MENTORING OF EMERGENCY RESIDENTS A DESIRED NECESSARY OR IMPOSITION

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Introduction: Mentoring process receives a lot of attention from the researchers, providing multiple definitions on what exactly are mentor, mentee and mentoring process. Mentoring is a vital component of education, personal growth, and career development in every profession.

Background: As mentoring is an essential part of Emergency Residency program, as it is very much necessary for carrier and academic development. But little has been written about mentoring in emergency medicine

Objective: To find out Benefits of mentor mentee program.

Aim Of The Study-
1. To study the benefits of mentor mentee program for residents and practice of mentoring in tertiary care hospital in India.
2. To know the students perception on mentoring relationship in an organization.
3. To understand the factors effecting mentoring relationship.

Limitations Of The Study: In spite of every sincere effort my study has lacunae. The notable short comings of this study are:
1. The sample size was small. Only 200 cases are not sufficient for this kind of study.
2. As data collection was done via survey monkey there was a delay and some of them did not response.
3. The study population is being tested upon a confined set of questionnaire and it may not cover the entire range of questions.

Materials And Method: A descriptive and observational, multicentric, hospital-based, questionnaire based study was conducted. 200 residents of emergency medicine evaluating the effect of mentoring on career choices and academic advancement. For statistical analysis data were entered into a Microsoft excel spreadsheet and then analyzed by SPSS 27.0.
Ethics & Scientific Committee Approval: Clinical research and ethics committee Peerless hospital Hospitex & Research center approval date 27th December 2018. Approval letter attached.

Result And Discussion: Our study found that maximum emergency residents think development of clinical skills via mentoring was helpful and very helpful for developing administrative skills. Most of the emergency residents think mentoring was very helpful platform for Academic development and helpful for Research or Publication. But in our study emergency residents think mentoring was not helpful for psychological support.

Conclusion: The mentor–mentee relationship provides mutual benefit to both participants. We suggested that mentoring increases the likelihood of successful clinical skills and Academic development. It was also found that mentoring was also helpful to develop administrative skills and Research or Publication but it was not that much helpful for psychological support of the student. As emergency medicine is stressful challenging psychological support is very much necessary. We suggest that attention should be taken towards psychological support. Keys to success is commitment to the mentor-mentee relationship, an awareness of both responsibilities and avoidance of pitfalls.

Introduction:

“Mentoring is a brain to pick, an ear to listen, and a push in the right direction.”-John Crosby,

Mentoring is a vital component of Education, personal growth, carrier development in every profession. So what exactly is mentor, mentee and mentoring process?. As described, mentoring includes the mentee and mentor. Classically, the mentor is the individual with greater experience and knowledge, as well as a more senior position. This can occur at any level including medical student and resident or staff, junior faculty and senior faculty. Most of us have experienced mentoring at a given point of time during our academic or student life. In short mentoring is one of the ways used to transfer knowledge. One major goal of the mentoring relationship is matching of a junior colleague with a more experience by helping him to obtain with the skills and knowledge from a experienced senior colleague. The mentor’s main goal is to assist the mentee along the road for future success in life, obtaining his/her goals. However, success can be defined differently, depending on the individual, and the mentor and mentee may differ in their definitions of success. Mentoring has multiple benefits, including improved productivity, and most importantly, career satisfaction and development. Physicians with mentors are more confident in their abilities. study suggests physicians with a mentor receive a higher salary. Professional societies have established the importance of mentoring, many creating formal programs for mentoring with resources. Who benefits? The relationship primarily benefits the mentee. As discussed, mentees demonstrate greater satisfaction, faster promotion, and more academic productivity in the literature. Other benefits include professional safety, confidence, project opportunities, greater understanding of medical roles, feedback, funding, and more relationships. Mentors also benefit, though these benefits may not occur as quickly. Mentors can assist in the development of a colleague, are exposed to new ideas, and have an opportunity to share their own values. Potential Topics for mentoring- Mentoring encompasses a wide range of topics. Topics can be separated into three fields: training, personal and professional, and future career, which overlap. Training issues such as mentee progress in his/her residency or career, rotation selection, clinical efficiency, mentee preparation for lectures or presentations, medical knowledge, discussion of cases (interesting, successful, difficult, or challenging), and tests are the major components of this field.

There is much published literature regarding the importance of mentoring in faculty development. Mentoring for medical students and residents has always been strongly encouraged. It makes sense that the presence of mentors at probably one of the most important transition points in a physician’s career would be highly desirable. Although mentoring is a well-recognized topic in academic medicine, relatively little has been written about mentoring in emergency medicine. Although the reasons for this are numerous, I would argue that in the Emergency department mentors needed most where a resident skills and knowledge gets tested every minute and have to maintain a very less margins of errors at emergency. Perhaps as residents enter practice we need to be more explicit that there will be
individuals who are willing to mentor them, to help them to continue to develop their clinical courage to maintain practice in these environments.

Our objectives of this paper were. First we wanted to conduct a review of literature on mentoring in EM. Second, based on this review we wish to know the students perception on mentoring relationship in an organization and lastly, the factors effecting mentoring relationship.

Aim of the Study:
1. To study the trends and practices of mentoring in tertiary care hospital in India.
2. To know the students perception on mentoring relationship in an organization
3. To understand the factors effecting mentoring relationship

Review of Literature:
Mentoring is a vital component of education, personal growth, and career development in every profession. In emergency medicine, mentoring is beneficial, for career development, job satisfaction, and goal achievement. Mentoring is defined by a trusted and experienced advisor (the mentor) who has a direct interest in the development and education of another individual (the mentee). Importantly, mentoring is defined by intentional interaction, with the primary goal of mentee development. The mentee seeks to receive guidance and wisdom, commonly in a confidential, protective, and supportive environment, from the mentor who actively sets aside time and energy and remains flexible.

