

Comparison of quality of clinical supervision as perceived by attending physicians and residents in university teaching hospitals in Tehran

Sara Razmjou¹, Hamid Reza Baradaran^{*2}, Jalil Kouhpayehzadeh³
Kamran Soltani-Arabshahi⁴

Received: 8 Mar 2015

Accepted: 3 Jul 2015

Published: 20 Aug 2015

Abstract

Background: Clinical supervision is an important factor in the development of competency in residency program. Attending physicians play a key role in supervision of residents. However little is known about how attending physicians and residents perceive the quality of clinical supervision. The aim of this study was to explore the differences between perceived qualities of supervision in these two groups in different wards in teaching hospitals in Tehran, Iran.

Methods: A valid questionnaire were completed by 219 attending physicians and residents from surgery, psychiatry, gynecology, pediatrics, internal medicine, orthopedics and radiology wards in two teaching hospital affiliated to Iran University of Medical Sciences. This questionnaire contained 15 items in regards to supervisory roles, rated on a five point Likert scale (1=never, 2=seldom, 3=sometimes, 4=often, 5=always).

Results: Out of 219 participants, 90 (41%) were attending physicians and 129 (59%) were residents. The overall mean±SD scores of perceived clinical supervision achieved by attending physicians and residents were respectively, 4.20±0.5 and 3.00±0.7 which was statistically significant ($p<0.05$). Attending physicians and residents acquired minimum scores (mean=4.06 and 2.7, respectively) regarding expectation from their supervisor to know and do during training period of residency.

Conclusion: It seems that the clinical supervisory does not have an efficient performance in teaching hospitals which needs to be more assessed and improved. Therefore it is suggested that policy-makers in medical education system pay more attention to this important issue and enhance some faculty development programs for clinical educators in Iran.

Keywords: Attending physicians, Clinical Supervision, Residents, Teaching Hospital, Iran.

Cite this article as: Razmjou S, Baradaran HR, Kouhpayehzadeh J, Soltani-Arabshahi K. Comparison of quality of clinical supervision as perceived by attending physicians and residents in university teaching hospitals in Tehran. *Med J Islam Repub Iran* 2015 (20 August). Vol. 29:248.

Introduction

Supervision is a complex activity and has various definitions. The suggested definition of supervision in clinical setting based on literature review is: the provision of monitoring, guidance and feedback on matters of personal, professional and educational development in the context of the doctor's care of patients, the ability to an-

ticipate a doctor's strengths and weaknesses in particular clinical situations in order to maximize patient safety. In fact, the ultimate purpose of supervision is to improve patient care (1).

The supervision of medical residents is one of the leading responsibilities of attending physicians in the clinical setting and it is often assumed that attending physicians

¹. Center for Educational Research in Medical Sciences (CERMS), Iran Tehran University of Medical Sciences, Tehran, Iran, & Department of Neurology, School of Medicine, Wayne State University, Detroit. sara.razmjou@carleton.ca

². (**Corresponding author**) Center for Educational Research in Medical Sciences (CERMS), Iran University of Medical Sciences, Tehran, Iran. baradaran.hr@iums.ac.ir

³. Center for Educational Research in Medical Sciences (CERMS), Iran University of Medical Sciences, Tehran, Iran. jkuhpayeh@yahoo.com

⁴. Center for Educational Research in Medical Sciences (CERMS), Iran University of Medical Sciences, Tehran, Iran. soltarab34@gmail.com

with good clinical abilities automatically possess good supervisory abilities in teaching medical residents. But unfortunately most attending physicians are unfamiliar with the principles of effective supervision (2,3). Effective supervision is defined as “practice that encourages supervisee development and autonomy, facilitates the supervisory relationship, protects the client, and enhances both client and supervisee outcomes” (4).

The nature of clinical supervision will vary from specialty to specialty and from unit to unit. The nature of the specialty (surgical or non-surgical for example), location (primary care or hospital) and the structure of the clinical team providing the service will be the primary determinants of the sort of supervision required, but in all cases the object of supervision will be the same: to provide the patient with the best possible quality service under the prevailing circumstances (5).

Although clinical supervision has an essential role in medical education, it is probably the least investigated aspect of clinical setting (1). This might be due to limitations including small non-randomized samples, the use of non-validated tools and basic descriptive statistics and a lack of a control or comparison group (6).

