



# A cross-sectional study to analyze the various factors influencing Patient Safety Incident Reporting at a Tertiary Care Hospital in North India

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## Introduction

- Incident reporting is widely acknowledged as one of the crucial ways of improving patient safety <sup>1</sup>
- Provides effective monitoring, prevention, and reduction in the occurrence of patient safety events.<sup>2</sup>
- Despite such significant contribution, the magnitude of underreporting remains high across the globe. <sup>2</sup>
- Its effectiveness is diminished by barriers related to concerns about repercussions to the reporter.<sup>3</sup>
- When employees do not speak up, organizations miss opportunities for improvement and learning.<sup>4</sup>
- Research on reporting behaviors by health care professionals shows that enablers and barriers to reporting are rooted in beliefs which have consequences at the individual level.<sup>3</sup>
- Very limited framework for incident reporting exists in Indian hospitals.<sup>5</sup>



## Aim

This study was aimed **to identify the various factors influencing reporting of patient safety incidents** at a Tertiary Care Hospital in North India.



## Methods

- A cross-sectional study was conducted at All India Institute of Medical Sciences, New Delhi.
- Self designed questionnaire:
  - Review on published literature from 2004 to 2020.
  - Pilot Study was done on a stratified sample of 34 participants.
  - Questionnaire was face, content and criteria validated.**
- Stratified simple random sampling - **15% of Faculty, Residents, Nurses and Technical Staff** were considered.
- The statistical method of Factor Analysis was applied to reduce variables into meaningful factors that represent the factors influencing patient safety incident reporting.
- The responses were statistically analyzed using STATA (ver.: 16.1) for descriptive study and IBM SPSS (v25.0) for factor analysis.

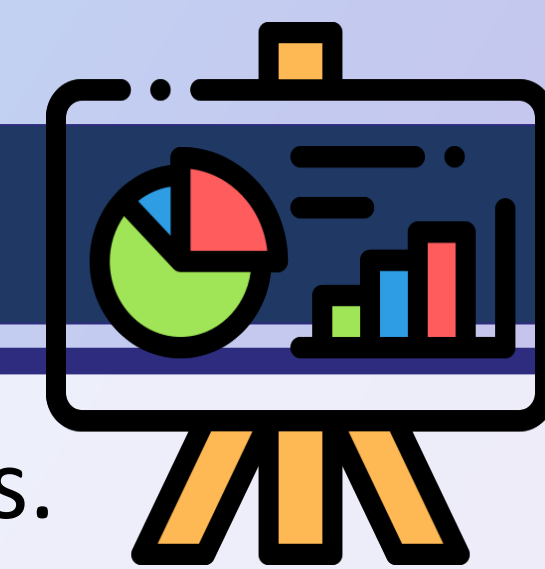
## Conclusion

- Majority of the participants favored a **non-punitive, centralized, electronic, confidential, anonymous and mandatory reporting system**.
- Assuring anonymity and confidentiality were perceived as measures to overcome barriers to reporting.
- The various kinds of fear perceived by healthcare professionals with regard to incident reporting need to be allayed with the help of periodic strengthening of knowledge and awareness of the healthcare professionals, and appropriate administrative support.
- There is need for a more consistent and structured training and active patient safety-oriented research, helping in devising, implementing and monitoring the reporting system in place.
- The results of factor analysis not only identified areas needing immediate action, but also highlighted the various potential factors to be tended to while establishing an incident reporting system.

