

Cybersecurity Awareness Among College Students: An Empirical Study

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Abstract:

As students rely more and more on digital devices, cybersecurity has emerged as a critical issue. The degree to which college students are knowledgeable about cybersecurity is the focus of this research. A structured questionnaire was used to gather data from a sample of 80 students who were chosen using convenience sampling.

The majority of pupils have a fair understanding of cybersecurity and are conversant with typical cyber dangers like phishing, hacking, and malware, according to the results. While the majority of students do their best to be safe when using the internet, a sizeable minority has never had any kind of cybersecurity education. In order to encourage students to practice safe online habits and enhance their digital security, the report stresses the need of more cybersecurity education and awareness programmes in higher education.

Keywords: Cybersecurity Awareness, College Students, Cyber Threats, Online Security, Data Privacy, Digital Safety, Information Security.

I. INTRODUCTION

How individuals' study, interact, and access information has been revolutionised by the advent of the internet, smartphones, social media, cloud computing, and online educational tools in the modern digital age. For all of their academic, social, and personal needs, college students depend substantially on internet platforms. Despite the many advantages, users are more vulnerable to cyber risks including phishing, malware, identity theft, data breaches, ransomware, and online fraud as a result of these technical improvements. To guarantee the safe and responsible use of digital technology in the face of ever-increasing cyber risks, cybersecurity awareness is crucial.

A person's level of cybersecurity awareness determines how well they are able to safeguard their own data and digital assets from known and unknown cyber threats. To lessen the likelihood of cyberattacks, it is essential that people learn to use strong passwords, protect their personal information, recognise phishing attempts, navigate the web safely, and use social media responsibly. Unfortunately, many students still don't realise the dangers of being online, which makes them easy prey for hackers.

Raising students' cybersecurity awareness is a critical function of educational institutions. Colleges may play an important role in preparing students to identify and counteract cyber risks by offering cybersecurity courses, training, and awareness campaigns. Therefore, in order to develop effective interventions and instructional programmes, it is crucial to understand the present degree of cybersecurity awareness among university students.

With this context in mind, the current research aims to test college students' understanding of common cyber dangers, their online security practices, and their degree of cybersecurity awareness. Insights about students' cybersecurity behaviour and strategies to improve digital safety and cyber resilience in educational settings are anticipated to be generated by the study's findings.

II. REVIEW OF RELATED STUDIES

Rasul, Hakar et al., (2026). The transition to digital systems in higher education has been dramatic in recent years, leaving students open to a host of cyber dangers such as phishing, identity theft, and malware infections. It is more crucial than ever to ensure that students comprehend the significance of Cybersecurity Awareness,

even if many universities rely on digital technologies to provide students with services and instructional resources. Using a quantitative methodology based on an online survey, this research will evaluate the degree of cybersecurity awareness among 356 students from five different faculties at Qaiwan International University: Dentistry, Pharmacy, Engineering & Computer Science, Health Sciences, and Management & Social Sciences. Questions about students' understanding, behaviour, and perspective on cybersecurity were included in the survey. The data was analysed using both descriptive statistics and analysis of variance (ANOVA). According to the results, students' cybersecurity knowledge is low ($M = 2.06$) and their cybersecurity practices are nonexistent ($M = 1.86$). Cybersecurity was viewed by students as having moderate attitudes. Students have a serious knowledge gap when it comes to typical cyber dangers; 60.1% of respondents said they had never heard of a phishing attack. Cybersecurity training increased students' awareness compared to non-trained students, according to the results. Furthermore, the various Faculties did not differ significantly in their levels of awareness. This study shows how important it is to teach students to be aware of and prepared for cybersecurity risks as part of university curricula.

Jangid, Dhruv. (2025). Many people, particularly college students who spend a lot of time online, are worried about cybersecurity in this modern digital world. College students' knowledge of prevalent cyber risks, safe browsing behaviours, and password procedures are the main areas of focus in this study that assesses their level of cybersecurity awareness. Although most students grasp basic dangers, unsafe online behaviour is nonetheless frequent, according to the results of an analysis of 50 pupils. Researchers came to the conclusion that in order to get people to be more cautious online, cybersecurity education and awareness programmes are required.

