

360 degree evaluation of professional competencies among resident doctors at SVNGMC Yavatmal.

Dr.Nilima Patil

Associate professor

Dept of Anatomy ,SVNGMC Yavatmal

Dr.Alka Rawekar

Prof. Physiology,Dean allied health professionals,Convenor MCI Nodal Center ,JNMC,DMIMS(DU) Sawangi (M)Wardha.

Corresponding author: Dr.Nilima Patil

Associate professor

Dept of Anatomy ,SRTRGMC Ambajogai 431517

Dist Beed Maharashtra,India.

Abstract;

Introduction: The curriculum for postgraduate courses are well defined with respect to their respective subject matter but training and assessment of soft skills i.e. interpersonal skill, communication skill and professionalism are seldom part of this defined curriculum. These skills are as important as clinical skills and knowledge to produce a good medical professional, therefore 360 degree evaluation of these skills is essential. **Aims & Objectives:** To evaluate professionalism and other competencies among resident doctors at SVNGMC Yavatmal by 360 degree evaluation. **Material and methods:** This is a cross sectional observational study conducted at SVNGMC Yavatmal .Fourteen JRH from six clinical departments were evaluated by self and ten other evaluators from residents working sphere by using a validated questionnaire with five point Likert scale rating from poor to very good. Data collected analyzed to get the results. **Results:**1.Communication skills , Interpersonal skills ,professionalism skills, team work skills , sound knowledge and its application for patients care, were rated by majority as good to very good.2.Rating from self, peer, nurses, interns and patients were good to very good in majority but from faculty we got majority of responses 42.65% as satisfactory and 20.63% response as less than satisfactory.3.we got striking 31.16% responses as don't know regarding the research ability facet of the resident doctors. **Conclusion:** Overall, our assessment of self and working sphere reported competencies among residents at SVNGMC Yavatmal showed that residents are capable of consistently performing professionally across the domains of professionalism

Date of Submission: 02-02-2023

Date of Acceptance: 13-02-2023

I. Introduction:

Accreditation Council for Graduate Medical Education in 1999 had identified six core competencies which include: medical knowledge, patient care, professionalism, practice- based learning and improvement, systems-based practice and interpersonal and communication skills. ^[1] Three sixty degree evaluations can potentially assess all the six core competencies but may be especially useful in assessing interpersonal skills, communications skills, and professionalism^[2]. These skills are important for physicians as these skills help them to gain and maintain the trust of patients and also work as a team with other healthcare professionals ^[1]

The curriculum for postgraduate courses are well defined with respect to their respective subject matter but training and assessment of soft skills i.e., interpersonal skill, communication skill and professionalism are seldom part of this defined curriculum. These skills are as important as clinical skills and knowledge to produce a good medical professional, therefore evaluation of these skills is essential ^[3]

360-degree feedback provides a systematic vehicle for “full circle appraisal” of observable behaviors, especially the “soft” areas of performance that are difficult to quantify ^[6].

In this study with 360 degree evaluation, postgraduate students were evaluated by different people from their working sphere.This approach is better than single evaluator assessment as it will enhance their soft skills and thereby improve their overall performance if done diligently.

In this study, we evaluated the resident doctors at SVNGMC Yavatmal by 360-degree assessment, to evaluate professionalism and other competencies like interpersonal skills, communication skills, knowledge & its application for patient care and team work capabilities among them.

II. Aim and objectives

Aim: To evaluate professional competencies by 360 degree evaluation in resident doctors at SVNGMC Yavatmal.

Objectives:

1. To evaluate communication skills among resident doctors
2. To evaluate interpersonal skills among resident doctors
3. To evaluate professionalism among resident doctors.
4. To evaluate sound knowledge and its application in resident doctors.
4. To evaluate the team work capabilities among resident doctor.

III. Material And Methods:

This cross sectional observational study was conducted after due ethical approval from IEC SVNGMC Yavatmal to evaluate the postgraduate students' professionalism and other related competencies by 360 degree evaluation over a period of six months from october 2017-March 2018. Residents from six clinical departments medicine, surgery, OBGY, Ophthalmology, ENT and Pediatrics were included in this study.

Inclusion criteria: Only JR II from these departments were included in the study.

Exclusion criteria: 1. JR I were too new to undergo adequate evaluation. 2. JR III were also excluded as they will be graduated within one year and there would not be a chance to reevaluate them in the next year if any intervention planed at the end of the study as per need.

