.00)	97(49.50)
lighting of morning report venue	34(17.00)	145(74.00)	17(9.00)
voice of morning report venue	43(22.00)	134(38.50)	19(9.50)
ventilation of morning report venue	31(16.00)	138(70.50)	27(13.50)
heating and cooling systems of morning report venue	31(16.00)	142(72.50)	23(11.50)
diversity of participants in the meetings	33(17.00)	136(69.50)	27(13.50)

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A statistically significant correlation was found between the structure of morning report meetings and departments (*P*=0.*001*). Infectious diseases and cardiology departments were reported to have the best and poorest morning report structure, respectively (Table 2).

Table 2: Structure of morning reports from the perspective of medical students at different departments of Kurdistan University of Medical Sciences (2014-2015)

Morning report structure of departments	Average number (%)	Poor Number (%)	Total	2	P-value
Neurology	6(75.00)	2(25.00)	8	22.75	0.002
Surgery	10(55.56)	8(44.44)	18		
Internal medicine	17(60.71)	11(39.29)	28		
Psychiatry	17(50.00)	17(50.00)	34		
Gynecology	22(62.86)	13(37.14)	35		
Cardiology	1(6.67)	14(93.33)	15		
Infectious diseases	12(85.71)	2(14.29)	14		
Pediatrics	21(50.00)	21(50.00)	42		
Total	106	88	194		

The data presented in Table 3 indicates a statistically significant correlation between morning report structure and medical students' academic level (*P=0.004*). The structure of morning report meetings was found to be good in the view point of residents but poor in the opinion of interns.

Table 3: Structure of morning reports for different academic levels from the perspective of medical students at Kurdistan University of Medical Sciences (2014-2015)

Morning report structure of academic level	Good Number (%)	Average number (%)	Poor Number (%)	Total	Fisher	P-value
Apprentice	0(0)	39(46.50)	45(53.50)	84	15.48	0.004
Intern	2(2.50)	47(59.00)	30(38.50)	79		
Resident	0(0)	29(87.00)	4(13.00)	33		
Total	2	115	79	196		

With regard to the students' gain from attending the morning report meetings, the highest frequency in medical capabilities was reported for taking medical history (reported by 120 participants) and the lowest frequency was found for defending the patients' rights and medical consultation requesting methods reported only by 20 participants (Figure. 1). As for the educational capabilities, however, the highest and lowest frequencies were reported for development of presentation skills and research, respectively(Figure. 2).

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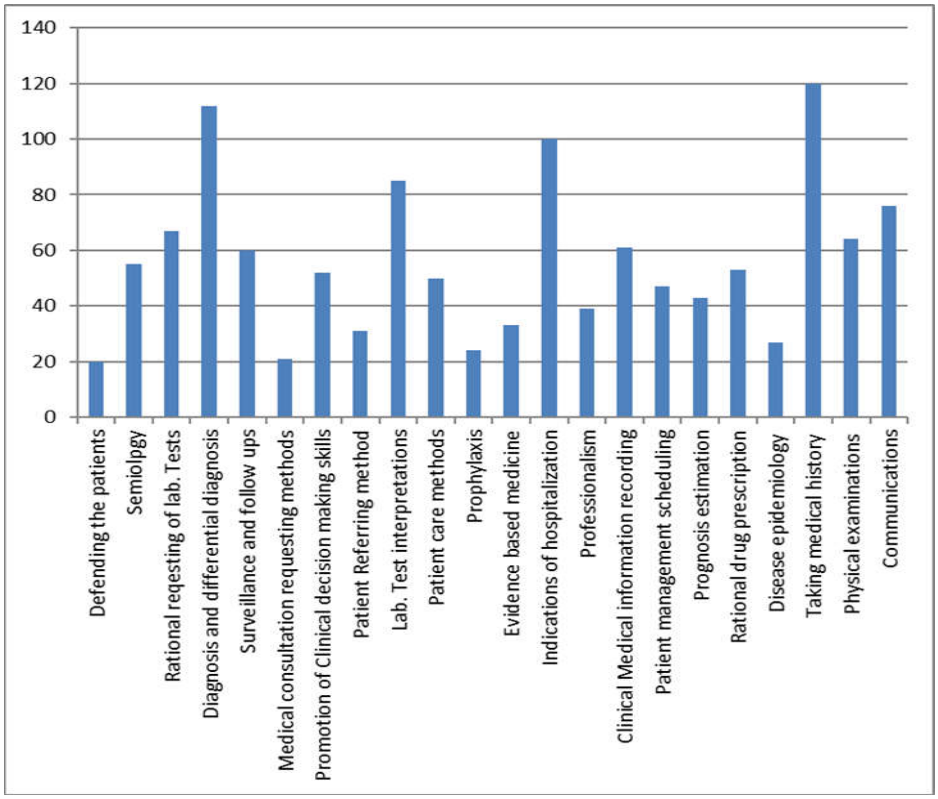

