

“Effectiveness Of Didactic Lecture and Demonstration in Improving The Competency Interns In Writing Injury Certificate”.

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Abstract:

Objectives

- To assess improvement in the skill of interns in writing injury certificate after intervention
- To assess improvement in knowledge of interns regarding injuries after intervention

Method:

Study design: Interventional prospective study.

Place of Study- Department of Forensic Medicine, Shri Vasantnaik Government Medical College, Yavatmal, Maharashtra, India

Duration of Study- 6 months

Study group- Interns

Sample size- Out of 60 Interns, study group was selected by systematic random sampling.

Group 1- Study group (30 interns)

Group 2- Control group (30 interns)

Institutional Ethical committee approval was obtained.

Data collection method: After obtaining consent, pretest and two-injury case data were given to both the groups. This was followed by intervention in the form of didactic lecture and practical training on patients in study group. After fifteen days of intervention in the study group, post-test along with injury case data was given to both the groups to evaluate their performance. Feedback was obtained from study group by close and open-ended questionnaire. For ethical reasons similar intervention was also carried out in the control group

Data analysis- Mean, Standard deviation and P-value was calculated using SPSS Software.

Results: The post-test score was statistically significant than pre-test in study group (p value <0.0001) and there was significant improvement in writing injury certificate after the intervention. (<0.0001)

Conclusions: Proper training during internship significantly improves the knowledge about injuries and competency of interns in writing injury certificate. Further studies on larger sample size are needed.

Keywords: injury certificates, interns, didactic lecture, demonstration

I. Introduction

The general aim of undergraduate medical education in India is to produce a physician of 'first contact' who would be capable of looking after the preventive, promotive, curative and rehabilitative aspects of medicine.^[1]

Clinical Forensic Medicine is the application of forensic medical knowledge and techniques to living patients. To address the un-met forensic needs of victims who are survivors of violent crimes and trauma there is urgent need of examination of victims of violence by specially trained personnel in medico-legal matters.^[2]

The broad goal of teaching of forensic medicine in our country is to produce a physician who is well informed about the medico-legal responsibilities in the practice of medicine. Forensic Medicine, as a part of the undergraduate curriculum, is taught in the second phase (3rd to 5th semester), along with the other three Para-Clinical subjects.^[1,3] So the students are likely to forget the implications and applications of forensic medicine till they reach internship.

Among the medico-legal cases, Injury certificate is an important medico-legal document. Injury certificates are presented in the court of law so it should be complete and in proper format. Injury certificate issued by expert or the people who are well informed when presented before court will provide justice to the society.

The injuries are examined, noted & commented on in the injury certificates/reports. The forensic

medicine expert's role as a clinical investigator provides a vital liaison between the investigative process and court of law.^[4]

On the basis of these reports, investigating authorities and judiciaries take action against culprit & society is benefited or justice is brought to the victim. So an expert or properly trained authority should issue injury certificate.

II. Rationale Of Study:

It has been seen in general that the interns lack in their knowledge regarding injuries which leads to incomplete and incorrect injury reports. Interns are the future medical officers or practicing doctors who would issue injury certificates. Hence this study was planned to assess the ability of intern to write injury certificate, to enhance their knowledge about injuries & improve their skill in writing injury certificate.

III. Aims

The main aim of the study is

- To make interns competent in writing injury certificate.
- To improve the knowledge of interns regarding injuries.

IV. Objective

4.1 Short term –

- To assess improvement in the skill of interns in writing injury certificate after intervention
- To assess improvement in knowledge of interns regarding injuries after intervention

4.2 Mid term - Introduction of forensic training module on writing of injury certificate during Internship.

4.3 Long term- Application of this knowledge in writing injury report in Medico-legal cases in future practice.

V. Materials And Methods

5.1 Study type- Interventional prospective study.

5.2 Place of Study-This study was carried out in the Department of Forensic Medicine and Toxicology, Shri Vasantrya Naik Government Medical College, Yavatmal, Maharashtra, India.

5.3 Duration of Study- 6 months

5.4 Study Design-Institutional Ethical committee, Shri V N Government medical college, Yavatmal approval was obtained. Pretest, post-test and Feedback questionnaire were prepared after defining the objectives and doing literature search. Five subject experts did content validity while faculty members of Institutional Medical education unit carried out face and construct validity. Reliability test of questionnaire was carried out by test retest method in a small group of 10 students.

Study group- Interns at Shri Vasantrya Naik Government Medical College, Yavatmal

Sample size- Written consent of interns to participate in the study was obtained and total 60 Interns were divided into two groups by systematic random sampling method.