This relationship can be short or long, structured or loose. It does not need to be continuous, and contact may be reestablished after breaks. It can occur with a variety of levels. Importantly, both the mentor and mentee gain from this relationship, though at first the mentee seems to benefit the most.

Yorkshire accident and emergency mentoring scheme
Mentoring was introduced to the accident and emergency medicine trainees of this region in 1997. The regional coordinator sends out names of volunteer mentors (15 of them) to the prospective mentees who then choose a mentor that they are comfortable with and feel will respect their confidentiality. They remain together for the duration of the mentee’s training. As capacity is always a problem, mentees are advised to nominate a second choice, as their first choice may not be accommodated. Mentors are encouraged to attend the regular semiformal trainee meetings giving them an opportunity to assess one another. A survey was carried out in May 1999 to assess the impact, if any, that the mentoring had on their training and determine if there was any enthusiasm for the mentoring scheme. All 28 specialist registrar trainees in emergency medicine were sent a questionnaire of nine questions (see appendix) either by post or in person. All were guaranteed anonymity. Twenty five replied (89%), of which 19 were male and six were female; four were from an ethnic minority. This good response was matched by very good completion of the questionnaires. All 25 respondents had mentors and were familiar with the concept of mentoring. Seventeen selected their mentors while eight were allocated mentors. Reasons were not given in the reply sheets. All of the respondents met at least two to three times a year with their mentors. Seventeen of these met more than four times a year with their mentors. When asked if they found appraisals and assessments intimidating, five said yes and 18 said no. Four of the five who replied yes were from an ethnic minority and one was a white female. The most common reason advanced was, “Assessments were confrontational like examinations and too formal”. When asked if mentoring helped their preparation for appraisals and assessment, 18 said yes, five said no. Two did not answer as they were in year 1 and had not yet had an assessment. Those who replied no to the question were in years 4 and 5. They felt that the mentoring scheme had no impact on their training. Ethnic minority and female trainees were most enthusiastic and felt that mentoring was very helpful in preparing them for appraisals and assessments. These findings mirror the reported conclusions of the investigations into the outcomes of the doctors development and mentoring network in the Northern and Yorkshire region of the NHS, carried out by Dr Mary Connor. It showed that mentoring could be of particular value to marginalised groups such as ethnic minorities and women in medicine.

Yeung M et al (2010) found that a mentor is a person who takes a special interest in the professional development of a junior colleague and provides guidance and support. Mentoring can be beneficial for students, residents, junior colleagues and researchers and can be very rewarding for the physician who provides this guidance. Although mentoring is a well-recognized topic in academic medicine, relatively little has been written about mentoring in emergency medicine (EM). Consequently, we conducted a literature review on mentoring in EM and present our
findings in this paper. We discuss different models of mentoring, factors that foster the development of strong mentorship programs, the responsibilities of mentors and mentees, and issues specific to mentorship of female, minority and research physicians. We also present several case scenarios as a basis for recommendations for teachers and learners in EM.

Welch JL et al (2016) found that Mentoring in academia is considered a fundamental element of career choice, satisfaction, and productivity. While there is an expectation that trainees and junior faculty will have a mentor, there is no standard practice for training or establishing mentoring relationships. This mentoring workshop is designed to help leaders in academic medicine train mentees. This workshop is built around the fundamental belief that training the mentee to be proactive, take ownership, and drive the relationship will not only jump-start the mentoring process but also cultivate a more sustainable mentoring relationship. The materials for this workshop include instructor and participant resources to facilitate self-reflection and group discussion. Tools include a mentee needs self-assessment and a mentoring network map. Implementation of the workshop was successfully carried out in a residency program with 21 interns in their first year of training. Participants believed the workshop was appropriate for their needs and provided useful knowledge and tools to enhance their mentoring relationships. This workshop is the first session in a mentoring training series designed to provide ongoing mentoring training, resources, and tools to encourage both the mentor and the mentee to cultivate a productive relationship.

Garmel GM et al (2004) found that Mentoring is an important aspect of career development for medical students, residents, and junior faculty. It is vital to the professional growth and maturation of individuals early in each phase of their careers. Additionally, mentoring has a critical role throughout all career stages, because the mentor–mentee relationship provides mutual benefit to both participants. This article will describe the role of the mentor; suggest ways to increase the likelihood of successful.

Welch J et al (2017) Mentoring is considered a fundamental component of career success and satisfaction in academic medicine. However, there is no national standard for faculty mentoring in academic emergency medicine (EM) and a paucity of literature on the subject. The objective was to conduct a descriptive study of faculty mentoring programs and practices in academic departments of EM. An electronic survey instrument was sent to 135 department chairs of EM in the United States. The survey queried faculty demographics, mentoring practices, structure, training, expectations, and outcome measures. Chi-square and Wilcoxon rank-sum tests were used to compare metrics of mentoring effectiveness (i.e., number of publications and National Institutes of Health [NIH] funding) across mentoring variables of interest. Thirty-nine of 135 departments completed the survey, with a heterogeneous mix of faculty classifications. While only 43.6% of departments had formal mentoring programs, many augmented faculty mentoring with project or skills-based mentoring (66.7%), peer mentoring (53.8%), and mentoring committees (18%). Although the majority of departments expected faculty to participate in mentoring relationships, only half offered some form of mentoring training. The mean number of faculty publications per department per year was 52.8, and 11 departments fell within the top 35 NIH-funded EM departments. There was an association between higher levels of perceived mentoring success and both higher NIH funding (p = 0.022) and higher departmental publications rates (p = 0.022). In addition, higher NIH funding was associated with mentoring relationships that were assigned (80%), self-identified (20%), or mixed (22%; p = 0.026). Our findings help to characterize the variability of faculty mentoring in EM, identify opportunities for improvement, and underscore the need to learn from other successful mentoring programs. This study can serve as a basis to share mentoring practices and stimulate conversation around strategies to improve faculty mentoring in EM.