Miya, Aahadmad et al., (2025). Undergraduates, who are more susceptible to cyber dangers, are a particular focus of modern cybersecurity efforts. Many students may not have the knowledge or awareness to safeguard themselves from these dangers, even though they use the internet frequently. The purpose of this research is to find out how well-informed college students are about cyber-security. This study used a qualitative research approach by reviewing 30 research publications from academic sources like JSTOR, IEEE Xplore, and Google Scholar. The data came from existing studies. The results show that students don't always take the necessary precautions to protect themselves online, even when they know about typical cyber dangers like phishing, malware, and identity theft. Multiple studies have shown that students are highly interested in learning more about cybersecurity, which means there is a need for more focused educational programmes. Furthermore, the review brought attention to differences in cybersecurity awareness according to demographics including age, gender, and academic field. In order to increase involvement, the study suggests incorporating cybersecurity training into university curricula through well-known channels such as social media.

Dr. Bottyan, Laszlo. (2023). Cyber dangers have grown in sophistication and prevalence in recent years, affecting not just educational institutions but also individuals involved in the teaching and learning process. There are very strong arguments in favour of taking sufficient precautions. When it comes to defence as a whole, information security knowledge is crucial. In this study work, I surveyed a sample of students to gauge their degree of security awareness. Findings are in line with those of studies conducted on a global scale. The results show that managing passwords and not doing sensitive tasks on any device other than our PC are the two biggest problems.

Moallem, Abbas. (2019). Aiming to evaluate student awareness and attitudes towards cyber security and the accompanying hazards in the most sophisticated technology environment—Silicon Valley in California, USA—this study offers the early results of a research project. Students in Silicon Valley come from a wide range of ethnic backgrounds. It was intended to gauge the level of cyber-awareness and cyber-defense preparedness among pupils in this technologically advanced setting. College students may not know much about data security, according to preliminary statistical analysis, even though they are worried about being watched online and that their information is not safe even on campus networks. Academic institutions also don't seem to be doing much to raise students' consciousness about these problems and teach them to be safe online from threats like ransomware and identity theft.

III. RESEARCH METHODOLOGY

To investigate how well-informed college students are on cybersecurity issues, the current study, "Cybersecurity Awareness Among College Students: An Empirical Study," used a descriptive research strategy. The quantitative study's overarching goal is to gauge students' familiarity with cyber dangers, best practices for internet security, and methods for preserving personal information.

College students from a wide range of majors participated in the survey. The convenience sampling method was used to pick a sample of eighty-one pupils. Data was gathered from two sources: primary and secondary. A structured questionnaire served as the main data collector, while cybersecurity-related books, journals, research articles, reports, and internet sources provided the secondary data.

Questions on data privacy procedures, social media safety, phishing awareness, password security, and cybersecurity were all included of the survey. Frequency distribution, percentage analysis, and descriptive statistics were some of the statistical tools used to examine the gathered data. The results were presented using tables and charts.

Everyone who took part in the study did so voluntarily, and they were guaranteed complete anonymity. Results may not be generalizable to the full student body because the study only included 80 participants. The study's shortcomings aside, the information it reveals about college students' cybersecurity knowledge and online security habits is valuable.

