CYBER SECURITY AWARENESS AMONG COLLEGE STUDENTS

Ganesh Talpe*1

*1Department Of Information Technology B.K. Birla College Of Arts, Commerce And Science (Autonomous) Kalyan, India.

ABSTRACT

"In an era of rapid digital expansion, increased cybersecurity awareness among students is becoming increasingly important". This study shows early findings from an inquiry examining students' cybersecurity understanding and attitudes in a digitally sophisticated setting. This study investigates the current status of cybersecurity awareness in educational institutions and attempts to identify areas for improvement.

The major purpose was to test students' cyber-threat awareness and ability to defend themselves against prospective assaults in technologically advanced setting. Despite the ubiquitous use of digital devices and the internet for both academic and personal purposes, a troubling finding emerges: a sizable proportion of students have little acquaintance with basic cybersecurity concepts. The majority of kids are unaware of ordinary hazards.

Keywords: Cybersecurity Awareness, Students, Online Safety, Trust, Privacy, Password Security, Cyber Threats, Two-Factor Authentication.

I.   INTRODUCTION

Nowadays, rather then being a luxury, the internet has become an integral component of daily life. Every day, cybercriminals install ransomware through a number of attack vectors, including email, network traffic and application traffic[1]. In era typified by continuous technological innovation and growing digitalization of information, cybersecurity has arisen as a critical concern for individuals have the knowledge and skills required to defend themselves and their digital assets from a wide range of cyber- attacks. Students, who are among the most frequent users of digital technology, are an important group in the discussion of cybersecurity awareness.

The Internet is now used in every facet of everyone's everyday life. People use the internet to communicate with friends and family, to start businesses and banks, and to access a variety of other services such as virtual healthcare and education, video calls, and so on. As a result, the linkages to technology have grown. However, being constantly linked increases the hazards. All face cyber risks to essential infrastructure and the economy. Individual cyber security hazards can threaten one's wealth, identity, and privacy. There is a need for a cyber security related awareness programme to address cyber security awareness among college students in higher education institutions. Computers and the Internet have now become indispensable tools in daily life and education[2].

A number of studies have been carried out recently to assess college students' understanding of information security-related topics. This study made clear how urgently a cybersecurity awareness campaign has to be launched. Comparable studies on cybersecurity levels were carried out in Malaysia, India, and California, among other nations. The findings of these studies all pointed to a lack of appropriate cybersecurity awareness, and a program to raise awareness and reduce successful cyberattacks is required[3]. In other words, there is a lower level of compliance with information security knowledge than comprehension or awareness of it.

It is critical to comprehend the origin of the assault or potential security breaches[4]. Students are also the workforce of the future, and as such, the cybersecurity environment of the future will unavoidably be shaped by their current digital habits and knowledge. Therefore, improving students' cybersecurity knowledge is not just a personal safety concern but also a critical strategic decision for academic institutions, decision-makers, and the larger cybersecurity community.

II.   METHODOLOGY

In this study, a survey research design will be employed to assess the cybersecurity awareness levels among students. Survey research is a widely accepted method for collecting data on attitudes, behaviors, and

knowledge related to specific topic, making it suitable for investigating cybersecurity awareness among students. The study was designed to collect quantitative data with an online survey.

The study includes the following questions:

- Do you think you have something valuable to steal in mobile/laptop ?
- Have you ever received a SCAM message on social media ?
- If you think you are hacked or scammed should you report it ?
- Do you consider yourself knowledge about the concept of cyber security?
- On a scale of 1 to 10 rank how much knowledge do you have ?
- Have you ever rejected a mobile app for accessing your contacts/camera/location ?
- Which web browser do you normally use ?
- Do you have antivirus software installed on your computer /
- Have you received training on cybersecurity best practices in college?
- Have you ever shared password with friends, family members?
- Are there any common misconception about cybersecurity that people should be aware of ?
- What steps can individual take to prevent cyber attacks from occurring in the first place?

100 students have completed the survey online survey. No demographic data beside gender and age were collected. We did not collect any personal identifying data about respondents. 50% of respondents are female and 50% are males. 65% of the respondents are 15-20 years old, 32% are 20-25 years old and 3% are 25-30 years old. Thus, overall the respondents are very young , as expected for college students.

III.   RESULTS

The results of the study from the 100 surveyed students are summarized below.

➢ "When questioned about the perceived worth of data on their mobile devices or laptops, poll respondents' responses varied.

- 46% of respondents think that they definitely have something valuable that can be stolen.

- 35% believe that they maybe have something valuable that can be stolen.

- 12% of respondents not sure about if they have something valuable or not.

-7% of respondents do not think they have something valuable to steal.