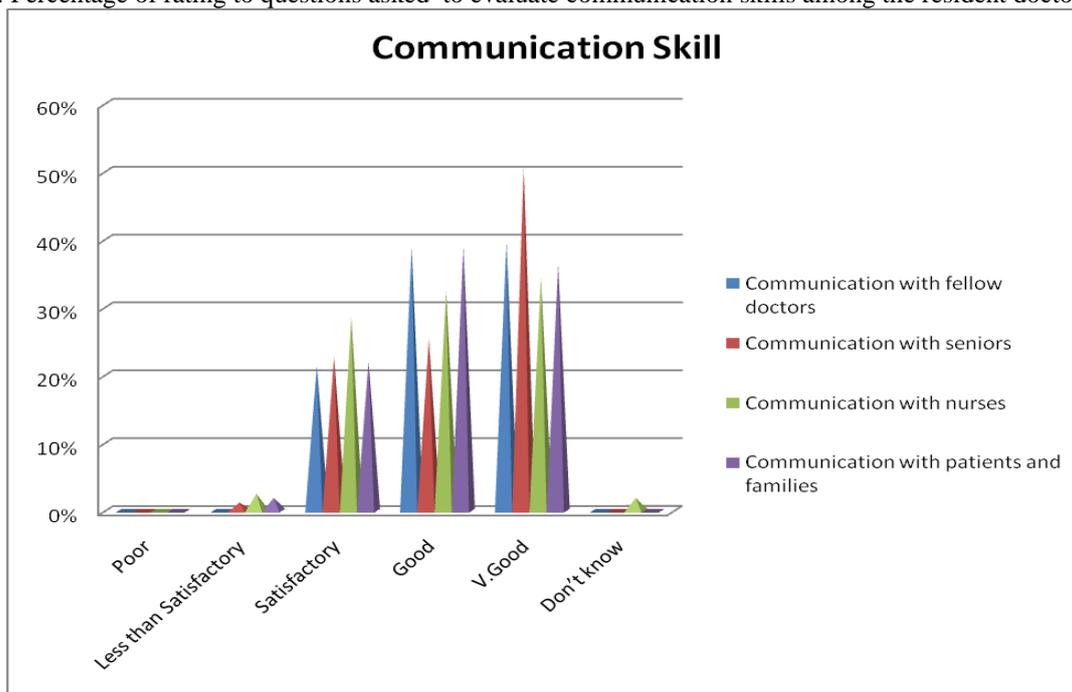
Volunteer residents' (JR II) valid informed and written consents were taken prior to starting of evaluation. The evaluation was done over a period of 2 months period. The evaluators questionnaire was prepared consisting of total eighteen questions distributed as four questions evaluating communication skills, three questions evaluating Interpersonal skills, Four questions evaluating Knowledge and practical skills four questions evaluating professionalism and three questions evaluating teamwork skills.

Each resident doctor (JR II) was evaluated by self, two faculties, two peers, two interns, two nursing staff, and two patients. Thus each resident was evaluated by himself and ten evaluators thus in total eleven evaluators for one resident under 360degree evaluation. All these evaluators were selected randomly from the residents' working sphere. Answered questionnaires were collected on the same day of distribution. Identity of the evaluators and their responses were kept confidential and it was not disclosed at any given time, only their occupational groups were disclosed. A five point Likert-scale was used to rate the residents' skills (interpersonal skill, communication skills, professionalism ,knowledge and teamwork capabilities) with '5' meaning 'very good'; '4' meaning 'good'; '3' meaning 'Satisfactory'; 2 meaning 'less than satisfactory'; and '1' implying 'poor'.

If the evaluators feel they cannot answer any question they were asked to tick 'Don't know' as a last option in the questionnaire. Eleven response sheets for fourteen residents, making a total of 154 were tabulated further to deduce the observations in a comprehensive manner.

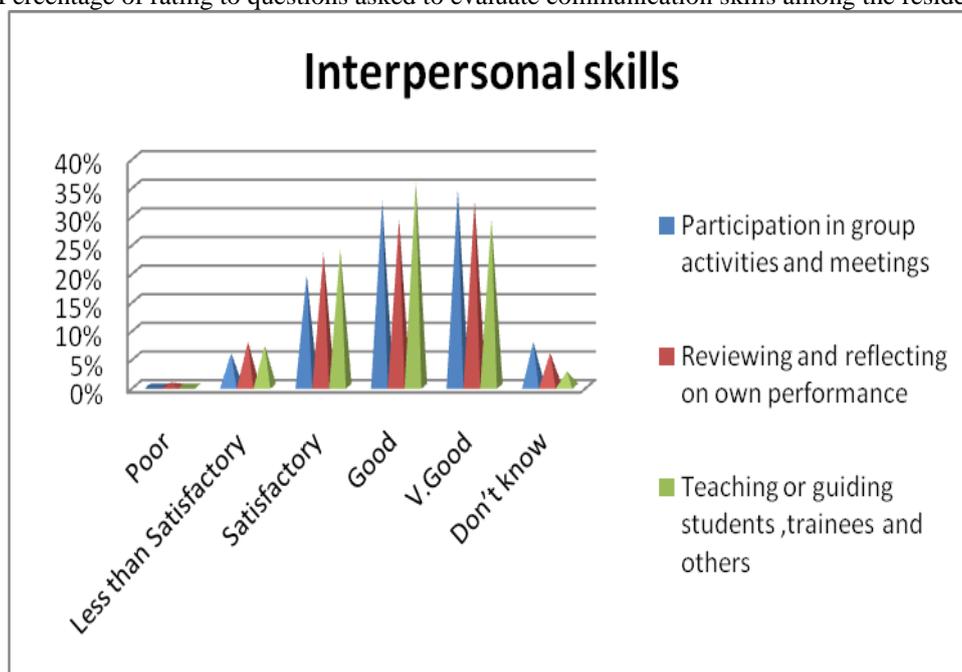
IV. Observations And Result:

Fig.1: Percentage of rating to questions asked to evaluate communication skills among the resident doctors.