Rekha KN et al (2019) the primary objective of the present study is to understand mentoring relationships in Indian organizations from the mentors’ perspective. In particular, the study examines whether the learning goal orientation of a mentor can significantly influence the mentoring process and outcomes for the mentor in a mentoring relationship. Two hundred and thirty- six participants were selected using purposive sampling. Data were gathered using standardized questionnaires. Mediating effects were investigated using the PROCESS model by Hayes, Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression Based Approach. The results indicate high levels of support for several hypotheses examining the direct effects of learning goal orientation on willingness to engage by the mentor, mentoring functions provided and mentor outcomes (personal learning and self enhancement). The overall findings of the study suggest that mentors are not only ‘providers’ but also ‘receivers of learning’. Limitations and directions for future research are also discussed in the paper.
Materials & Method:-
A descriptive and observational, multicentric, hospital-based, questionnaire based study was conducted. The focus of the study is to determine mentoring of emergency residents necessary or imposition through a multiple choice questionnaire. This information was obtained through a descriptive correlation analytical survey design. Essentially, descriptive and correlation are classed as non-experimental research and in a survey; its purpose is to observe, describe and document aspects of a situation.

Sample Size Justification:
The incidence of emergency medicine residents is high, widely varies ranging between 25% and 77.8%. So for this study $p=0.25$
Thus the number of emergency medicine residents required for this study was 200.00~200 with power 90% of 95% Confidence Interval.
The formula used for sample size calculation was as follows:
\[ n = \frac{4pq}{L^2} \]
Where
n= required sample size
p= 0.25 (as per the study)
qu = 1 - p
L = Loss % (Loss of information)

Calculation:
Here p= 0.25
q=1-p = 1-0.25=0.75
4pq = 4 x 0.25X0.75= 0.75
L^2 = 0.00375
n = \[ \frac{4pq}{L^2} \] = 0.75/0.00375= 200.00= 200
Total 200 emergency medicine residents were selected in our study.

Inclusion Criteria
All residents of emergency medicine evaluating the effect of mentoring on career choices and academic advancement.

Exclusion Criteria
Residents of all other disciplines.

Method of data Collection:-
Information through questionnaire survey is the most common method of data collection in medical research. One study describes the questionnaire as the quickest and cost effective approach when collecting large amounts of information from a large number of people scattered over a wide geographical area. A questionnaire allows a degree of objectivity to the data collected as it is unobtrusive and offers the possibility of complete anonymity of the participant.

This study is confined among the resident doctors of emergency medicine working at India govt and non govt sectors. The questionnaire included the questions regarding their opinion of mentoring, they are part of any mentoring programme and how mentoring is beneficial for their academic carrier etc. The questionnaire will be E-mailed to the emergency residents all over India by using “SURVEY MONKEY” software .The responses was noted, coded and entered in an excel sheet and analyzed accordingly. The result which was obtained was expressed in terms of percentages and proportions.

Questionnaire Format (Appendix I)
For the purpose of this proposal, a closed question format to collect data will be used. Closed questions yield data that allow for comparison between respondents as all the responses are in the same format, this additionally allows for the collection of valid and reliable data. They can be answered quickly and therefore improve response rates and can be pre-coded, thereby making analysis easier. To determine knowledge level a multiple-choice format was used. One study suggest that this format is appropriate in cases where there is more or less fixed number of alternatives.
Multiple-choice offers the participant a list of responses, from which they select the one most appropriate. The questionnaire that was used in this study is a already validated questionnaire that has been used by a study in their study done in Australia.

**Anticipated Benefits**
This study is being conducted to help us in the following:
1. What is the view of the residents towards the mentoring programme
2. Is there any mentoring programme available for emergency residents.
3. What is the potential benefits of mentoring programme.
4. What more we can do to improve mentoring programme or start a mentoring if it is not available.

**Statistical Analysis:**
For statistical analysis data were entered into a Microsoft excel spreadsheet and then analyzed by SPSS (version 27.0; SPSS Inc., Chicago, IL, USA) and GraphPad Prism version 5. Data had been summarized as mean and standard deviation for numerical variables and count and percentages for categorical variables Z-test (Standard Normal Deviate) was used to test the significant difference of proportions. p-value ≤ 0.05 was considered for statistically significant.

**Result And Analysis:**
**Table:** Distribution of Gender.

| Gender | Frequency | Percent |
|--------|-----------|---------|
| Female | 69        | 34.5%   |
| Male   | 131       | 65.5%   |
| Total  | 200       | 100.0%  |

69(34.5%) emergency residents were female and 131(65.5%) emergency residents were male. The value of z is 6.2. The value of p is < .00001. The result is significant at p < .05.