Most of attending physicians are aware of its great significance but due to the collision of educational and therapeutic responsibilities, there has been less paid attention on clinical supervision in teaching hospitals. The objective of the present study was to investigate the educational value of clinical supervision as perceived by attending physicians and medical residents in teaching hospitals affiliated to Iran University of Medical Sciences (IUMS).

Methods

This study was conducted at teaching hospitals affiliated to Iran University of Medical Sciences (IUMS). The participants were attending physicians and medical residents of surgery, psychiatry, gynecology, pediatrics, internal medicine, orthopedics

and radiology, at all levels (year 1–year 4). The developed questionnaire by Busari and Koot (2) was employed in this study then was translated from English to Persian (Farsi) by clinicians who were experts in medical education in Education and Development Center (EDC) at IUMS. This instrument has been shown to be a reliable tool in Persian (Cronbach’s-alpha=0.96). Questionnaires were distributed by authors in the assigned clinical wards through morning sessions where attending physicians and residents were present. Questionnaires were contributed and filled anonymously in all seven wards to obtain attending physicians and medical residents’ perception of the clinical supervision. This validated questionnaire contained 15 items in regards to supervisory roles, rated on a five point Likert scale (1= never, 2= seldom, 3= sometimes, 4= often, 5= always). Some relevant information including the age, gender, years of teaching, marital status were also asked to be completed by participants.

Statistical Analysis

Student independent t-test was used to identify differences between attending physicians and residents’ point of view. The analysis of variance (ANOVA) was used to compare clinical supervision perception in seven clinical wards. Statistical analyses were performed by SPSS16 and values are expressed as mean \pm SD. P-value less than 0.05 were considered statistically significant.

Results

Out of 219 participants, 90 (41%) were attending physicians and 129 (59%) were residents. Ages ranged from 26 to 66 years with a mean \pm SD of 48 \pm 8.6 years for attending physicians and 32 \pm 3.2 years for medical residents. The number of participants according to the subdivision of wards is shown in Table 1. The overall mean \pm SD scores of perceived clinical supervision achieved by attending physicians and residents were respectively, 4.20 \pm 0.5 and

Table 1. Frequency distribution of participants according to the subdivision of wards

Specialty	Attending Physician N (%)	Medical Residents N (%)	Total
Internal medicine	13 (14.4)	46 (35.7)	59 (26.9)
Pediatrics	25 (27.8)	12 (9.3)	37 (16.9)
Gynecology	16 (17.8)	15 (11.6)	31 (14.2)
Radiology	9 (10)	8 (6.2)	17 (7.8)
Psychiatry	7 (7.8)	17 (13.2)	24 (11)
Surgery	6 (6.7)	14 (10.9)	20 (9.1)
Orthopedics	14 (15.6)	17 (13.2)	31 (14.2)
Total	90 (100)	129 (100)	219 (100)

Table 2. Summary of perceived clinical supervision by attending doctors and residents

	Attending Physician (SD)	Residents (SD)	p
1) I/They establish a good learning environment (Approachable, non-threatening, enthusiastic, etc)	4.2±0.6	2.9±1	<0.001
2) I/They stimulate the registrars to learn independently	4.3±0.6	3.1±1	<0.001
3) I/They allow autonomy appropriate to the registrars' level/experience/competence	4.2±0.6	3.3±1	<0.001
4) I/They organize my time to allow for both teaching and care giving	4.3±0.7	2.8±1	<0.001
5) I/They offer regular feedback (both positive and negative)	4.1±0.7	3.0±1	<0.001
6) I/They clearly specify what the registrars are expected to know and do during the training period	4.0±0.7	2.7±1	<0.001
7) I/They adjust teaching to the registrars' needs (experience, competence, interest, etc)	4.2±0.6	2.7±1	<0.001
8) I/They ask questions that promote learning (clarifications, probes, reflective questions, etc)	4.2±0.6	3.0±1	<0.001
9) I/They give clear explanations/reasons for opinions, advice actions, etc	4.4 ±0.5	3.3±0.8	<0.001
10) I/They adjust teaching to diverse settings (bedside, view box, OR, consultation room, etc)	4.1±0.7	3.3±0.9	<0.001
11) I/They coach on clinical/technical skills (interview, diagnostic, examination, procedural, lab, etc)	4.2±0.6	3.1±0.9	<0.001
12) I/They incorporate research data and/or practice guidelines into teaching	4.0±0.8	3.0±1	<0.001
13) I/They teach diagnostic skills (clinical reasoning, selection/interpretation of tests, etc)	4.3±0.6	3.3 ±0.9	<0.001
14) I/They teach effective patient and/or family communication skills	4.1±0.8	2.8±1	<0.001
15) I/They teach principles of cost-appropriate care (resource utilization, etc)	3.9±0.8	3.0±1	<0.001
Overall mean	4.2±0.5	3.0±0.7	<0.001