IV. RESULTS AND DISCUSSION

Table 1 Demographic Profile of Respondents

Particulars	Frequency	Percentage
Male	45	56.25
Female	35	43.75
Total	80	100.00

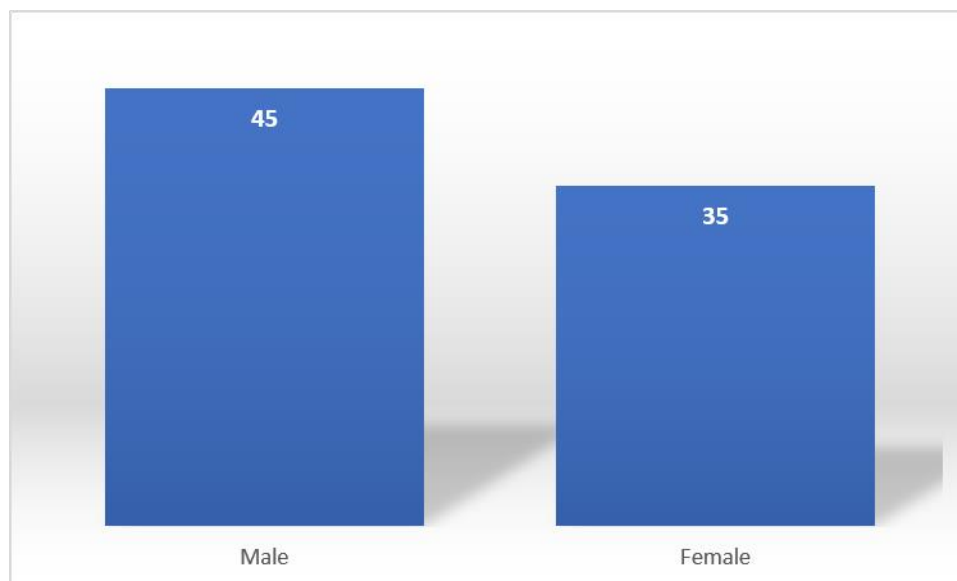


Figure 1 Demographic Profile of Respondents

Table 1 shows the gender breakdown of the respondents in the demographic profile. Out of a total of 80 respondents, 45 are male (or 56.25 percent of the sample), while 35 are female (or 43.75 percent of the sample). So, it seems like there are a few more men than women taking part in the survey. There appears to be about equal representation of the sexes in the sample, albeit the gap is not huge. In general, the data shows that both sexes are sufficiently represented, with men somewhat outnumbering women.