Do you think you have something valuable to steal in mobile/laptop?
100 responses
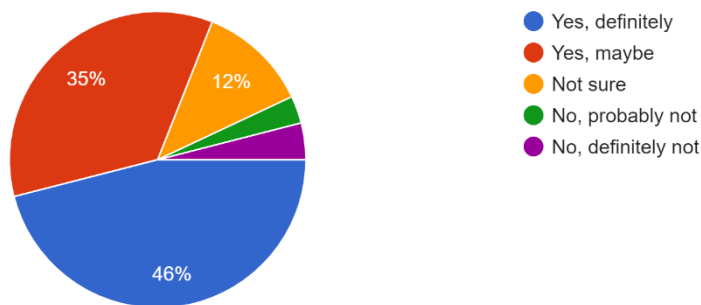
➢ In response to the question of whether they have ever received a scam message on social media, participants gave the following answers:

35 percent said "yes."

To that, 27% said, "Yes, maybe."

Ten percent did not know or could not answer clearly.

28 % said "no."

➢ "In response to the question of whether people think they should disclose being hacked or defrauded, respondents gave the following answers:

84 percent said "yes."

7 percent said, "Yes, maybe."

7 percent said "no."

In response to this question, a sizable majority of respondents stated that they thought it was essential to report instances of hacking or scamming, while a lesser minority expressed doubt or reluctance."

➢ "When asked whether individuals consider themselves knowledgeable about the concept of cybersecurity, respondents provided the following responses:

78% answered 'Yes.'

22% answered 'No.'

Do you consider yourself knowledge about the concept of cyber security ?

100 responses
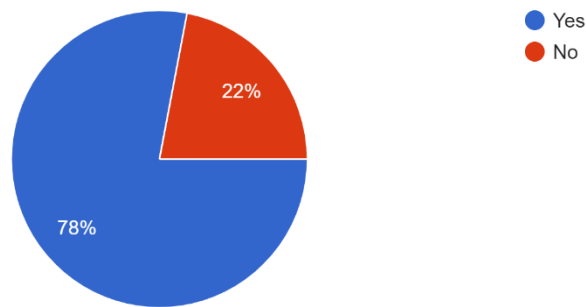
This question gives insight into survey participants' self-perceived levels of cybersecurity awareness, with a sizable proportion expressing confidence in their understanding.

➢ "On a scale of 1 to 10, where 10 is the highest knowledge level and 1 is the lowest, 27 respondents voted to rank 5 on the knowledge level." This implies that a considerable proportion of the respondents evaluated their comprehension of cybersecurity at a moderate level, signifying a well-rounded grasp of the idea."

➢ "Respondents gave the following answers when asked if they had ever turned down a mobile app's request to use their location, camera, or contacts:

In response to contacts, 81% said "yes."

71% said they rejected a mobile app for accessing for camera.

When asked for location they were, 69% said "yes."

According to this statistics, a sizable majority of survey respondents had, at some point, refused to let mobile applications access to their location, camera, or contacts, maybe because they were worried about privacy.

➢ "When asked which web browser they preferred, respondents gave a variety of answers, with Google Chrome receiving the most votes." Despite the fact that other browsers were listed, Chrome emerged as the most widely used web browser among poll participants, indicating its popularity."

Which web browser do you normally use ?

100 responses
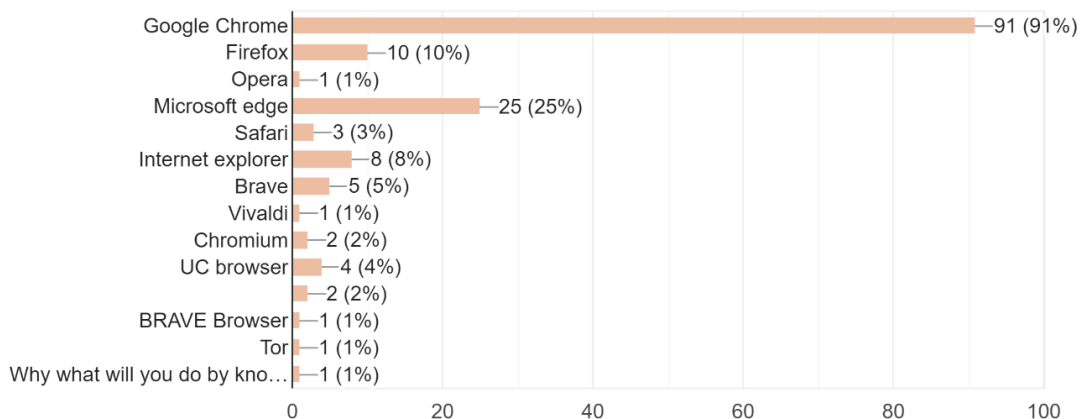
Most respondents (68.7%) indicated that they had not gotten any instruction on cybersecurity best practises while attending college. This shows that a sizable percentage of survey respondents did not get specialised instruction on cybersecurity best practises while attending college.