Group 1- Study group (30 interns)

Group 2- Control group (30 interns)

5.4.1 Data collection method-

After obtaining consent from interns pretest and two-injury case data were given to both the groups. This was followed by intervention in the form of didactic lecture and practical training on patients in study group. Didactic lectures were conducted in the department of forensic medicine based on the format of injury certificate, which includes classification, types, nature, age, kind of weapon used and remark on injuries. Demonstration and practical training was given in the casualty department of our hospital. The study group was divided into three groups of ten interns in each group. Each group was given practical demonstration on various aspects of injuries based on injury certificate. Didactic lecture and demonstration was carried out by same faculty member. After fifteen days of intervention in the study group, post-test along with injury case data were given to both the groups. Feedback was obtained from study group by close and open-ended questionnaire. For ethical reasons similar intervention was also carried out in the control group

5.4.2 Data analysis- Mean, Standard deviation and P-value was calculated using SPSS (Statistical Package for the Social Sciences) software.

VI. Observation & Result

Post-test score of study group was statistically more significant than pre-test score (P value-<0.0001) (Table no-1) while control group post-test score was not statistically significant than pretest (P value-0.6300). Table no 2 depicts post-test score of study group to be significantly more as compared to control group (P value-<0.0001)

Post intervention score (Table 3) of study group in writing Injury certificate (based on case data) significantly improved as compared to control group (P value < 0.0001). Eighty percent of interns in study group were able to write injury certificate correctly after the intervention as compared to 20% interns before intervention while control group showed no improvement.

Feedback received from study group based on likerts scale (Graph-1) shows that 57% of interns disagreed and strongly disagreed that at the end of MBBS curriculum, interns are able to issue the injury certificate correctly & efficiently.

On asking whether injury certificate is an important document having relevance in judiciary proceedings, 100% of them strongly agreed and agreed that it is.

Hundred percent Interns strongly agreed and agreed that an expert & experienced doctor should issue injury certificate.

Hundred percent Interns strongly agreed and agreed that there should be regular training for medical officers & interns on clinical forensic medicine.

In open ended questions (table no-4) when interns were asked about their views regarding present internship training program with reference to writing injury certificate, they opined that presently they merely depend on their past knowledge and senior’s guidance for dealing with the cases. Many suggested that there should be proper clinical forensic training module to be introduced during internship program. Few thought that hands on training on writing injury certificate is must during internship.

When put forth, proper training for writing of injury certificate is necessary during internship, if yes, why? 100% agreed that Injury certificate is an important document having relevance in judiciary proceedings. A legally sound injury certificate will help in giving justice to the victim and it will be of immense help in future when they become practitioners.

Many felt that hands on training is much better and interesting option when asked about the mode of training to be introduced during internship for improving the writing skill of medico legal certificates & dealing with medico-legal cases.

VII. Discussion:

From the medico-legal point of view, every injury recorded by the doctor who has examined the injured, is important and needs to be medico-legally diagnosed in the right perspective in the disbursement of justice, as doctor is an “expert witness” in a court of law as per section 45 of Indian Evidence Act, 1872.⁽⁵⁾ The detailed and accurate record of the injuries and other relevant particulars of the injured noted during medico-legal examination, form the basis of medico-legal diagnosis and epidemiological observations in the criminal justice system.⁽⁶⁾

According to the Medical council of India guidelines, for teaching and training in forensic medicine at internship level, an intern should be able to prepare report or certificate in medico-legal cases in accordance with the law of land. Clinical forensic medicine being taught to second year MBBS students and that too merely through theory, questions the competency of interns and hence future medical practitioners in issuing of flawless injury certificate.

Present study showed that didactic lectures and demonstration in study group significantly improved the knowledge of interns regarding injuries and writing of injury certificate (Table-1, Table-2, Table-3), which is in accordance with Pratibha A Mardikar et al who found that only 5.2 % of interns were able to properly explain the writing of injury certificate and hence their knowledge about various medico-legal aspects needs to be boosted up from time to time particularly at internship. Interns need to be refreshed about various medico-legal aspects which can be done by giving training to them.⁽⁷⁾

Feedback obtained on the basis of likerts scale shows that more than half of interns in study group strongly disagreed that at the end of MBBS curriculum, interns are able to issue the injury report correctly & efficiently which is in accordance with study carried out by Dr. Indrajit Khandekar et al in J Indian Academic Forensic Med.⁽⁸⁾

Any act done by a medical practitioner in diagnosing, investigating and treating a disease condition has medico-legal implications. The subjection of the medical profession to the purview of the Consumer Protection Act and the growing awareness of the public of their rights and the duties and responsibilities of the doctor has further compounded the problems.⁽⁹⁾ Almost hundred percent of interns acknowledged that injury certificate is an important document having relevance in judiciary proceedings, it should be issued by an experienced doctor, there is need of regular training for Medical officers & interns on clinical Forensic medicine, and hands on training during internship is beneficial in writing injury certificate. This is in accordance with Dr B R Sharma et

al [9] who concluded that medico legal examinations on the living involve clinical evaluation of varying degrees and trauma outcomes have major clinical requirements besides the medico-legal implications. Therefore, everything that we teach must be subjected to the scrutiny of its relevance to the needs of a self-reliant and complete doctor on one hand and the needs of our community and the nation on the other.