3.00± 07 and this difference was statistically significant. The overview of perceived clinical supervision is summarized in table 2. Interestingly, out of the 15 items assessed, all were found significantly different among attending physicians and medical residents 'perspective (Table 2).

What attending physicians found weak in their training schedule, based on their poll were as follow: questions six; I clearly specify what the registrars are expected to know and do during the training period (mean±SD=4.0±0.7), question twelve; I incorporate research data and/or practice

guidelines into teaching (mean±SD= 4.0±0.8) and question fifteen; I teach principles of cost-appropriate care (mean±SD= 3.9±0.8).

Similarly medical residents found poor supervisory roles in clarification of their responsibilities and learning goals which was assessed by question six; The attending physicians clearly specifies what I am expected to know and to do during training period (mean±SD= 2.7±1). This definitely shows the lack of an organized educational program to specify the teaching goals and objectives of residency training. However

Table 3. Comparison of clinical supervision in seven clinical wards

	Attending Physician (mean±SD)	Residents (mean±SD)	p
Internal medicine	4.4±0.7	2.8±0.7	<0.001
pediatrics	4.2±0.4	2.4±0.8	<0.001
Gynecology	4.3±0.5	3.5±0.8	0.005
Radiology	3.4±0.5	3.2±0.6	0.719
Orthopedics	4.1±0.3	3.4±0.7	0.004
Psychiatry	4.0±0.2	3.2±0.5	0.001
Surgery	4.2±0.3	3.0±0.7	0.002

the other items found as poor supervisory roles among medical residents were related to teaching communication skills with patients and adjusting teaching perspectives with resident's demands. As shown in table two, these were assessed respectively by questions fourteen (mean±SD= 2.7±1) and seven (mean±SD= 2.8±1).

In terms of comparing different wards in clinical supervision among two groups of attending physicians and residents, statistical significant differences were found in all wards except radiology ($p > 0.05$). (Table 3, Fig. 1). As it is shown in Table 3, this difference is more prominent in pediatrics and internal medicine wards.

Discussion

In this study, the perceived quality of clinical supervision was investigated and compared in seven different clinical wards among two groups of attending physicians

and medical residents at teaching hospitals in IUMS.

There are few studies assessing clinical supervision in clinical practice in terms of training medical residents. Although clinical supervision has an essential role in enhancing training and ensuring patient and staff safety, the clinical supervision literature is criticized for methodological limitations (6-7). There would be an inevitable bias in the concept of "self-report" implying that there would be a difference in terms of what participant do and what they say they do (6,8). Due to this limitation we decided to compare the response of the attending physicians and medical residents in terms of medical training.

Similarly, Busari (2,9) assessed the attending physicians and residents' point of view towards clinical supervision in university and district teaching hospitals in two separate studies in the Netherlands. In