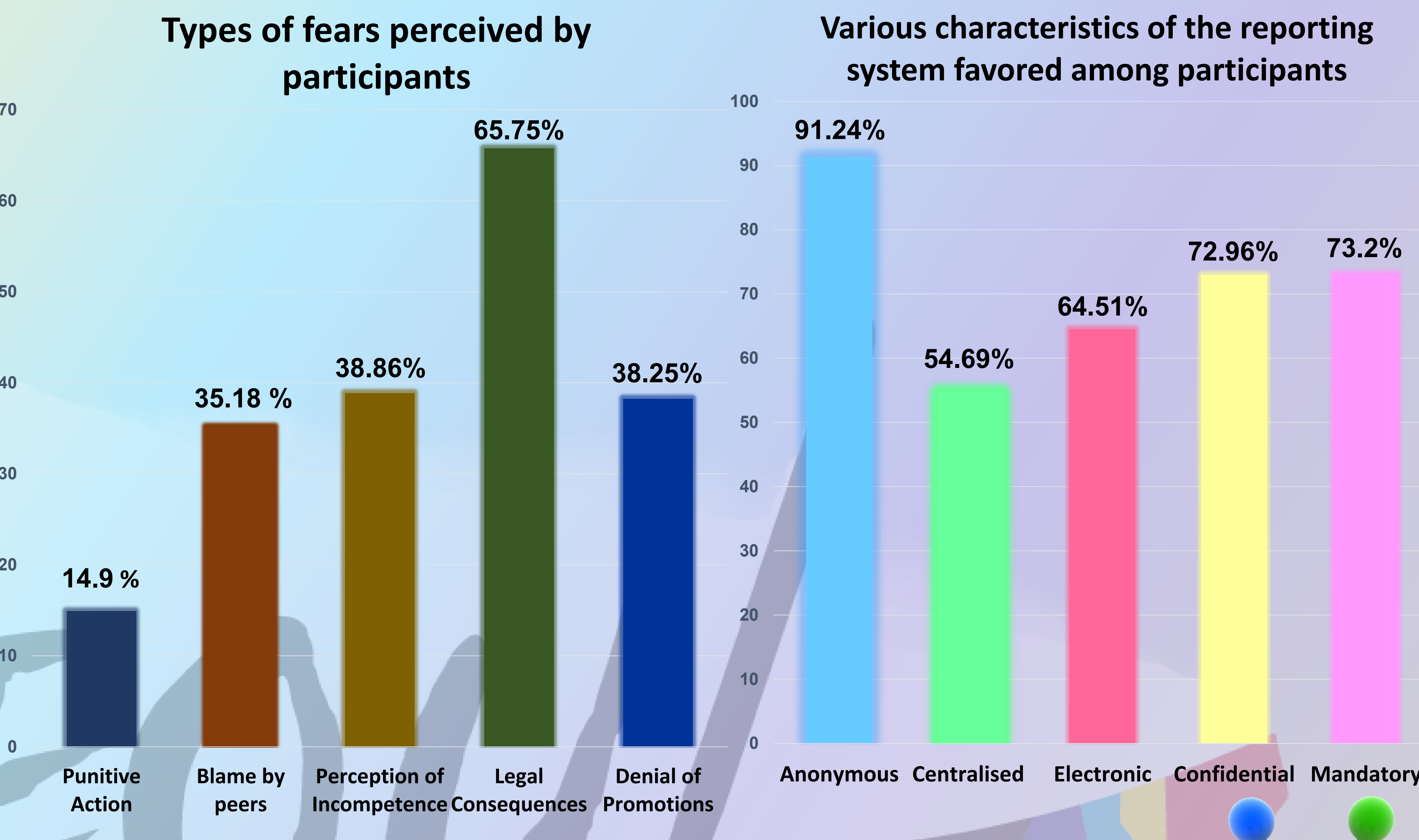
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## Results



- Overall, 80.34% of the participants were aware about patient safety events.
- About a third (34.1%) received training; of whom only about a third (36.49%) reported an incident in the past three years.



## Factor Analysis



- Data was subjected to several rounds of Factor Analysis using 42 variables.
- Tests of sampling adequacy: indicated an acceptable sample size.
  - Kaiser-Meyer-Olkin measure: 0.707
  - Bartlett's test of Sphericity: df = 861 and Significance <0.001.
- Method used for extraction of factors: Principal Component Analysis (PCA)
- In the Scree plot; Eigen values >1 were only considered for factors. (*fig. 01*)
- The solution yielded **10 factors**.
- The labels for the factors listed below were derived and agreed upon after several discussions with the second and third authors:
  - Implementation of an Idealistic Reporting System**
  - Regulatory Framework for Patient Safety Incident Reporting System**
  - Active Patient Safety Oriented Research**
  - Performance Appraisal Management**
  - Immunity on Information given to Public**
  - Confidentiality of the Process of Reporting**
  - Administrative Support**
  - Blame Free Culture**
  - Proper Communication**
  - Training**

