

# A Survey on Cyber Security Awareness among College Students in Telangana

\*<sup>1</sup>V Sumalatha

\*<sup>1</sup>Research Scholar, School of Sciences Career Point University, Kota, Rajasthan, India.

## Abstract

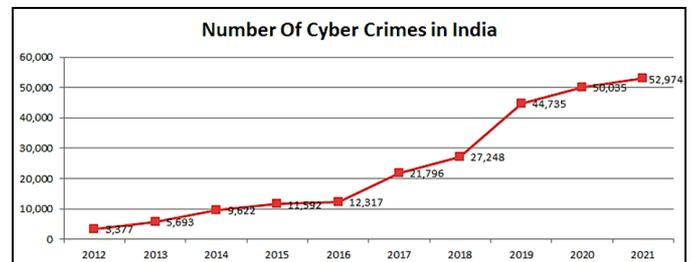
In this analysis is to study the different level of cybercrime security awareness among college students in Telangana. In significant rise in internet and other source users, the incidence of cybercrime in banking sector has also surged and various challenges in this domain encompass personal privacy, national security, public safety etc. To mitigate the risk of falling victim to cybercrime in banking sector such as ATM, OTP, Credit Card etc., it is essential for individuals to be well-informed about their own security and adopt safety measures. The study employs a well-structured questionnaire survey method to analyze these issues to overcome the cyber issues.

**Keywords:** Awareness, ATM, OTP, Credit Card.

## 1. Introduction

Cybercrime is defined as any crime in which a computer is either the victim or the perpetrator of the crime. Cybercrime is a state topic, according to the Indian Constitution's Seventh Schedule. Cybercrime, often known as computer crime, is the criminal use of a computer to aim the illegal goals like fraud, trafficking in child pornography and proprietary information, obtaining opinions, or invading security. A temporary employment scam has been linked to a Dubai-based kingpin with China connections, and six people have been arrested. Cops will use Facebook Live to raise awareness about cybercrime. A young person loses Rs. 6 lakh in the name of crypto currency. The Kolkata Police Department holds the first Facebook Live session on e-crime. 80,000 cyber champions will assist cops in fighting online fraud in Gurgaon.

moral, or ethical harm. In 2017, the number of mobile phone internet uses rapidly increases by 12.4% over the last year, 23.9% of the population used their mobile phone to access the internet.



Graph 1:

In the above Graph 1, it was identified that the number of cybercrime cases are growing very high due to usage of multiple devices such as mobile phones, Internet, Facebook etc. In 2012 the crimes are 3,377 and 2021 are 52,974. The internet is marked as the people's medium; it is gradually becoming a dark net, with increased instances of cyber stalking, cyber terrorism, child pornography sites and online slander via social media sites. Cybercrime is classified as any illicit activity in which computer is used as a tool, a target, or both. The cybercrime is increasing in the field of crime that is growing at an alarming rate. Basically, cybercrime is on the rise since it is viewed as the simplest way to commit a crime to another.

Table 1: Hacking Information on Multiple Sector

S. No	Act	Sections of IPC	Under IPC
1	Web-Hacking	383	Extortion
2	Banking	409	Public servant/by a banker
3	Online harassment	354-D	Stalking
4	Cyber frauds	420	Cheating
5	Sending threatening/defamatory messages	503/499	Defamation/criminal Intimidation

In the same year, 1205 cybercrime instances were filed in Telangana. According to the FBI's research, India ranks third among the top 20 victims of cybercrime. The people who spend lengthy hour browsing the internet face challenges as the internet usage rate rise. In 2022 (statista.com). A lack of information on such topics will result in financial, emotional,

## 2. Literature Review

According to the most recent NCRB data, a total of 27,248 casses of cybercrime were field in India in 2018. Muhammad Abdullah *et al* (2014) is analysed on awareness on cyber victimization among students of university of Sindh, Jamshoro and collected 100 students. The outcome of the

paper shows that the 77% of them are don't bother to give their personal information with cyber friends. 73% respondent doesn't know about the government for their help in case of cyber victimization.

Rezgui and Marks (2008) has presented on delve into the factor influencing information security awareness among staff, including decision – makers in information system, in higher education, specifically, with in the context of the UAE. Employing an interpretive case-study approach and utilizing multiple data gathering methods, the research sheld light on various aspects. Findings indicates that factors such as cultural assumptions and beliefs and social conditions significantly impac the behaviour and attitudes of university staff towards general and information security awareness in particular.