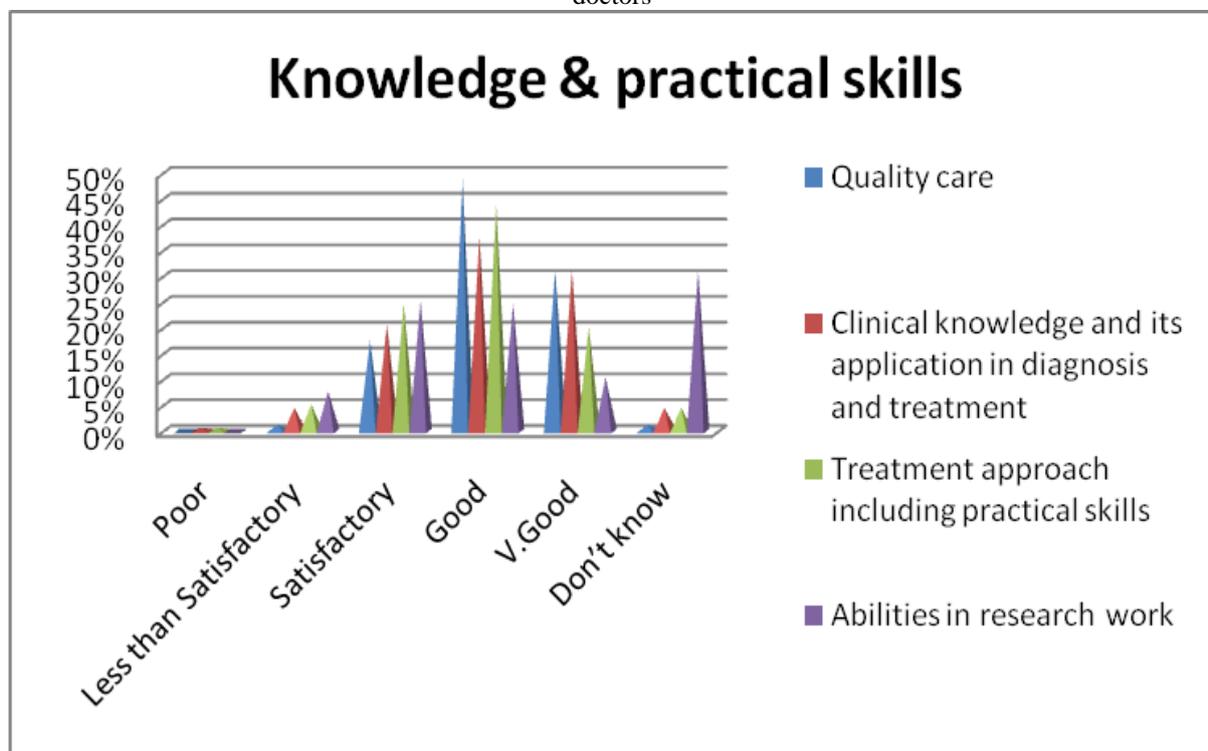
1. Communication with fellow doctors was rated as very good by majority of evaluators 39.61% followed as good by 38.96%, Satisfactory by 21.42%.None of the evaluators rated it as poor or less than satisfactory.
2. Communication with seniors was rated Very good by 50.64% evaluators and rated less than satisfactory by 1.2% of the evaluators. None of the evaluators rated it as poor.
3. Communication with nurses was rated as very good by majority 34.41%, 2.5% evaluators rated it as less than satisfactory and 1.9% marked doesn't know response for it.
4. Communication with patients and families was rated as good by majority 38.96% evaluators and minimum that is 1.9% rating was less than satisfactory, none of the evaluator rated it as poor.

Fig. 2: Percentage of rating to questions asked to evaluate communication skills among the resident doctor



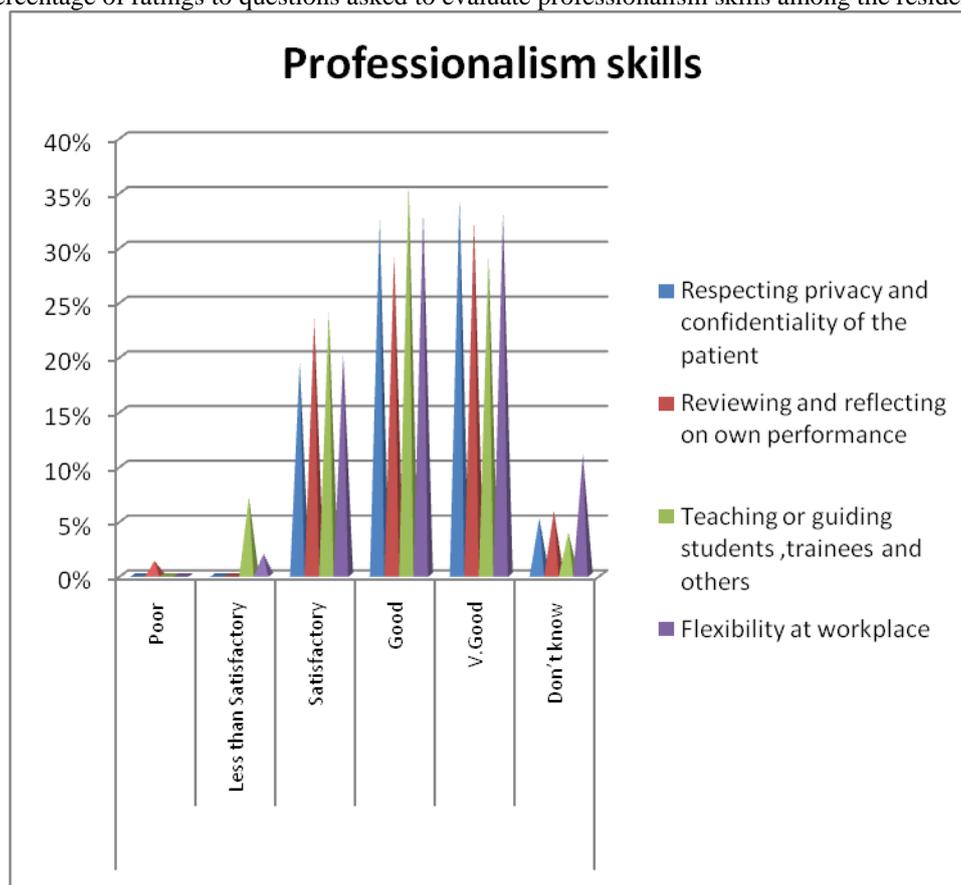
1. Participation in group activities and meetings was rated very good by majority 34.41% and lowest rating was 5.8% for less than satisfactory. 7.79% evaluators marked it as don't know.
2. Revising and reflecting on own performance was rated by majority 32.46% of evaluators as very good with minimum 0.64% rating for less than satisfactory and 5.84% of the evaluators marked it as don't know.
3. Teaching or guiding students, trainees and others was rated by majority 35.71% as good whereas only 7.14% rated it as less than satisfactory. 2.59% marked it as don't know.