**Table:** Distribution of Year of the Student.

| Year of the Student | Frequency | Percent |
|---------------------|-----------|---------|
| 1\textsuperscript{st} | 38        | 19.0%   |
| 2\textsuperscript{nd} | 113       | 56.5%   |
| 3\textsuperscript{rd} | 49        | 24.5%   |
| Total               | 200       | 100.0%  |

38(19.0%) emergency residents were 1\textsuperscript{st} year’s student, 113(56.5%) emergency residents were 2\textsuperscript{nd} year’s student and 49(24.5%) emergency residents were 3\textsuperscript{rd} year’s student. The value of z is 6.5187. The value of p is < .00001. The result is significant at p < .05.
Table: Distribution of postgraduate residency program.

| Postgraduate residency program | Frequency | Percent |
|-------------------------------|-----------|---------|
| DNB-EM                        | 35        | 17.5%   |
| MEM                           | 137       | 68.5%   |
| MRCEM                         | 28        | 14.0%   |
| Total                         | 200       | 100.0%  |

35(17.5%) emergency residents were DNB-EM, 137(68.5%) emergency residents were MEM and 28(14.0%) emergency residents were MRCEM. The value of z is 10.3015. The value of p is < .00001. The result is significant at p < .05.

Table: Distribution of University of Affiliation.

| University of Affiliation | Frequency | Percent |
|---------------------------|-----------|---------|
| GWU                       | 165       | 82.5%   |
| National Board            | 35        | 17.5%   |
| Total                     | 200       | 100.0%  |

165(82.5%) emergency residents were from GWU and 35(17.5%) emergency residents were from national board. The value of z is 13. The value of p is < .00001. The result is significant at p < .05.
Table:- Distribution of understand by a mentor.

| Understand by a mentor | Frequency | Percent |
|------------------------|-----------|---------|
| Counselor              | 4         | 2.0%    |
| Guide                  | 140       | 70.0%   |
| Motivator              | 39        | 19.5%   |
| Supervisor             | 17        | 8.5%    |
| Total                  | 200       | 100.0%  |

4(2.0%) emergency residents were understood by counselor, 140(70.0%) emergency residents were understood by guide, 39(19.5%) emergency residents were understood by motivator and 17(8.5%) emergency residents were understood by supervisor. The value of z is 10.1561. The value of p is < .00001. The result is significant at p < .05.

Table:- Distribution part of other emergency medicine residency?

| Other emergency medicine residency? | Frequency | Percent |
|-------------------------------------|-----------|---------|
| NO                                  | 140       | 70.0%   |
| YES                                 | 60        | 30.0%   |
| Total                               | 200       | 100.0%  |

60(30.0%) emergency residents were part of other emergency medicine residency prior to the current one. The value of z is 8. The value of p is < .00001. The result is significant at p < .05.
Table: Distribution of experience of mentoring before.

| Experience of mentoring before | Frequency | Percent |
|-------------------------------|-----------|---------|
| NO                            | 144       | 72.0%   |
| YES                           | 56        | 28.0%   |
| Total                         | 200       | 100.0%  |

56(28.0%) emergency residents had prior experience of mentoring before joining the current program. The value of z is 8.8. The value of p is < .00001. The result is significant at p < .05.

Table: Distribution of concept of mentoring.

| Concept of mentoring | Frequency | Percent |
|----------------------|-----------|---------|
| NO                   | 52        | 26.0%   |
| YES                  | 148       | 74.0%   |
| Total                | 200       | 100.0%  |

148(74.0%) emergency residents were familiar with the concept of mentoring. The value of z is 9.0041. The value of p is < .00001. The result is significant at p < .05.
Table: Distribution of designated mentor.

| Designated mentor | Frequency | Percent |
|-------------------|-----------|---------|
| NO                | 56        | 28.0%   |
| YES               | 144       | 72.0%   |
| Total             | 200       | 100.0%  |

144(72.0%) emergency residents had designated mentor. The value of z is 8.8. The value of p is < .00001. The result is significant at p < .05.

Table: Distribution of choose your mentor.

| Choose your mentor | Frequency | Percent |
|--------------------|-----------|---------|
| NO                 | 144       | 72.0%   |
| YES                | 56        | 28.0%   |
| Total              | 200       | 100.0%  |

56(28.0%) emergency residents had chosen their mentor. The value of z is 8.8. The value of p is < .00001. The result is significant at p < .05.
126 (63.0%) emergency residents had mentoring scheme that helped them with the difficulties. The value of $z$ is 5.2. The value of $p$ is $< .00001$. The result is significant at $p < .05$.

| Mentoring scheme has helped you with the difficulties | Frequency | Percent |
|------------------------------------------------------|-----------|---------|
| NO                                                   | 74        | 37.0%   |
| YES                                                  | 126       | 63.0%   |
| Total                                                | 200       | 100.0%  |

98 (49.0%) emergency residents had mentoring scheme that met their expectations. The value of $z$ is 0.4. The value of $p$ is .68916. The result is not significant at $p < .05$.

| Mentoring scheme has met with your expectations? | Frequency | Percent |
|--------------------------------------------------|-----------|---------|
| NO                                               | 102       | 51.0%   |
| YES                                              | 98        | 49.0%   |
| Total                                            | 200       | 100.0%  |
Table: Distribution of role of mentors should be limited to consultants only?

| Role of mentors should be limited to consultants only? | Frequency | Percent |
|--------------------------------------------------------|-----------|---------|
| NO                                                     | 151       | 75.5%   |
| YES                                                    | 49        | 24.5%   |
| Total                                                  | 200       | 100.0%  |

49(24.5%) emergency residents had limited role of mentors to consultants only. The value of z is 10.2. The value of p is < .00001. The result is significant at p < .05.