Md Shamimul *et al* (2015) is discussed defence and awareness of young internet users with regard cybercrime, the evidence from Malaysia and he found some insights such as female students are more aware and have affirmative insights than male students and students between 18 to 23 have lower perception and awareness than those between the ages of 24 and above. Finally this study provides the empirical proof to the top management of higher level institutons that there is a need to modify their plicies and procedures to protect the young generations and reduce the high risk of becoming a victim.

Archana Chanuvai Narahari *et al* (2016) is provided the study on survey of 100 people to identify whether or not netizes are aware of cybercrime. They found that while respondent are somewhat aware of cybercrime and cyber security, there is still a need increase awareness among them.

Anupreet Kaur Mokha (2017) is study on awareness of cybercrime and security and examines the level of awareness of cybercrime among internet users of several ages and educational backgrounds. The liner regression models was used for determine the objects. This study discovered a link between the age group and educational qualifications of the respondent.

**3. Objective of the Study**

- i). To evaluate the degree of mindfulness among internet users concerning cybercrime.
- ii). To determine any deficiencies and propose potential solutions.

**4. Methodology**

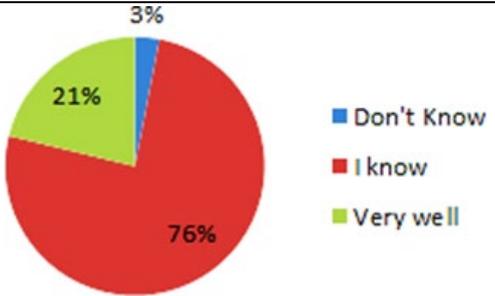
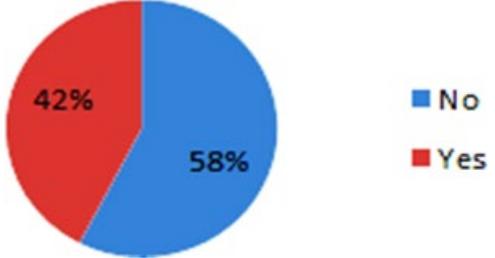
A Survey was taken involving 117 college going students who uses the internet, find at gauging their awareness of cybercrime in the Telangana region. The age group of the respondent ranges from 18 to 25 years and the convenience sampling method was utilized to select participants for the survey. Responses were collected using a Google forms and analysed using percentages.

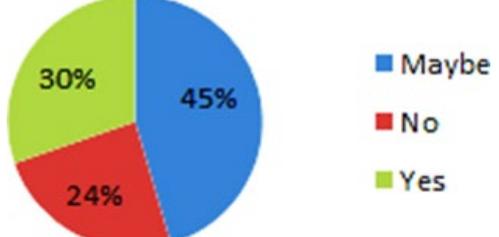
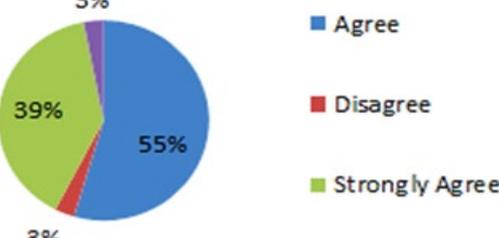
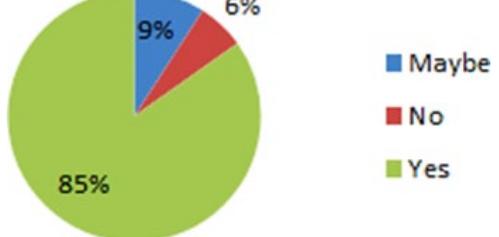
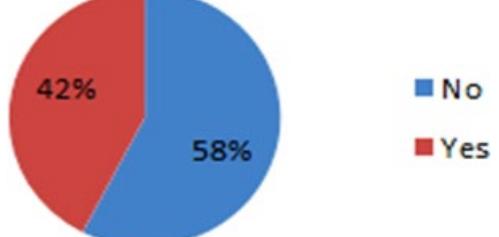
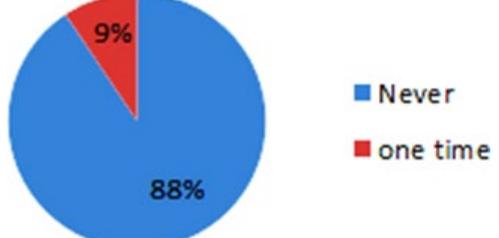
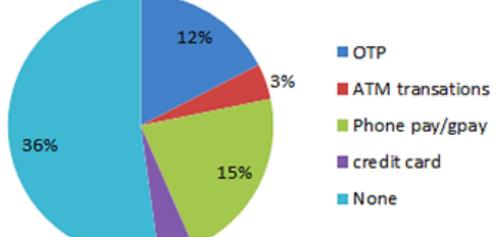
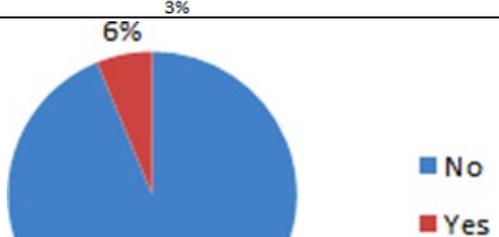
The significant test was also determined for the response using the chi-square test.