Fig. 3: Percentage of rating to questions asked to evaluate Knowledge and practical skills among the resident doctors



1. Quality care provided by the resident doctors was rated good by majority 48.70% of evaluators and only 1.29% rated it as less than satisfactory. 1.29% of evaluators marked it as don't know.
2. Clinical knowledge and its application in diagnosis and treatment by the resident doctors was rated as good by majority 37.66% of evaluators and only 0.64% rated as poor and 4.54% of evaluators marked it as don't know.
3. Treatment approach including practical skills of the resident doctors was rated as good by 44.15% of evaluators and only 0.64% of evaluators rated it as poor. 4.54% of evaluators marked it as don't know.
4. Abilities in research work of the resident doctors were rated as satisfactory by 25.32% of evaluators. And only 7.79% of rating was there for it as less than satisfactory. Majority 31.16% of evaluators marked it as don't know.

Fig 4: Percentage of ratings to questions asked to evaluate professionalism skills among the resident doctors.



From table 6 and chart 6 it can be observed that

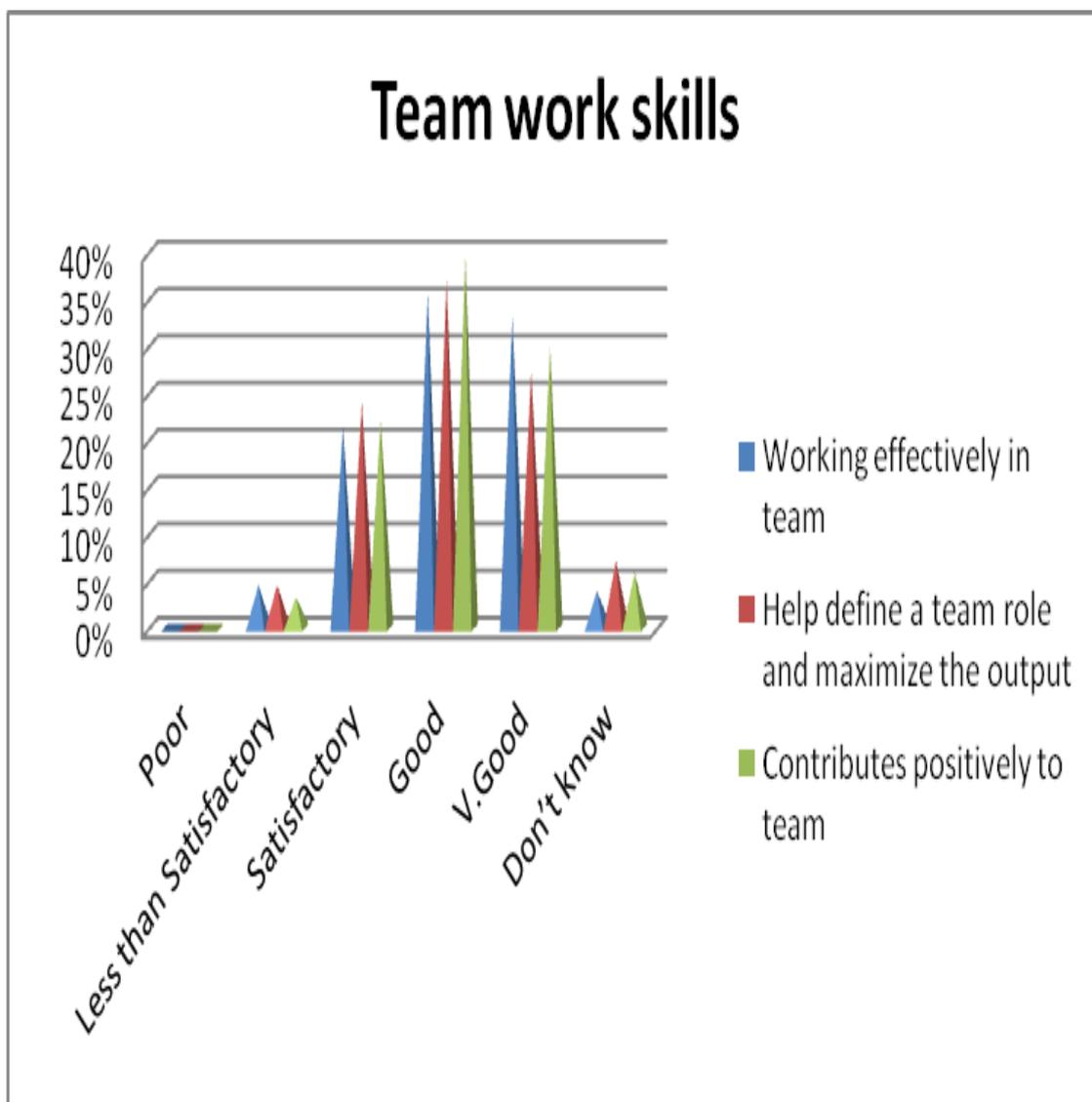
1. Though Respecting privacy and confidentiality of the patient by the resident doctors was rated as very good by majority 34.41% of evaluators. 0.44% evaluators rated it as less than satisfactory. 5.19% of evaluators marked it as don't know.