Table 2 Level of Awareness of Cybersecurity Concepts

Awareness Level	Frequency	Percentage
High	24	30.00
Moderate	38	47.50

Low	18	22.50
Total	80	100.00

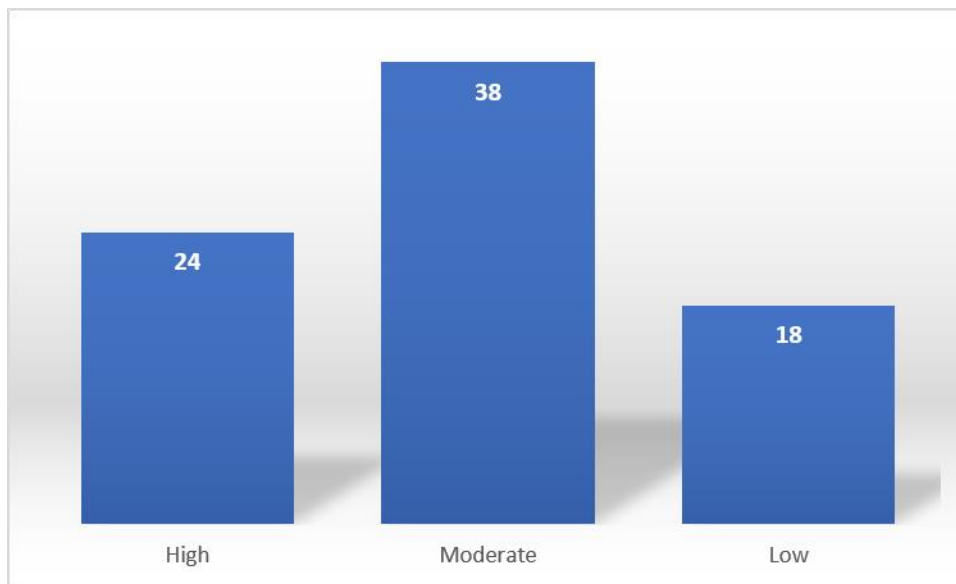


Figure 2 Level of Awareness of Cybersecurity Concepts

Table 2 displays the respondents' level of familiarity with cybersecurity principles. It shows that most people have a moderate level of awareness, with 38 out of 80 people (47.50%) having this level of awareness. After this, 24 people (30.00%) show a high level of awareness, suggesting that a sizeable fraction of the sample has a decent grasp of cybersecurity principles. In contrast, 18 people (or 22.50 percent) scored low on awareness, meaning that over 25% of the sample still doesn't know enough about the topic. There is a significant portion of the population that needs additional education and awareness upgrading regarding cybersecurity, even if the majority of respondents have a moderate level of awareness.

Table 3 Awareness of Common Cyber Threats (Phishing, Malware, Hacking)

Response	Frequency	Percentage
Aware	58	72.50
Not Aware	22	27.50
Total	80	100.00

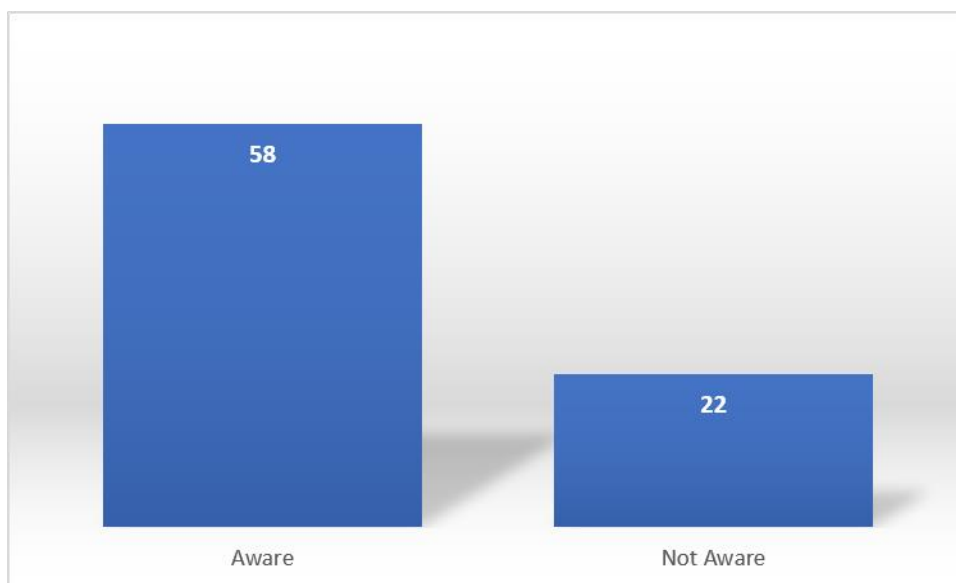


Figure 3 Awareness of Common Cyber Threats (Phishing, Malware, Hacking)

In Table 3, we can see how well-known cyber dangers like phishing, malware, and hacking are among the respondents. The research shows that most participants have a fairly good grasp of basic cybersecurity issues, as a large majority of 58 respondents (72.50%) are aware of these cyber threats. On the other hand, a sizeable minority of 22 respondents (27.50%) still lacks crucial knowledge in this area, since they stated that they are unaware of such concerns. While most people are aware of the most frequent cyber threats, the results show that awareness programmes still require some work to make sure everyone is aware of the dangers they face.