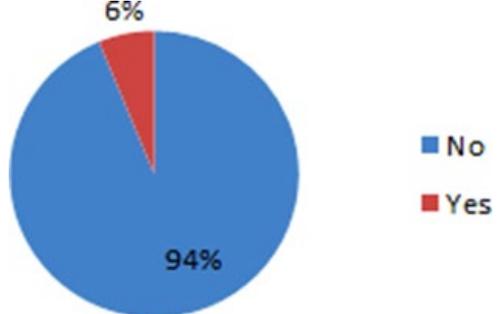
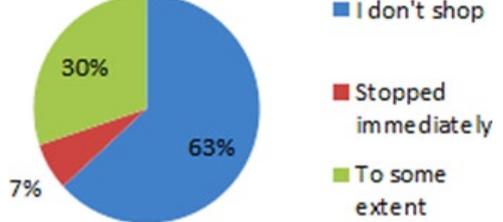
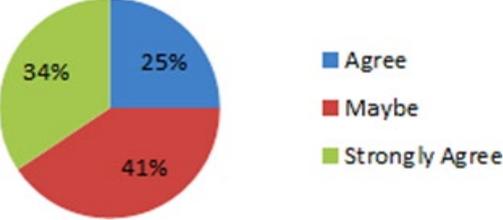
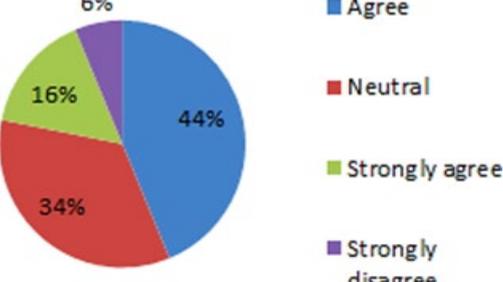
**5. Results and Discussions**

Given the increased usage of computers in society, cybercrime has grown into a significant problem. The advent of modern technology has rendered man reliant on the internet for all of his requirements. The internet has provided man with access to anything while remaining in one location. Social networking, online shopping, online studying, online jobs, and everything else that man can dream of each can be done via the internet. Cybercrime is distinct from other types of crime that occur in society. It affects all parties, from government to business to citizens. With the increased usage of technology for communication and information, cybercrime is on the rise in India. As a result, this article attempts to study a brief introduction to cybercrime, distinct types, amendments, and an analysis of cybercrime in India. He also talks various methods to combat cybercrime in India. The data collected form the students which are having age between 18 year to 25 and on how much awareness are having in cybercrime on banking sector such as ATM, OTP and credit card. For data total 13 question received response and based on the response prepared some analysis below.