2. Reviewing and reflecting on own performance by the resident doctors under evaluation was rated as very good by majority 32.46% of the evaluators. 1.29% of evaluators rated it as poor. 5.84% of evaluators marked it as don't know.

3. Though Teaching or guiding students, trainees and others by the resident doctors under evaluation was rated as good by majority 35.71% of the evaluators, 11 (7.14%) of the evaluators rated it as less than satisfactory. 3.89% of evaluators marked it as don't know.

4. Flexibility at workplace of the resident doctors under evaluation was rated as good to very good each by majority 33.11% of the evaluators. 1.94% of evaluators rated it as less satisfactory. 11.03% of evaluators rated it as don't know.

Fig 5:Percentage of rating to questions asked to evaluate teamwork skills among the resident doctors

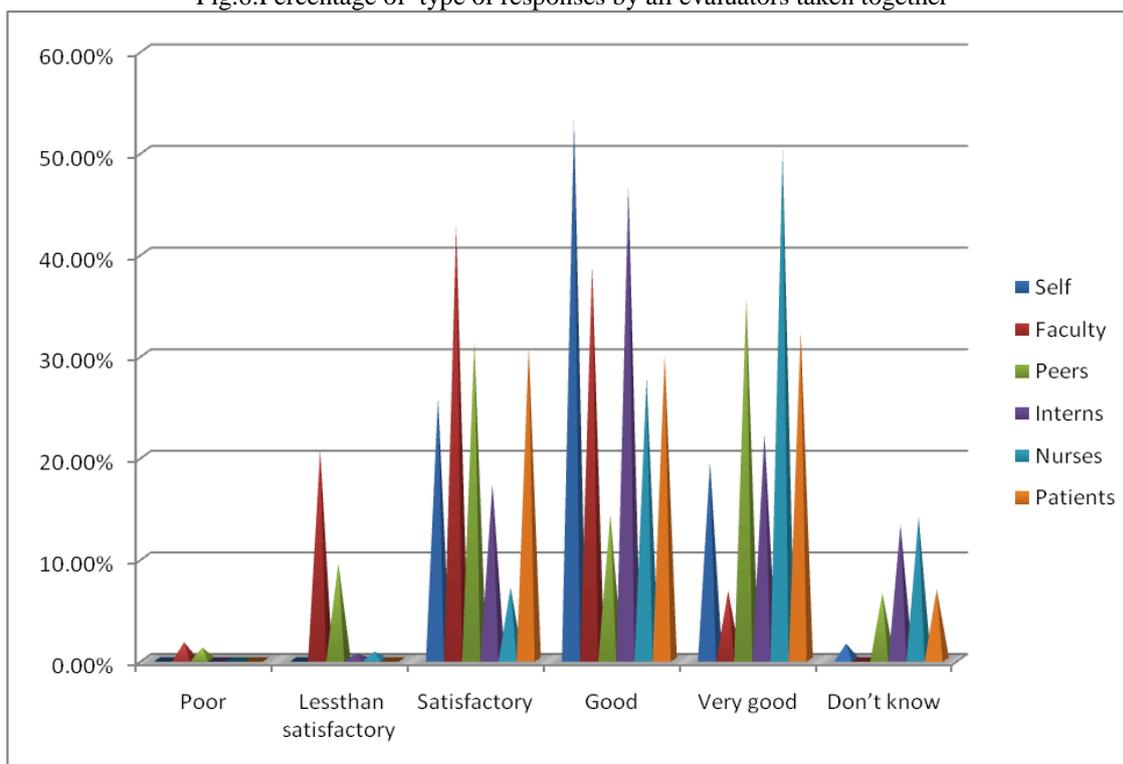


1. The ability of resident doctors under evaluation to Work effectively in team was rated good by majority 35.71% of evaluators. 4.54% of evaluators rate it as less than satisfactory. 3.89% evaluators marked it as unknown.

2. The ability of resident doctors under evaluation to help define a team role and maximize the output was rated as good by 37.01% of evaluators 4.54% of evaluators rate it as less than satisfactory. 7.14% evaluators marked it as don't know.