Table: Distribution of mentors have the time and commitment problems?

| Mentors have the time and commitment problems? | Frequency | Percent |
|------------------------------------------------|-----------|---------|
| NO                                             | 103       | 51.5%   |
| YES                                            | 97        | 48.5%   |
| Total                                          | 200       | 100.0%  |

97(48.5%) emergency residents had the time and commitment problems. The value of z is 0.6. The value of p is .5485. The result is not significant at p < .05.
Table: Distribution of mentoring system as it exists now is beneficial.

| Mentoring system as it exists now is beneficial | Frequency | Percent |
|-----------------------------------------------|-----------|---------|
| NO                                            | 80        | 40.0%   |
| Yes                                           | 120       | 60.0%   |
| Total                                         | 200       | 100.0%  |

120 (60.0%) emergency residents had mentoring system as it exists now was beneficial. The value of z is 4. The value of p is .00006. The result is significant at p < .05.

Table: Distribution of mentoring helped you in formulating career goals?

| Mentoring helped you in formulating career goals? | Frequency | Percent |
|--------------------------------------------------|-----------|---------|
| NO                                               | 87        | 44.2%   |
| Yes                                              | 110       | 55.8%   |
| Total                                            | 197       | 100.0%  |

110 (55.8%) emergency resident’s monitoring had helped them in formulating career goals. The value of z is 2.3003. The value of p is .02144. The result is significant at p < .05.
Table: Distribution of discuss your personal problems.

| Discuss your personal problems | Frequency | Percent |
|--------------------------------|-----------|---------|
| NO                             | 124       | 62.0%   |
| Yes                            | 76        | 38.0%   |
| Total                          | 200       | 100.0%  |

76(38.0%) emergency residents had discussed their personal problems. The value of z is 4.8. The value of p is < .00001. The result is significant at p < .05.

Table: DO you Think Mentoring Should be compulsory part of your emergency medicine residency?

| DO you Think Mentoring Should be part of your emergency medicine residency? | Frequency | Percent |
|------------------------------------------------------------------------------|-----------|---------|
| NO                                                                           | 37        | 18.5%   |
| Yes                                                                          | 163       | 81.5%   |
| Total                                                                        | 200       | 100.0%  |

163(81.5%) emergency residents had compulsory part of their emergency medicine residency. The value of z is 12.6. The value of p is < .00001. The result is significant at p < .05.
Table: Distribution of meeting with your mentor.

| Meeting with your mentor | Frequency | Percent |
|--------------------------|-----------|---------|
| Fortnightly              | 11        | 5.5%    |
| Monthly                  | 124       | 62.0%   |
| Once a week              | 46        | 23.0%   |
| Quarterly                | 19        | 9.5%    |
| Total                    | 200       | 100.0%  |

11(5.5%) emergency residents had met fortnightly with their mentor, 124(62.0%) emergency residents had met monthly with their mentor, 46(23.0%) emergency residents had met once a week with their mentor and 19(9.5%) emergency residents had met quarterly with their mentor. The value of z is 7.8893. The value of p is < .00001. The result is significant at p < .05.

Table: Distribution of Developing clinical skills.

| Developing clinical skills    | Frequency | Percent |
|-------------------------------|-----------|---------|
| Somewhat helpful              | 8         | 4.0%    |
| Helpful                       | 97        | 48.5%   |
| Very helpful                  | 81        | 40.5%   |
| Extremely helpful             | 14        | 7.0%    |
| Total                         | 200       | 100.0%  |

8(4.0%) emergency residents development were somewhat helpful, 97(48.5%) emergency residents development were helpful, 81(40.5%) emergency residents development were very helpful and, 14(7.0%) emergency residents development were extremely helpful. The value of z is 1.6098. The value of p is .1074. The result is not significant at p < .05.
Table: Distribution of Academic development.

| Academic development   | Frequency | Percent |
|------------------------|-----------|---------|
| Somewhat helpful       | 22        | 11.0%   |
| Helpful                | 58        | 29.0%   |
| Very helpful           | 92        | 46.0%   |
| Extremely helpful      | 28        | 14.0%   |
| Total                  | 200       | 100.0%  |

22(11.0%) emergency residents academic development were somewhat helpful, 58(29.0%) emergency residents academic development were helpful, 92(46.0%) emergency residents academic development were very helpful and 28(14.0%) emergency residents academic development were extremely helpful. The value of z is 3.5115. The value of p is .00044. The result is significant at p < .05.

Table: Distribution of Research and publication

| Research and publication | Frequency | Percent |
|--------------------------|-----------|---------|
| Somewhat helpful         | 19        | 9.5%    |
| Helpful                  | 83        | 41.5%   |
| Very helpful             | 47        | 23.5%   |
| Extremely helpful        | 51        | 25.5%   |
| Total                    | 200       | 100.0%  |

19(9.5%) emergency residents research and publication was somewhat helpful, 83(41.5%) emergency residents research and publication was helpful, 47(23.5%) emergency residents research and publication was very helpful and 51(25.5%) emergency residents research and publication was extremely helpful. The value of z is 3.3899. The value of p is .0007. The result is significant at p < .05.
Table: Distribution of Developing administrative skills.

| Developing administrative skills      | Frequency | Percent |
|--------------------------------------|-----------|---------|
| Somewhat helpful                     | 17        | 8.5%    |
| Helpful                              | 40        | 20.0%   |
| Very helpful                         | 126       | 63.0%   |
| Extremely helpful                    | 17        | 8.5%    |
| Total                                | 200       | 100.0%  |

17(8.5%) emergency residents developing administrative skills was somewhat helpful, 40(20.0%) emergency residents developing administrative skills was helpful, 126(63.0%) emergency residents developing administrative skills was very helpful and 17(8.5%) emergency residents developing administrative skills was extremely helpful. The value of z is 8.727. The value of p is < .00001. The result is significant at p < .05.