**Table 2:** Analysis on Survey

Detailed Analysis on Survey		
Question	Analysis	% Graphs
How aware are you about cybercrime in banking sector such as ATM, OTP, credit card etc.	The purpose of this question was to access the respondent awareness of cybercrime police top in responses seventy six percent of the responded indicated that they are known and 21% of them are very well for awareness on cybercrime and 3% of them are do not know.	 <ul style="list-style-type: none"> <li>■ Don't Know</li> <li>■ I know</li> <li>■ Very well</li> </ul>
Is antivirus software installed on your PC, mac or mobile device?	When asked whether they had an antivirus installed on their devices, 58% of the respondents answered “yes” while only 42% answered “no” this suggests that the younger generation is having less percentage of awareness of the threat posed by cyber crime	 <ul style="list-style-type: none"> <li>■ No</li> <li>■ Yes</li> </ul>

<p>Is it okay to give permission for accessing your device while downloading any file/app on your pc or mobile?</p>	<p>When analysis of this question, the researcher found that more than 45% of the respondents were either neutral or disagreed with it, while approximately 30% of the respondents agreed with the statement and not agree was 24%.</p>	 <ul style="list-style-type: none"> <li>■ Maybe</li> <li>■ No</li> <li>■ Yes</li> </ul>
<p>Do you believe that implementing password protection is crucial for information security?</p>	<p>When asked about implementation of password protection and information security, 39% of respondents strongly agreed, 55% agreed, and 3% were neutral on this matter.</p>	 <ul style="list-style-type: none"> <li>■ Agree</li> <li>■ Disagree</li> <li>■ Strongly Agree</li> </ul>
<p>Is it crucial to thoroughly read the terms and conditions before downloading any file, software or app on your device?</p>	<p>This factor holds significant importance for accessing data files are information online as a result 85% of the respondents agreed with it. It's essential because when downloading something from the Internet, one should thoroughly read all the terms and conditions before granting permission for the data access.</p>	 <ul style="list-style-type: none"> <li>■ Maybe</li> <li>■ No</li> <li>■ Yes</li> </ul>
<p>Have you been contacted by unknown sources via calls or messages requesting your banking related information such as OTP, ATM pin or Credit card etc..?</p>	<p>When asked about contacted by unknown sources via calls or messages requesting your banking related information, 42% of respondents "NO", 58% respondents are "Yes".</p>	 <ul style="list-style-type: none"> <li>■ No</li> <li>■ Yes</li> </ul>
<p>How many times have you been a victim of a cybercrime?</p>	<p>80 eight percentage of the respondents reported that they had never been victims of cybercrime. Meanwhile, 9% reported experiencing it once</p>	 <ul style="list-style-type: none"> <li>■ Never</li> <li>■ one time</li> </ul>
<p>On which banking platform have you encountered a cybercrime incident?</p>	<p>This factor banking platforms As a result, 36% of the respondents not encountered and 15% of them were phone pay/gpay and remain 3% of them are credit and OTP Platforms.</p>	 <ul style="list-style-type: none"> <li>■ OTP</li> <li>■ ATM transactions</li> <li>■ Phone pay/gpay</li> <li>■ credit card</li> <li>■ None</li> </ul>
<p>Have you experienced financial losses as a result of cybercrime in banking sector?</p>	<p>94% of the respondents reported that they had never been experienced financial losses as a result of cybercrime in banking sector, meanwhile 6% reported experiencing it. The highest percentage of the respondents indicated that they had never experienced cybercrime indicating that individuals engaging in online transactions are conscious of these fraudulent activities, however there is still room for improvement to ensure 100% awareness of this type of crime among the younger generation.</p>	 <ul style="list-style-type: none"> <li>■ No</li> <li>■ Yes</li> </ul>

<p>Have you experienced financial losses as a result of cybercrime in banking sector?</p>	<p>94% of respondents reported that they had never been experienced financial losses as a result of cybercrime in banking sector. Meanwhile, 6% reported experiencing it. The highest percentage of respondents indicated that they had never experienced cybercrime, indicating that individuals engaging in online transactions are conscious of these Fraudulent activities. However, there is still room for improvement to ensure 100% awareness of this type of crime among the younger generation.</p>	 <p>94% No, 6% Yes</p>
<p>Have you stopped shopping online due to this issue using banking sector?</p>	<p>When asked this question 63% of the population stated that they do not shop online, while 30% reported doing some extent additionally however 7% of the respondents indicated that they had completely stopped online shopping due to negative experiences.</p>	 <p>63% I don't shop, 30% To some extent, 7% Stopped immediately</p>
<p>Are there any risks associated with using public wi-fi on cybercrime in banking sector?</p>	<p>For this question 41% of the respondents were either neutral or disagreed with risk associated with public wi-fi on cybercrime in banking sector while approximately 25% of the respondents agreed with the statement and strongly agree was 34 percentage.</p>	 <p>41% Maybe, 34% Strongly Agree, 25% Agree</p>
<p>Hackers can access your banking information such as ATM, OTP's and credit cards?</p>	<p>The respondent given response 44% agreed on Hackers can access your banking information. So we observed that the most of chance are there on hacking prospective and most of them have awareness on cybercrime activates.</p>	 <p>44% Agree, 34% Neutral, 16% Strongly agree, 6% Strongly disagree</p>