3. The ability of resident doctors under evaluation to Contributes positively to team was rated as good by 39.61% of evaluators 3.24% of evaluators rate it as less than satisfactory. 5.84% evaluators marked it as don't know.

Fig.6:Percentage of type of responses by all evaluators taken together



From table 8 we can observe the following pattern frequency of rating various responses by the evaluators in 360 degree evaluation feedback.

1. In self assessment evaluation sheets we observed that maximum response is 53.17% rating good in all questions, none of them rated as poor or less than satisfactory in any of the competencies.
2. In evaluation of resident doctors by faculty we observed that maximum that is 42.65% rating is satisfactory with 1.73% of faculty rating them poor in one or more competencies
3. In evaluation of resident doctors by peers we observed that 35.71% peers rated the residents under evaluation as very good .1.19% of peers rated them poor in one or more competencies
4. In evaluation of resident doctors by interns, we observed that 46.62% interns rated the residents under evaluation as good and 0.59% interns rated them as poor in one or more competencies with don't know response in 13.29%.
5. In evaluation of resident doctors by nurses we observed that 50.19% of nurses rated the residents under evaluation as very good and 0.79% as poor in one or more competencies. With don't know response in 14.08%.
6. In evaluation of resident doctors by patients we observed that 32.34% patients rated the residents under evaluation as very good and none of them rated as poor in one or more competencies, with don't know response in 6.94%.

V. Results:

After going through the observation tables of the ratings by the evaluators of 360 degree evaluation of resident doctors at SVNGMC Yavatmal we got the following results

1. Communication skills of JR II with fellow doctors, seniors ,nurses and patients and families was rated by majority of evaluators from good(39.6%) to very good(50.64%) along with a 2.5% rating less than satisfactory for the communication with nurses.
2. In Interpersonal skills, rating was good to very good for all aspects but with 7.79% less than satisfactory for reviewing and reflecting on their own work and 7.79% rating as don't know response for participation in group activities.
3. In professionalism skills also there was majority of rating was good to very good with only 1.29% of rating as poor and 11.03% responded as don't know for the question on flexibility at work place.
4. In team work skills we got good to very good rating in majority with 7.14% response for don't know.
5. In rating for sound knowledge and its application for patient care though majority rating was for good to very good, we got striking 31.16% responses as don't know regarding the research ability facet of the resident doctors.

6. We got good to very good type of responses in majority from self, peers, interns, nurses and patients but from faculty we got majority of responses 42.65% as satisfactory and 20.63% response as less than satisfactory.

VI. Discussion:

In an era of competency-based education, it is important for residency programs to appropriately assess resident knowledge and skills, as well as professional attitudes and behaviors^[9]

Behavioral or affective competencies such as interpersonal skills, communication skills, and judgment and relationship management are more difficult to measure quantitatively. Assessment of these skills through observation, peer appraisal and self assessment over a period of time and from a variety of perspective is more useful in providing a feedback^[7] Experience in many jurisdiction shown that, the receipt and subsequent integration of the information provided through 360 degree assessment can facilitate physician self awareness and personal and professional development^[8] The concept is however gaining momentum slowly but steadily in medical training.

We were able to introduce and implement the 360- degree evaluation instrument in our Institute for evaluation of residents in core competencies recognized by ACGME, without any resistance from the participants; we also obtained high evaluation rates. All categories of evaluators returned completed forms promptly, indicating their support for the process.

Many studies demonstrated that the 360-degree assessment tool is feasible for evaluating residents' professionalism^[10,11,12,13] In a pilot study of a 360-degree assessment instrument for a physical medicine and rehabilitation residency program, the tool was useful for providing formative feedback to residents regarding professionalism and performance^[11] Our findings support that the 360-degree assessment tool can be useful in an evaluation of resident doctors at SVNGMC Yavatmal

A recent study by Hemalata R and Shakuntla BS concludes the assessment done by the nurses and patient's relatives was inferior to peer and self evaluation^[14] . Such findings were also consistent with earlier studies done by Chandler N et al., and Brinkman WB et al^[3] Our study results coincides with the results of Harsha Jain et al which showed , ratings done by patients, nursing staff and undergraduate students was good; in fact better than rating by peers and consultants. In our study also overall rating for core competencies in JR II by nurses, patients, interns and peers was higher than by the faculty. This although is a positive finding for the institute, as patients seem to be satisfied with the health care professionals here, still, there is a need to explore further for reasons for lesser score by faculty. The probable explanation for this difference could be the regular sensitization of faculty for professionalism, communication skills, interpersonal skills etc. in this institution possibly resulting in higher expectations by faculty. Also, strong association between patients and colleague rating was noted in a study done by Lelliott P et al^[15]

One of the important finding of our study regarding research abilities of the residents responded by 31.16 % of evaluators as don't know .This finding alarms a intervention in regard of time to time reviewing the ongoing research work of the residents and sensitizing the residents in research work.

In summary, a 360-degree assessment tool might be a feasible and reliable measurement of the residents' professional competencies that a resident should show during residency program.

While the best approaches to teaching and evaluating professional competencies remain unclear, it has been noted that 360-degree assessments of professionalism are useful for the evaluation of residents^[12] Other groups have also demonstrated the feasibility of implementing 360-degree evaluations in residency programs for the assessment of a variety of ACGME competencies.^[10,11,13,16,17] We hope that this study might help to stimulate the development of implementing assessment tools like this and to establish the appropriate evaluation methods for the competencies.