Table 4 Password Security Practices Among Students

Response	Frequency	Percentage
Always Use Strong Passwords	30	37.50
Often	24	30.00
Sometimes	18	22.50
Rarely	6	7.50
Never	2	2.50
Total	80	100.00

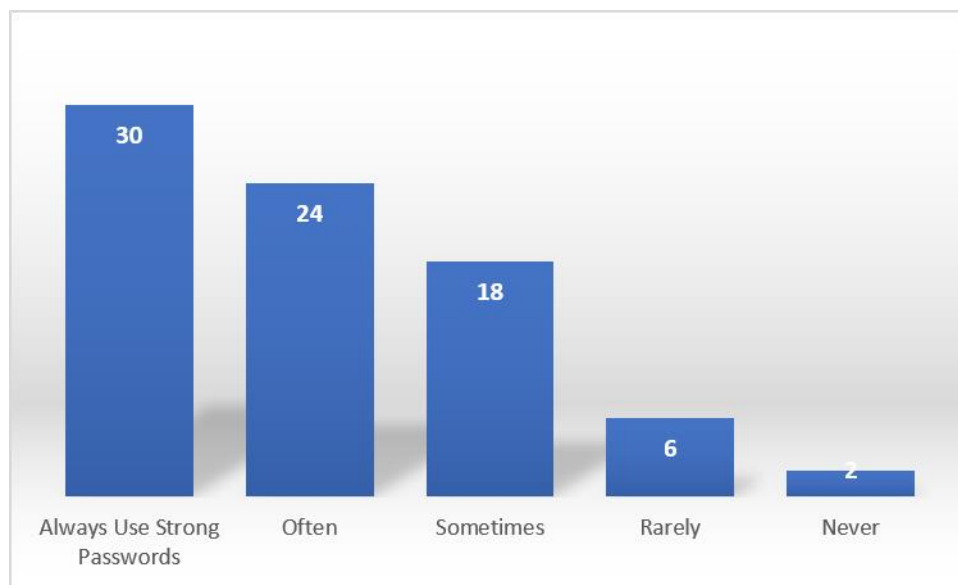


Figure 4 Password Security Practices Among Students

The security practices of students' passwords are displayed in Table 4. Thirty respondents (37.50% of the total) consistently utilise strong passwords, demonstrating that a sizeable proportion of the sample exhibits commendable security practices. While many students may be aware of the need of password security, not all of them may always adhere to recommended practices. This is indicated by the fact that 24 respondents (30.00%) frequently use strong passwords. Inconsistent behaviour is indicated by the fact that 18 respondents (22.50%) occasionally use strong passwords. Only 2 respondents (2.50%) never use strong passwords, and 6 (7.50%) rarely do, revealing a tiny but worrying subset of respondents who do not follow best practices for password security. In general, the results indicate that while the majority of students do a good job with their passwords, there is space for growth in order to guarantee that everyone is being more consistent and secure.