Table: Distribution of Psychological support.

| Psychological support     | Frequency | Percent |
|---------------------------|-----------|---------|
| Somewhat helpful          | 74        | 37.0%   |
| Helpful                   | 63        | 31.5%   |
| Very helpful              | 45        | 22.5%   |
| Extremely helpful         | 18        | 9.0%    |
| Total                     | 200       | 100.0%  |

74(37.0%) emergency residents psychological support was somewhat helpful, 63(31.5%) emergency residents psychological support was helpful, 45(22.5%) emergency residents psychological support was very helpful and 18(9.0%) emergency residents psychological support was extremely helpful. The value of z is 1.159. The value of p is .24604. The result is not significant at p < .05.
Table:- Distribution of mean Age in Years at PG Student.

| Age in Years at PG Student | Number | Mean  | SD    | Minimum | Maximum | Median |
|----------------------------|--------|-------|-------|---------|---------|--------|
|                            | 200    | 30.2450 | 6.9777 | 22.0000 | 47.0000 | 28.0000 |

The mean age in years at PG student (mean± s.d.) of emergency residents was 30.2450 ± 6.9777 years.

Table:- Distribution of mean worked after passing MBBS in Years.

| Worked after passing MBBS in Years | Number | Mean  | SD    | Minimum | Maximum | Median |
|-----------------------------------|--------|-------|-------|---------|---------|--------|
|                                   | 200    | 2.9250 | 1.8700 | 0.0000  | 8.0000  | 3.0000 |

The mean worked after passing MBBS (mean± s.d.) of emergency residents was 2.9250 ± 1.8700 years.
Discussion:
It was found that the mean age in years at PG student (mean± s.d.) of emergency residents was 30.2450 ± 6.9777 years.

We found that 69(34.5%) emergency residents were female and 131(65.5%) emergency residents were male. Out of 200 students 38(19.0%) emergency residents were 1st year’s student, 113(56.5%) emergency residents were 2nd year’s student and 49(24.5%) emergency residents were 3rd year’s student.

It was found that 35(17.5%) emergency residents were DNB-EM, 137(68.5%) emergency residents were MEM and 28(14.0%) emergency residents were MRCEM. 165(82.5%) emergency residents were from GWU and 35(17.5%) emergency residents were from national board.

We found that 4(2.0%) emergency residents were understood by counselor, 140(70.0%) emergency residents were understood by guide, 39(19.5%) emergency residents were understood by motivator and 17(8.5%) emergency residents were understood by supervisor.

Our study showed that 56(28.0%) emergency residents had prior experience of mentoring before joining the current program and 148(74.0%) emergency residents were familiar with the concept of mentoring. In our hospital 144(72.0%) emergency residents had designated mentor and only 56(28.0%) emergency residents had chosen their mentor.

Our study showed that 126(63.0%) emergency residents had mentoring scheme that helped them with the difficulties. 98(49.0%) emergency residents had mentoring scheme that met them with expectations and 49(24.5%) emergency residents had limited role of mentors to consultants only. We found that 97(48.5%) emergency residents had the time and commitment problems.

It was found that 120(60.0%) emergency residents had mentoring system as it exists now was beneficial. 110(55.8%) emergency resident’s monitoring had helped them in formulating career goals. Present study showed that 76(38.0%) emergency residents had discussed their personal problems and 163(81.5%) emergency residents had think compulsory part of their emergency medicine residency.

According to developing clinical skills, 8(4.0%) emergency residents development were somewhat helpful, 97(48.5%) emergency residents development were helpful, 81(40.5%) emergency residents development were very helpful and, 14(7.0%) emergency residents development were extremely helpful. According to academic development, 22(11.0%) emergency residents academic development were somewhat helpful, 58(29.0%) emergency residents academic development were helpful, 92(46.0%) emergency residents academic development were very helpful and 28(14.0%) emergency residents academic development were extremely helpful. 19(9.5%) emergency residents research and publication was somewhat helpful, 83(41.5%) emergency residents research and
publication was helpful, 47(23.5%) emergency residents research and publication was very helpful and 51(25.5%) emergency residents research and publication was extremely helpful.

We found that 17(8.5%) emergency residents developing administrative skills was somewhat helpful, 40(20.0%) emergency residents developing administrative skills was helpful, 126(63.0%) emergency residents developing administrative skills was very helpful and 17(8.5%) emergency residents developing administrative skills was extremely helpful.

It was found that 74(37.0%) emergency residents psychological support was somewhat helpful, 63(31.5%) emergency residents psychological support was helpful, 45(22.5%) emergency residents psychological support was very helpful and 18(9.0%) emergency residents psychological support was extremely helpful.