Fig. 1: Promotion of medical students' capabilities through attending the morning report meetings at Kurdistan University of Medical Sciences (2014-2015)

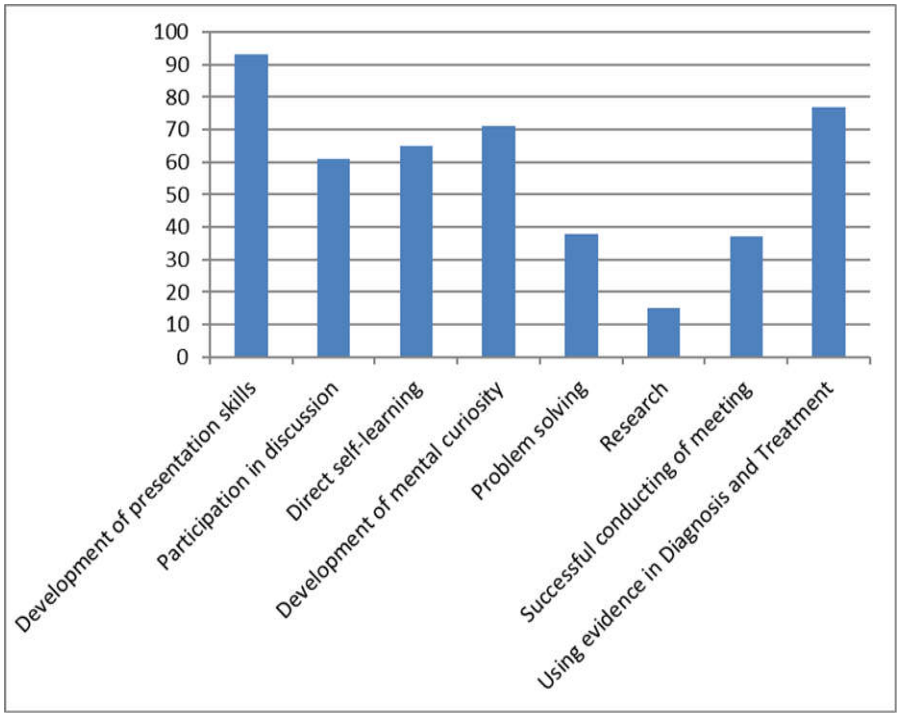

Fig. 2: Promotion of medical students' academic capabilities through attending the morning report meetings at Kurdistan University of Medical Sciences (2014-2015)

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Discussion

The analysis of medical students' viewpoint about the morning report structure showed the majority of the studied variables, including order of meetings, duration of meetings, and venue were at an average level. Further, the teachers' seating in the meeting and type of diseases introduced were evaluated to be at a good level by a higher proportion of participants. However, attendance of experts from other disciplines was found to be at a poor level in the view point of 50% of the participants (Table 1).

Ziaei *et al.* (8) showed that the conditions of morning report venue, lighting, ventilation, and the overall environmental conditions were rated to be at a good level by 38, 75.5, 30, and 44.5% of participants, respectively, while in the present study ventilation, lighting, and cooling and heating systems were reported to be at a good level by 16, 17, and 16% of the medical students. This indicates that the overall condition of welfare facilities was not good in comparison with findings the previous studies. In the current study, 90% of participants reported the order and starting time of meetings to be at a good level, which was consistent with the findings of the study by Wenderoth *et al.* (11) and the results of the study by Razavi *et al*. (2) in which 74% of the subjects evaluated the starting time of meetings to be at a good level and considered the time of the meeting as an important component of the meetings.