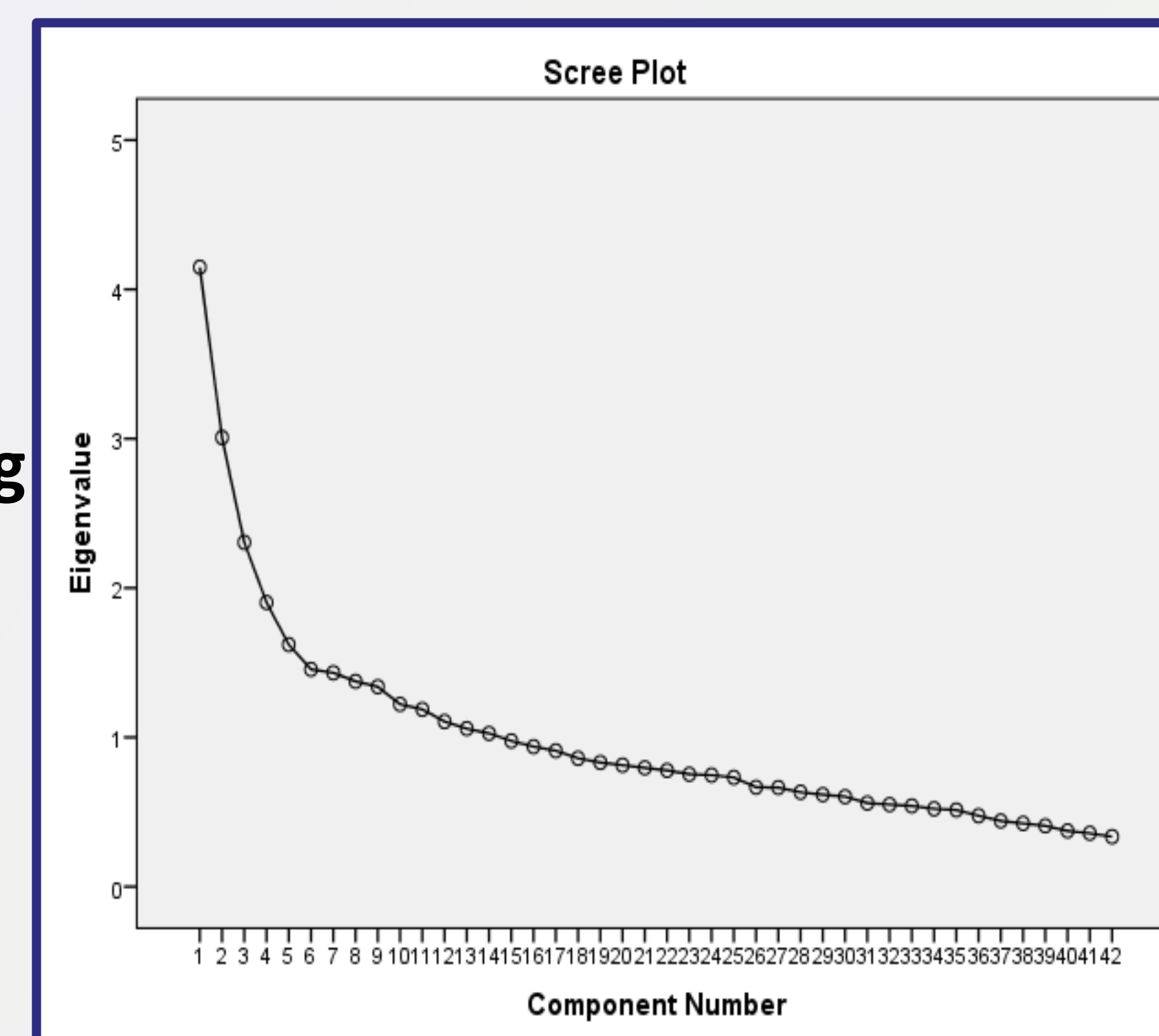


fig. 01: Scree Plot