**6. Significance Test:**

The significance test for the aforementioned questions utilised the Chi Square test to determine the significance values now

the hypothesis of the significant test is **H<sub>0</sub>**: There is insufficient evidence. And **H<sub>1</sub>**: There is sufficient evidence.

**Table 3:** Significance Test

S. No	Association between Gender	Chi-square Value	P value
1	How aware are you about cybercrime in banking sector such as ATM, OTP, Credit card etc.?	17.402	0.000 < 0.01
2	Is antivirus software installed on your PC, Mac, or mobile device?	2.181	0.140 > 0.05
3	Is it OK to give permission for accessing your device while downloading any file/app on your pc or mobile?	0.188	0.910 > 0.05
4	Do you believe that implementing password protection is crucial for information security?	3.379	0.337 > 0.05
5	Is it crucial to thoroughly read the terms and conditions before downloading any file software or app on your device?	0.086	0.958 > 0.05
6	Have you been contacted by unknown sources via calls or messages requesting your banking related information such as OTP ATM pin or credit card etc.,?	1.114	0.291 > 0.05
7	How many times have you been a victim of a cybercrime?	1.637	0.201 > 0.05
8	On which banking platform have you encountered cybercrime incident?	8.005	0.091 > 0.05
9	Have you experienced financial losses as a result of Cybercrime in banking sector?	2.761	0.097 > 0.05
10	Have you reported a cybercrime incident?	0.157	0.692 > 0.05
11	Have you stopped shopping online due to this issue using banking sector?	9.584	0.022 < 0.05
12	Are there any risks associated with using public wi-fi on cybercrime in banking sector?	4.268	0.371 > 0.05
13	Hackers can access your banking information such as ATM,OTP's and credit cards?	6.451	0.168 > 0.05

From the above table 3 it was observed that the P value obtained from the Chi Square test is used to determine the significance of the test and if the P value is greater than the

significance level. Except question number 1 and 11, remaining all of them are P value is greater than 0.05(Assuming a significance level of 0.05). We fail to reject

the Null Hypothesis this means that there is insufficient evidence to conclude that there is a significant difference or association.

## 7. Conclusion

The study indicates that most of the cybercrime incidents such as ATM transaction, OTP generation and credit card transaction, and more are based on the internet users in Tealngana. The lack comprehensive awareness of prevailing cybercrimes on banking sector, despite the increasing reliance on the internet observed in metropolitan areas like Hyderabad in Tealngana. The advent of smartphones and the internet has widened the scope for cybercrimes. Many internet users perceive cybercrimes solely as sophisticated politically motivated attacks on large organizations, unaware of the gap in their knowledge regarding cyber security or cybercrimes, which could potentially impact user. Apart from hacking, a majority of users are unaware of other cybercrimes such as ATM transaction, OTP generation and credit card transaction, and more. Basic internet users are unaware of whom to contact or report grievances related to cybercrimes. Furthermore, significant ignorance is observed regarding the security of personal computers and laptops, as some respondents have fallen victim to cybercrimes like viruses and data theft due to infrequent password updates and a tendency to share personal information with others. Despite being aware of the consequences, internet users still engage in illegal downloads of movies, games, and music from various torrents. Failure of the government to make serious efforts in enforcing policies and regulations in this regard may exacerbate the ignorance on this issue.

## 8. Suggestions

Based on the aforementioned findings and analysis, several guidelines can aid all internet users in safeguarding themselves from cybercrimes:

- i). Implement specific instructions for students enrolled in any course, including:
- ii). Conduct workshops led by experts and ethical hackers in schools and colleges to educate children and parents on Internet safety issues as users nowadays include young children.
- iii). Implement stringent measures for 24x7 monitoring of website traffic to detect any irregularities promptly.
- iv). The government should take proactive initiatives in addressing these concerns

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