In the present study, 25% and 71% of students evaluated the teachers' seating as good and average, respectively. The results of the study conducted by Razavi, *et al.* (9) showed that the faculty members mostly sat in the front row back to the audience in the meetings. They reported a significant correlation between the teachers' seating and students' satisfaction and gain. However, higher satisfaction and gain were found when the faculty members were seated in the front row facing the audience, which might be due to the effect of face-to-face education. Moreover, other studies on morning report structure have not evaluated the teachers' seating in the meetings. However body language, facial expression of feelings, puzzling and surprising gesture, is effective and powerful of means of communications. The importance that the participants placed upon the teachers' seating method shows they need non- verbal communications from teachers in addition to other forms of feedback and information exchanges in the meetings.

In the current study, the medical students believed that only 4.5% of faculty members from different departments had good attendance and 45% of them had average attendance. The study of Mousavi

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(12) on regular attendance of teachers from other departments indicated that the majority of students reported that 90% of internal medicine, cardiology and infectious diseases teachers attended the meetings regularly and 100% of other specialists like pathologists and pharmacologists regularly attended the meetings. The research by Westman *et al.* (13) revealed that almost all the teachers attended the meetings. Other studies have also reported a regular attendance of the teachers (4, 7). Moreover, Ways (1) introduced the teachers' attendance as one of the most important factors affecting the educational quality of morning report meetings. Attendance of medical educators from different disciplines can widen and deepen students' understandings on the cases presented and shows them a more interdisciplinary approach to the issues.

The findings of the current study showed a significant correlation between morning report structure and departments. The majority of students evaluated the morning report structure to be at an average level. They also expressed the infectious diseases and cardiology departments to have the best and worst morning report structure, respectively. The results of Lamei (10) indicated that students of internal medicine, surgery and pediatrics departments were less satisfied with morning reports.

Moreover, the results of the present study showed a significant relationship between morning report structure and academic level of medical students, which was in agreement with the findings of Salehi *et al.* (14), indicating that the morning reports were not compatible with the students' needs. The study of Haghdoust *et al*. (15) revealed that students did not have an active role in running the morning report meetings; therefore, they might have performance errors which would consequently affect their satisfaction. It seems the level of complexity of the discussions affects the rate of students' gains from the meetings; in other words, the higher the level of the students the more understandings, gain and satisfaction do occur.

Regarding the medical students' gain from morning report meetings, the maximum number of students reported taking medical history and differential diagnosis to be more useful, and the minimum number of students reported defending the patients' rights, requesting medical consultations , and prophylaxis as useful.

In the study of Razavi *et al.* (9), subjects such as taking medical history, diagnosis and differential diagnosis, and patients' examination were emphasized while instances like patients' referral, health economics, and defending the patients' rights were less discussed. Various studies

have analyzed diverse morning report dimensions such as management, professional ethics, critical thinking, evidence-based medicine (2), taking medical history, physical examinations, radiologic and pathologic examinations, medical outcomes, prognosis estimation, patient care, iatrogenic diseases, clinical skills, initial evaluation of patients, diagnosis and differential diagnosis, side effects of drugs, pathophysiology of diseases, health economics, mistreatment outcomes, and disease analysis. Thus, the variation of morning report subjects should also be taken into account (7, 16). The findings of the present study suggest that an evidence based approach to conduct morning reports would enrich their educational impact and value for all levels of students.

Increasing the number of meetings contributes to repeating the educational subjects over and over again, covering the subjects better, increasing the meeting organizers' experience, and identifying the strengths of meetings, as a result of which students achieve a higher gain from meetings (8).

Flexibility and directing the discussion toward more effective questions strengthen the participants' clinical decision making skills and increase their gain (17). Using more interdisciplinary and inter-professional approaches to conduct morning reports would maximize the level of thinking and reflective practice among graduates (18)

Conclusion

The quality of morning reports can be improved provided that constant monitoring of the sessions is made possible and the viewpoint of the stakeholders is considered. Medical students, namely apprentices, interns and residents are the main stakeholders of any medical education program including morning reports. This study aimed to appraise the quality of morning reports from the perspectives of medical students of the university. In general, it could be concluded that quality of morning report meetings were in line with what had been reported in other studies and needed improvement in many aspects.

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