VII. Conclusion:

Resident doctors' assessment by self and working sphere reported competencies among resident doctors showed that residents at SVNGMC Yavatmal are capable of consistently performing professionally across the domains of professionalism. However, the distribution of responses highlights some specific area where residents' performance could be improved.

A structured course in professionalism with valid and reliable assessment methods can be helpful in improving quality of medical education and health care so that society will get competent physicians.

We hope that routine 360 degree evaluation of residents for professionalism and other competencies will continue to increase discussions about professionalism and positively impact faculty and resident doctors attitudes.

Limitations: This study has several limitations.

First, even though our study covered a broad range of behaviors that were important for the resident doctors as a clinician but some potentially important competencies might not been included in it.

Second, a small sample size, limited by our resident (JR II) numbers, contributed to a general difficulty with further statistical analysis.

Recommendations:

There was significant time and effort involved in manually distributing, collecting, and ensuring confidentiality of the data. We hope that electronic data collection will solve this issue in the future.

Practice points: .1.In an era of competency-based education, it is important for residency programs to appropriately assess resident knowledge and skills, as well as professional attitudes and behaviors.

2.Training & assessment of these skills is seldom part of the postgraduate curriculum.

3.360 degree evaluation of postgraduate students is done by different people from their working sphere to evaluate professional competencies among resident doctors.

4. the receipt and subsequent integration of the information provided through 360 degree assessment can facilitate resident doctors self awareness and personal and professional development

Practice points:

- In an era of competency-based education, it is important for residency programs to appropriately assess resident knowledge and skills, as well as professional attitudes and behaviors.
- .Training & assessment of these skills is seldom part of the postgraduate curriculum.
- 360 degree evaluation of postgraduate students is done by different people from their working sphere to evaluate professional competencies among resident doctors.
- the receipt and subsequent integration of the information provided through 360 degree assessment can facilitate resident doctors self awareness and personal and professional development

References:

- [1]. Accreditation Council For Graduate Medical Education. 360-Degree Evaluation [3]Instrument: An Educational Resource from The ACGME Outcome Project. Toolbox Of Assessment Methods.Version 1.1. September 2000; 3.
- [2]. Rodgers KG, Manifold C. 360-Degree Feedback: Possibilities for Assessment [4] Of the ACGME Core Competencies for Emergency Medicine Residents. Acad Emerg Med. 2002; 9(11):1300-04.
- [3]. Chandler N, Anderson G, Park B, Byerley J, Brown W, Steiner M. Use Of A [2]360-Degree Evaluation In The Outpatient Setting: The Usefulness Of Nurse, Faculty, Patient/ Family And Resident Self Evaluation. Journal of Graduate Medical Education. 2010; 2(3):430-34.
- [4]. Lynch DC, Surdyk PM, Eiserar (2004) Assessing Professionalism: A Review Of The Literature. Med Teach 26: 366- 373.5. 360 Degree Performance Toolkits, Council of Academic Hospitals of Ontario, Page 13
- [5]. Arnold EL, Blank LL, Race EH Cipparrone, N (1998). Can Professionalism Be Measured? The Development of a Scale for Use in The Medical Environment. Acad Med. 73:1119-21.
- [6]. Isser Dubinsky,Kelly Jennings,Moshe Greengarten And Amybrans,360 Degree Physician Performance Assessment ,Healthcare Quarterly Vol.13 No.2 ,2010 Page 72.
- [7]. Brinkman W.,S.R.Geraghty,B.P. Lahrpear,J.C.Khoury,J.A.Gonzalezdel Rey,T.G.Dewitt Et Al.2007, Effect Of Multisource Feedback On Resident Communication Skills And Professionalism.Archives Of Paediatric And Adolescent Medicine 161:44-49.
- [8]. Conducting Effective Performance Appraisals. Clin Leadersh Manag Rev.2001; 15:348–352.)
- [9]. Wood J, Collins J, Burnside ES, Et Al. Patient, Faculty And Self-Assessment Of Radiology Resident Performance. Acad Radiol. 2004;11:931–939.
- [10]. Musick DW, Mcdowell SM, Clark N, Salcido R. Pilot Study Of A 360-Degree Assessment Instrument For Physical Medicine And Rehabilitation Resident Program. J Phys Med Rehabil. 2003;82:394–402.
- [11]. Lynch DC, Surdyk PM, Eiser AR. Assessing Professionalism: A Review Of The Literature. Med Teach. 2004;26:366–373.
- [12]. Stark R, Korenstein D, Karani R. Impact Of 360-Degree Professionalism Assessment On Faculty Comfort And Skill In Feedback Delivery. J Gen Intern Med. 2007; 23(7):969–972.
- [13]. Hemlata R Shakunta[9]La BS. Using Multiple Assessors To Evaluate Core Competencies Of Nursing Students: A 360 Degree Evaluation Approach. Nitte University Journal Of Health Science. 2013;3(3):ISSN 2249-7110.9].
- [14]. Lelliot P, Williams R, Mears A, Andiappan M, Owen H, Reading P, Et Al Questionnaires For 360 Degree Assessment Of Consultant Psychiatrists; Development And Psychometric Properties. British Journal Of Psychiatry. 2008;193:156-60.
- [15]. Joshi R, Ling FW, Jaeger J. Assessment Of A 360-Degree Instrument To Evaluate Residents' Competency In Interpersonal And Communication Skills. Acad Med. 2004;79:458–63.
- [16]. Higgins RS, Bridges J, Burke JM, O'Donnell MA, Cohen NM, Wilkes SB. Implementing The ACGME General Competencies In A Cardiothoracic Surgery Residency Program Using 360-Degree Feedback. Ann Thorac Surg. 2004;77:12–7

Notes on contributor:

Dr.Nilima Patil is an eminent teacher in Anatomy and asso.prof. in the department of anatomy.