Implications Of Study

Incorporating the Module of training for injury certificate during internship will improve the quality of certification, which will help the investigating authority & judiciary for administration of justice in society.

Limitations Of The Study

The study was carried out in single institute.

Future Research Directions

Assessment of this module should be carried out in various institutes.

VIII. Conclusion

Proper training during internship significantly improves the competency of interns in writing injury certificate and knowledge about injuries. Further studies in other institutes on larger sample size are needed.

Clinical forensic medicine is need of time and there is an urgent need to incorporate the clinical forensic medicine with a special training module during internship, which should include didactic lectures & demonstration, so as to create a competent doctor who is well qualified and can handle the medico-legal cases.

Acknowledgments- Nil

Conflict of interest- Nil

Source of funding- Nil

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Tables

Table 1- Pre-test and Post-test Mean Score of study & control group

Group	Pre-test (mean ± SD)	Post-test (mean ± SD)	P value
Study Group	4.8666 ± 1.502	12.4333 ± 1.194	<0.0001
Control Group	3.8333 ± 1.440	3.9333 ± 1.460	0.6300

Table-2- Post test score of control & study group.

Test	Control group (mean ± SD)	Study group (mean ± SD)	P value
Post-test score	3.9333 ± 1.460	12.4333 ± 1.194	< 0.0001

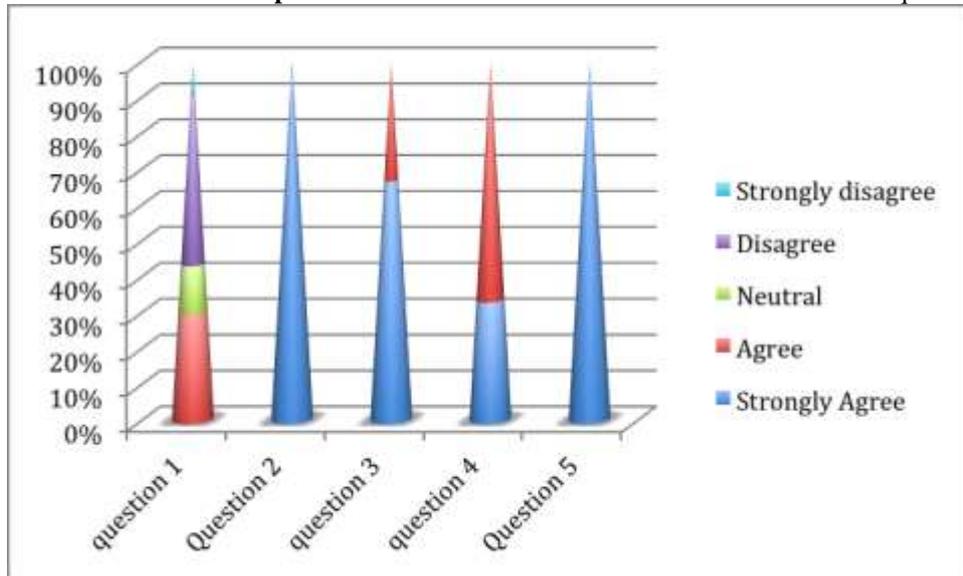
Table-3- Injury Certificate Scores

Group	Pre-intervention (mean ±SD)	Post-intervention (mean ±SD)	P value
Study Group	2.24± 0.85	4.5±1.5	<0.0001
Control Group	2.3 ± 1.03	2.19 ± 0.87	0.47

Sr no	Questions	Answer
1	What are your views regarding present internship training program with reference to writing injury report?	<ul style="list-style-type: none"> - During internship we come across many medico-legal cases and on the basis of our past knowledge and senior’s guidance we learn to deal with them. - Many suggested that there should be proper clinical forensic training module to be introduced during internship program. - Few suggested that hands on training on writing injury certificate is must during internship
2	Do you think, proper training for writing of injury certificate is necessary during internship, if yes, why?	<ul style="list-style-type: none"> Yes, training for writing injury certificate is necessary because- - Injury certificate is an important document having relevance in judiciary proceedings. - A legally sound injury certificate will help in giving justice to the victim. - It will be of immense help to us in future when we become practitioners.
3	Mention the mode of training, You think should be introduced during internship for making the intern competent enough to write injury certificate	<ul style="list-style-type: none"> - Many felt that hands on training is much better and interesting and hence it should be introduced during internship.

Table-4- Open-ended questions

Graph 1-Interns Feedback based on likerts scale close-ended questions



- Question-1** At the end of MBBS curriculum, interns are able to issue the injury report correctly & efficiently.
Question-2. Do you think injury certificate is an important document having relevance in judiciary proceedings
Question-3 An expert & experienced doctor should issue injury certificate.
Question-4 There should be regular training for Medical officers & interns on clinical Forensic medicine.
Question-5 Hands on training during internship is beneficial in writing injury certificate