**Conclusion:**
It was found that Maximum emergency residents were male. We found that higher proportion emergency residents were masters in Emergency medicine under GWU. Most of the emergency residents thought mentor as a guide. Our study showed that most of emergency residents were familiar with the concept of mentoring. It was found that most of emergency residents had designated mentor but they did not chose their mentor. Our study found that maximum emergency residents think development of clinical skills via mentoring was helpful and very helpful for developing administrative skills. Most of the emergency residents think mentoring was very helpful platform for Academic development and helpful for Research or Publication. But in our study emergency residents think mentoring was somewhat helpful for psychological support.

The mentor–mentee relationship provides mutual benefit to both participants. We suggested that mentoring in increases the likelihood of successful clinical skills and Academic development. It was also found that mentoring was also helpful administrative skills and Research or Publication but it was not that much helpful for psychological support of the student. As emergency medicine is stressful & challenging psychological support is very much necessary. We suggest that attention should be taken towards psychological support. Keys to success are commitment to the mentor-mentee relationship, an awareness of both responsibilities and avoidance of pitfalls.

**Limitations Of The Study:**
In spite of every sincere effort my study has lacunae. The notable short comings of this study are:

1. The sample size was small. Only 200 cases are not sufficient for this kind of study.
2. As data collection was done via survey monkey there was a delay and some of them did not response.
3. The study populations are being tested upon a confined set of questionnaire and it may not cover the entire range of questions.
4. The study was carried out in a tertiary care hospital, so hospital bias cannot be ruled out.