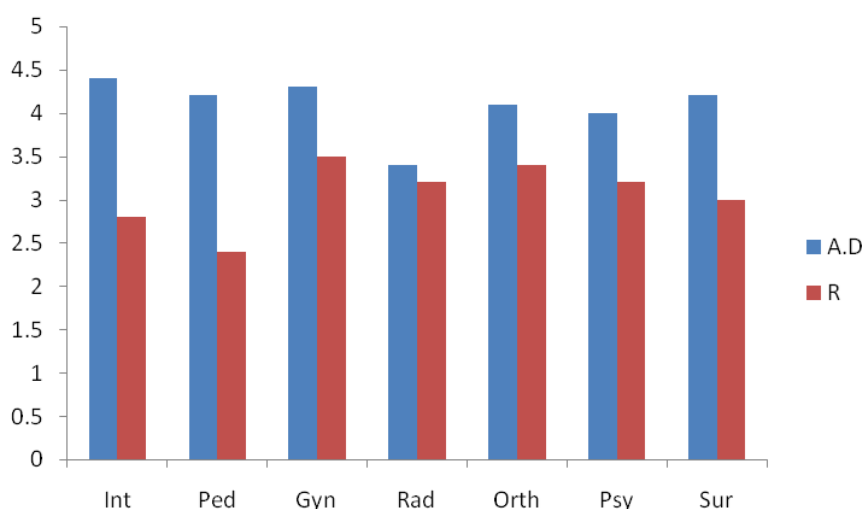


Fig.1. Clinical supervision compared in the two groups; Attending doctors and residents, in different wards. A.D=Attending Doctors, R=Residents, Int=Internal medicine, Ped=Pediatrics, Gyn=Gynecology, Rad=Radiology, Orth=Orthopedics, Psy=Psychiatry, Sur=Surgery.

both studies, the two teaching hospitals were compared; attending doctor's found no significant difference between the two different hospital settings and specialist registrars found a better quality of clinical supervision in district teaching hospitals (2,9). In these studies the base of comparison was different hospital setting whereas in our study clinical supervision was compared among attending physicians and residents in seven different wards but only in teaching hospitals.

Through subdivision of wards, we found a statistically significant difference in the perception of clinical supervision among attending physicians and residents in all wards except radiology; suggesting a more compatible educational system in radiology ward. However, this might be due to the fact that the number of radiology residents participating in our survey was lower in comparison with other wards.

Out of fifteen supervisory roles investigated among attending physicians, lack of incorporation of research data and guidelines into teaching, teaching the principles of cost-appropriate care and clarification of expectations towards medical residents were found remarkable for a poor clinical supervision. On the other hand, medical residents found lack of teaching patient/family communication skills, adjustment of teaching to residents' experiences and competences and specifications of what they are expected to learn and do during the training period as supervisory roles leading to a poor clinical supervision. The lack of specification of educational expectation was common among both attending physicians and residents. That necessitates assigning scheduled educational programs for medical residents during training periods in hospitals which should be organized by medical developmental center.

Conclusion

In conclusion, considering the significant differences among the two groups of attending physicians and residents for a good clinical supervision, it seems that the clinical

supervision does not have an efficient performance in teaching hospitals which needs to be more assessed and improved. Therefore it is suggested that policymakers in medical education system pay more attention to this important issue and enhance some faculty development programs for clinical educators in Iran.

Acknowledgements

The authors of this article would like to thank all attending physicians and residents who participated in this research. This study was supported by Center for Educational Research in Medical Sciences (CERMS) affiliated to Iran University of Medical Sciences.

References

1. Kilminster SM, Jolly BC. Effective supervision in clinical practice settings: a literature review. *Med Educ* 2000 Oct; 34(10):827-40.
2. Busari JO, Weggelaar NM, Knottnerus AC, Greidanus PM, Scherpbier AJ. How medical residents perceive the quality of supervision provided by attending doctors in the clinical setting. *Med Educ* 2005 Jul; 39(7):696-703.
3. Bruijn M, Busari JO, Wolf BH. Quality of clinical supervision as perceived by specialist registrars in a university and district teaching hospital. *Med Educ* 2006 Oct; 40(10):1002-8.
4. Falender CA, Shafranske EP. Clinical supervision: the state of the art. *J Clin Psychol* 2014 Nov; 70(11):1030-41.
5. Kilminster S, Cottrell D, Grant J, Jolly B. AMEE Guide No. 27: Effective educational and clinical supervision. *Med Teach* 2007 Feb; 29(1):2-19.
6. Dilworth S, Higgins I, Parker V, Kelly B, Turner J. Examining clinical supervision as a mechanism for changes in practice: a research protocol. *J Adv Nurs* 2014 Feb; 70(2):421-30.
7. Farnan JM, Petty LA, Georgitis E, Martin S, Chiu E, Prochaska M, et al. A systematic review: the effect of clinical supervision on patient and residency education outcomes. *Academic Medicine* 2012; 87(4), 428-442.
8. Heaven C, Clegg J, Maguire P. Transfer of communication skills training from workshop to workplace: the impact of clinical supervision. *Patient Education and Counseling* 2006; 60(3), 313-325.
9. Busari JO, Koot BG. Quality of clinical supervision as perceived by attending doctors in university and district teaching hospitals. *Med Educ* 2007 Oct; 41(10):957-64.