Dr.Alka Rawekar Prof. physiology Dean Allied healthprofessionals as well as coconvenor at MCI nodal center DMIMS(DU),Sawangi(M),Wardha INDIA.

Table 1:Percentage of ratings to questions asked to evaluate communication skills among the resident doctors.

Sr.n o.	Question	Poor	Less than Satisfactory	Satisfactory	Good	V.Good	Don't know
1	Communication with fellow doctors	0	0	33(21.42%)	60(38.96%)	61(39.61%)	0
2	Communication with seniors	0	2(1.2%)	35(22.72%)	39(25.32%)	78(50.64%)	0
3	Communication with nurses	0	4(2.5%)	44(28.57%)	50(32.46%)	53(34.41%)	3(1.9%)
4	Communication with patients and families	0	3(1.9%)	34(22.07%)	60(38.96%)	56(36.36%)	0

Table 2.Percentage of ratings to questions asked to evaluate Interpersonal skills among resident doctors

Sr.No.	Question	Poor	Less than Satisfactory	Satisfactory	Good	V.Good	Don't know
Q.1	Participation in group activities and meetings	0	9(5.8%)	30(19.48%)	50(32.46%)	53(34.41%)	12(7.79%)
Q.2	Reviewing and reflecting on own performance	1(0.64%)	12(7.79%)	36(23.37%)	45(29.22%)	50(32.46%)	9(5.84%)
Q.3	Teaching or guiding students ,trainees and others	0	11(7.14%)	37(24.02%)	55(35.71%)	45(29.22%)	4(2.59%)

Table 3.Percentage of ratings to questions asked to evaluate Knowledge and practical skills among the resident doctors.

Sr.No.	Question	Poor	Less than Satisfactory	Satisfactory	Good	V.Good	Don't know
Q.1	Quality care	0	2(1.29%)	27(17.53%)	75(48.70%)	48(31.16%)	2(1.29%)
Q.2	Clinical knowledge and its application in diagnosis and treatment	1(0.64 %)	7(4.54%)	32(20.77%)	58(37.66%)	48(31.16%)	7(4.54%)
Q.3	Treatment approach including practical skills	1(0.64 %)	8(5.19%)	38(24.67%)	68(44.15%)	31(20.12)	7(4.54%)
Q.4	Abilities in research work	0	12(7.79%)	39(25.32%)	38(24.67%)	16(10.38%)	48(31.16%)

Table 4:Percentage of ratings to questions asked to evaluate professionalism skills among the resident doctors.

Sr.No	Question	Poor	Less than Satisfactory	Satisfactory	Good	V.Good	Don't know
Q.1	Respecting privacy and confidentiality of the patient	0	13(8.44%)	30(19.48%)	50(32.46%)	53(34.41%)	8(5.19%)
Q.2	Reviewing and reflecting on own performance	2(1.29%)	12(7.79%)	36(23.37%)	45(29.22%)	50(32.46%)	9(5.84%)
Q.3	Teaching or guiding students ,trainees and others	0	11(7.14%)	37(24.04%)	55(35.71%)	45(29.22%)	6(3.89%)
Q.4	Flexibility at workplace	0	3(1.94%)	32(20.12%)	51(33.11%)	51(33.11%)	17(11.03 %)

Table 5.Percentage of ratings to questions rated to evaluate teamwork skills among the resident doctors

Sr.No.	Question	Poor	Less than Satisfactory	Satisfactory	Good	V.Good	Don't know
Q.1	Working effectively in team	0	7(4.54%)	33(21.42%)	55(35.71%)	51(33.11%)	6(3.89%)
Q.2	Help define a team role and maximize the output	0	7(4.54%)	37(24.04%)	57(37.01%)	42(27.27%)	11(7.14%)
Q.3	Contributes positively to team	0	5(3.24%)	34(22.07%)	61(39.61%)	46(29.87%)	9(5.84%)

Table 6. Percentage of type of responses by each evaluator taken together:

Evaluators → ↓ Responses	Self	Faculty	Peers	Interns	Nurses	Patients
Poor	0	7(1.73%)	6(1.19%)	0	0	0
Less than satisfactory	0	52(20.63%)	48(9.52%)	3(0.59%)	4(0.79%)	0
Satisfactory	65(25.79%)	215(42.65%)	158(31.34%)	87(17.26%)	36(7.14%)	155(30.75%)
Good	134(53.17%)	196(38.88%)	72(14.28%)	235(46.62%)	140(27.77%)	151(29.96%)
Very good	49(19.44%)	34(6.74%)	180(35.71%)	112(22.22)	253(50.19%)	163(32.34%)
Don't know	4(1.58%)	0	33(6.54%)	67(13.29%)	71(14.08%)	35(6.94%)
Total	252	504	504	504	504	504

Dr.Nilima Patil, et. al. "360 degree evaluation of professional competencies among resident doctors at SVNGMC Yavatmal." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 22(2), 2023, pp. 05-15.