**References:**
1. Birdi N, Goldstein R. Handbook on faculty mentoring. Ottawa(ON): Faculty of Medicine, University of Ottawa; 1999.
2. Steneck NH. Introduction to the responsible conduct of research. Rockville (MD): Office of Research Integrity; 2004.
3. Rose GL, Rukstalis MR, Schuckit MA. Informal mentoring between faculty and medical students. Acad Med 2005; 80:344-8.
4. Sambunjak D, Straus SE, Marusle A. Mentoring in academic medicine — a systematic review. JAMA 2006;296:1103-15.
5. Ramani S, Gruppen L, Krajic Kachur E. Twelve tips for developing effective mentors. Med Teach 2006;28:404-8.
6. Garmel GM. Mentoring medical students in academic emergency medicine. Acad Emerg Med 2004;11:1351-7.
7. Marks MB, Goldstein R. The mentoring triad: mentee, mentor, and environment. J Rheumatol 2005;32:216-8.
8. Coates WC, Hobgood CD, Birnbaum A, et al. Faculty development: academic opportunities for emergency medicine faculty on education career tracks. Acad Emerg Med 2003;10: 11137.
9. Jouriles NJ, Kuhn GJ, Moorhead JC, et al. Faculty development in emergency medicine. Acad Emerg Med 1997;4:1078-86.
10. Binder LS, DeBhnke DJ. The importance of being earnest— and student-centered. Acad Emerg Med 1998;5:1-3.
11. Marco CA, Perina DG. Mentoring in emergency medicine: challenges and future directions. Acad Emerg Med 2004;11:1329-30.
12. Rosen P, Edlich RF, Rosen CL, et al. Becoming a specialist in emergency medicine. J Emerg Med 2008;34:471-6.
13. Wright DW, Hedges JR. Mentoring faculty members to the next level. SAEM Faculty Development Handbook. Des Plaines(IL): Society for Academic Emergency Medicine; 2009.
14. Farrell SE, Digoia NM, Broderick KB, et al. Mentoring for clinician–educators. Acad Emerg Med 2004;11:1346-50.
15. Lewis RJ. Some thoughts regarding gender issues in the mentoring of future academicians. Acad Emerg Med 2003;10:59-61.
16. Blumstein HA, Cone DC. Medical student career advice related to emergency medicine. Acad Emerg Med 1998;5:69-72.
17. Hall JL. Reflecting on family medicine. Canadian family physician Medecin de famille canadien. 2016 Jul;62(7):605-.
18. Garmel GM. Chapter 4: Mentoring in emergency medicine in Practical Teaching in Emergency Medicine. Second Edition. Edited by Rogers RL, Mattu A, Winters ME, Martinez JP, Mulligan Terrence M. John Wiley & Sons, Ltd. Published 2013.
19. Yeung M, Nuth J, Stiell IG. Mentoring in emergency medicine: the art and the evidence. Cal J Emerg Med 2010;12(2):143-49.
20. Garmel GM. Mentoring medical students in academic emergency medicine. Acad Emerg Med 2004;11:1351-57.
21. Detsky AS. Baerlocher MO. Academic mentoring – how to give it and how to get it. J Am Med Assoc 2007;297(19):2134-36.
22. Jackson VA, Palepu A, Szalacha L, Caswell C, Carr PL, Inui T. Having the right chemistry: a Qualitative study of mentoring in academic medicine. Acad Med. 2003; 78:328–34.
23. Advisor, Teacher, Role Model, Friend: On Being a Mentor to Students in Science and Engineering. National Academy of Sciences, National Academy of Engineering, Institute of Medicine. Washington, DC: National Academy Press, 1997.
24. Clutterbuck D. Everyone Needs a Mentor: Fostering Talent at Work, ed 3. London: CIPD House, 2001.
25. Paice E, Heard S, Moss F. How important are role models in making good doctors? BMJ. 2002; 325:707–10.
26. Wright DW, Hedges JR. Mentoring faculty members to the next level. SAEM/AACEM Faculty Development Handbook, ed 1.
27. Ramanan RA, Phillips RS, Davis RB, Silen W, Reede JY. Mentoring in medicine: keys to satisfaction. Am J Med. 2002;
28. Clutterbuck D. Everyone needs a mentor; fostering talent at work. 2nd Ed. Institute of Personnel Management, 1992.Google Scholar
29. Armitage P, Burnard P. Mentors or preceptors? Narrowing the theory-practice gap. Nurse Education Today1991;11:225–9.CrossRefPubMedGoogle Scholar
30. Bould J, Imeson W. Professional education programme for specialist registrars, Northern and Yorkshire. Leeds: University of Leeds, 1998.Google Scholar
31. Connor M. Mentoring for medics. York: Discipline of Individual and Organisation Development Studies, University of Ripon and York St John, 1996.
32. "Chapter 22. Youth Mentoring Programs | Section 1. Building Youth Mentoring Programs | Main Section | Community Tool Box". ctb.ku.edu. Retrieved 2018-06-18.
33. "How Metizo certifies personal development". Metizo.
34. "4 Key Facets of Successful Mentoring Relationships". Inc.com. 2017-08-11. Retrieved 2018-06-18.
35. Buell, Cindy (January 2004). "Models of Mentoring in Communication". Communication Education. 53 (1): 56–73. doi:10.1080/0363452032000135779.
36. research.wustl.edu, Washington University in St. Louis.
37. chronus.com, Chronus.
38. Eby, Lillian; Allen, Tammy; Evans, Sarah; Ng, Thomas; DuBois, David (2008). "Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals". Journal of Vocational Behavior. 72 (2): 254–267. doi:10.1016/j.jvb.2007.04.005. PMC 2352144. PMID 19343074.
39. Kram, Kathy E. (1983). "Phases of the Mentor Relationship". Academy of Management Journal. 26 (4): 608–625. doi:10.5465/255910. ISSN 0001-4273.
40. Scandura, Terri A.; Ragins, Belle Rose (1993). "The Effects of Sex and Gender Role Orientation on Mentorship in Male-Dominated Occupations". Journal of Vocational Behavior. 43 (3): 251–265. doi:10.1006/jvbe.1993.1046. ISSN 0001-8791.
41. Nora, Amaury; Crisp, Gloria (November 2007). 'Mentoring Students: Conceptualizing and Validating the Multi-Dimensions of a Support System'. Journal of College Student Retention: Research, Theory & Practice. 9 (3): 337–356.
42. Form, Sven; Schlichting, Kerrin; Kaernbach, Christian (2017). "Mentoring functions: Interpersonal tensions are associated with mentees' creative achievement". Psychology of Aesthetics, Creativity, and the Arts. 11 (4): 440–450. doi:10.1037/acat0000103. ISSN 1931-390X.
43. Ragins, Belle Rose "Diversified Mentoring Relationships in Organizations" The Academy of Management Review, Vol. 22 (April 1997)
44. Crutcher, Betty Neal “Mentoring Across Cultures” American Association of University Professors, Academe Vol. 93 No.4 (2007)
45. "How Millennials in the Workplace Are Turning Peer Mentoring on Its Head". Fortune. Retrieved 2019-01-23.
46. Chronus. "Mentoring & Talent Development Solutions". chronus.com.
47. Laird, Pamela Walker (2006). Pull: Networking and Success since Benjamin Franklin. Cambridge: Harvard University Press. ISBN 9780674025530.
48. Cussler, Margaret (1958). The Woman Executive. New York: Harcourt, Brace and Co.
49. Roche, Gerard R. (January–February 1979). "Much Ado about Mentors". Harvard Business Review. 57: 14–28.
50. Yeung M, Nuth J, Stiell IG. Mentoring in emergency medicine: the art and the evidence. Canadian Journal of Emergency Medicine. 2010 Mar;12(2):143-9.
51. Jordan J, Hwang M, Coates WC. Academic career preparation for residents-are we on the right track? Prevalence of specialized tracks in emergency medicine training programs. BMC medical education. 2018 Dec;52. Welch JL. Fundamentals of mentoring: three steps to a mentee-driven relationship. MedEdPORTAL: the journal of teaching and learning resources. 2016
53. Yeung M, Nuth J, Stiell IG. Mentoring in emergency medicine: the art and the evidence. Canadian Journal of Emergency Medicine. 2010 Mar;12
54. Garmel GM. Mentoring medical students in academic emergency medicine. Academic Emergency Medicine. 2004 Dec;
55. Sheri K, Too JY, Chuah SE, Toh YP, Mason S, Radha Krishna LK. A scoping review of mentor training programs in medicine between 1990 and 2017. Medical education online. 2019 Jan 1;
56. S, Chhaila T. A study of trends in mentoring relationships existing in the Indian IT industry. Procedia-Social and Behavioral Sciences. 2014 May 15;
57. Welch J, Sawtelle S, Cheng D, Perkins T, Ownbey M, MacNeill E, Hockberger R, Rusyniak D. Faculty mentoring practices in academic emergency medicine. Academic Emergency Medicine. 2017 Mar;24
58. Bhatia K, Takayesu JK, Nadel ES. A novel mentorship programme for residents integrating academic development, clinical teaching and graduate medical education assessment. Perspectives on medical education. 2016 Feb 1;
59. Sambunjak D. Understanding wider environmental influences on mentoring: Towards an ecological model of mentoring in academic medicine. Acta medica academica. 2015 Jun 9.
60. Rekha KN, Ganesh MP. Factors influencing mentors’ learning from mentoring relationships: insights from a serial mediation study in India. International Journal of Training and Development. 2019
61. Hodges B. Factors that can influence mentorship relationships. Nursing Children and Young People. 2009 Jul 9.