IV. DATA ANALYSIS

In this section the data in the above questions are analyzed.

The purpose of the survey question was to find out how people felt about the valuables that were on their computers or mobile devices. 46% of the participants showed a high degree of confidence on the vital information included in their gadgets. Although they weren't as sure, another 35% said there may be useful data. Twelve percent of respondents, however, were certain that their gadgets held nothing significant. These results underscore the significance of digital security measures to safeguard sensitive data, as the majority of people seem to think that their laptops and mobile devices contain significant information.

The purpose of the survey question was to find out how people felt about the valuables that were on their computers or mobile devices. 46% of the participants showed a high degree of confidence on the vital information included in their gadgets. Although they weren't as sure, another 35% said there may be useful data. Twelve percent of respondents, however, were certain that their gadgets held nothing significant. These results underscore the significance of digital security measures to safeguard sensitive data, as the majority of people seem to think that their laptops and mobile devices contain significant information.

The majority of the survey participants (78%) consider themselves knowledgeable about the concept of cybersecurity, while a notable portion (22%) do not perceive themselves as knowledgeable in this field. This suggests that there is a significant divide in self-assessed cybersecurity knowledge among the respondents, highlighting a potential need for educational initiatives or awareness programs in cybersecurity.

It is clear from the survey results that a sizable portion of the participants (68.7%) stated they had no instruction on cybersecurity best practises while in college. This research points to a possible weakness in college curricula related to cybersecurity education. Given that the majority of college students have not had the chance to participate in formal training in this vital sector, closing this gap may be essential to raising cybersecurity awareness and expertise among this demographic.

Some respondents admit to having the misperception that what they see on the internet isn't necessarily factual. This demonstrates a recognition that internet material may be deceptive. Respondents are hesitant to use public Wi-Fi, USB ports, or share personal information. Concerns regarding the security hazards connected with these practices are reflected in this awareness. Several responders indicate the presence of quick-money schemes. This shows that you are aware of the frequency of internet frauds. There is a comprehension of the possible hazards involved with online activity, since there is recognition that everything online is subject to cyberattacks. Some responses stress the general public's lack of understanding of cybersecurity, implying a need for increased education on the subjects. According to some responders, many individuals take cybersecurity lightly and are duped. This emphasis the importance of increased awareness and attentiveness. The myth that cybersecurity is unimportant is addressed. Respondents recognizes the importance of cybersecurity in our linked environment.

V. CONCLUSION

The results of the survey demonstrate that respondents had a broad understanding of cybersecurity. Some demonstrate understanding of internet threats and the value of monitoring. However, there are several misunderstandings regarding antivirus efficacy and the breadth of cybersecurity.

The vast majority recognizes the need of cybersecurity education, notably in educational institutions and businesses. Employee conduct and a reluctance to report hacking occurrences are also observed.

In conclusion, the poll emphasis the importance of comprehensive cybersecurity education in bridging knowledge gaps and encouraging improved online security practices among respondents.

VI. REFERENCES

[1] A. Moallem, "Cyber Security Awareness Among College Students," in Advances in Human Factors in Cybersecurity, vol. 782, T. Z. Ahram and D. Nicholson, Eds., in Advances in Intelligent Systems and Computing, vol. 782. , Cham: Springer International Publishing, 2019, pp. 79–87. doi: 10.1007/978-3-319-94782-2_8.

[2] K. Senthilkumar and S. Easwaramoorthy, "A Survey on Cyber Security awareness among college students in Tamil Nadu," IOP Conf. Ser. Mater. Sci. Eng., vol. 263, p. 042043, Nov. 2017, doi: 10.1088/1757-899X/263/4/042043.

[3] A. Garba, Maheyzah Binti Sirat, Siti Hajar, and Ibrahim Bukar Dauda, "Cyber Security Awareness Among University Students: A Case Study," Sci. Proc. Ser., vol. 2, no. 1, pp. 82–86, Apr. 2020, doi: 10.31580/sps.v2i1.1320.

[4] S. S. Tirumala, A. Sarrafzadeh, and P. Pang, "A survey on internet usage and cybersecurity awareness in students," in 2016 14th Annual Conference on Privacy, Security and Trust (PST), Auckland, New Zealand: IEEE, Dec. 2016, pp. 223–228. doi: 10.1109/PST.2016.7906931.