Table 5 Participation in Cybersecurity Training or Awareness Programs

Response	Frequency	Percentage
Yes	32	40.00
No	48	60.00
Total	80	100.00

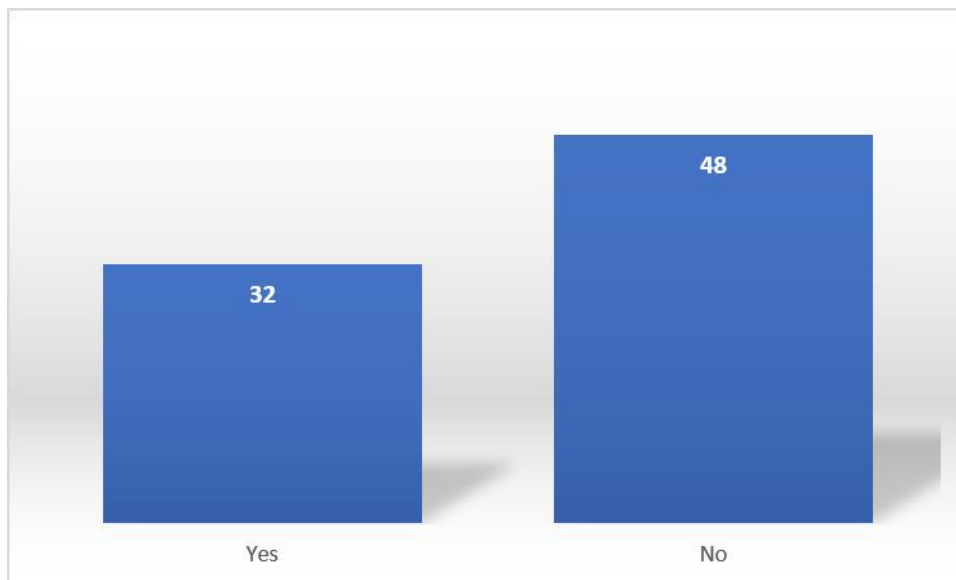


Figure 5 Participation in Cybersecurity Training or Awareness Programs

The number of pupils that have participated in cybersecurity awareness or training programmes is displayed in Table 5. A large percentage of pupils have had formal exposure to cybersecurity education, since 32 respondents (40.00%) have participated in such programmes. On the other hand, 48 people (or 60.00%) said they have never taken part in a cybersecurity awareness or training programme. In spite of the growing significance of digital safety, it appears that the majority of students do not receive organised cybersecurity training. All things considered, the results show how important it is to increase cybersecurity awareness programmes so more kids can get the education they need and become better at staying secure while using the internet.

Table 6 Overall Cybersecurity Awareness Level Among Students

Awareness Level	Frequency	Percentage
High Awareness	26	32.50
Moderate Awareness	40	50.00
Low Awareness	14	17.50
Total	80	100.00

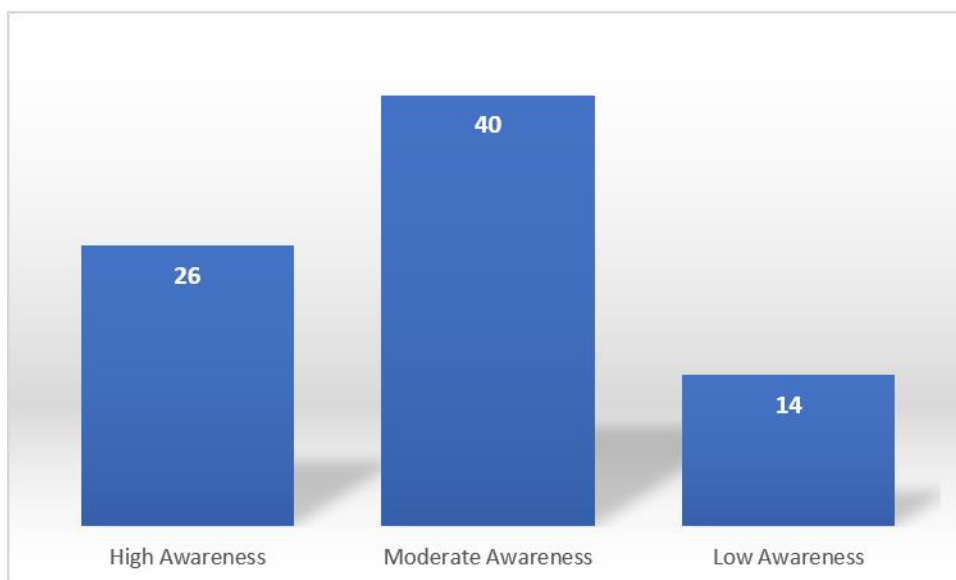


Figure 6 Overall Cybersecurity Awareness Level Among Students

Table 6 displays the total level of student cybersecurity awareness. Half of the students surveyed (40 out of 100) had a moderate level of awareness on cybersecurity, suggesting that the majority of students grasp the

basics but aren't experts. Also, over one-third of the students surveyed had a solid grasp of cybersecurity practices; 26 of them, or 32.50%, show a high degree of knowledge. In contrast, 14 students (17.50%) demonstrate low awareness, indicating that a smaller but important group still does not possess sufficient knowledge in this domain. Although most students have a reasonable level of cybersecurity awareness, the results show that awareness programmes still need to be strengthened to increase knowledge and decrease the number of students with poor awareness.

V.CONCLUSION

College students generally have a modest level of cybersecurity knowledge, according to the report. Phishing, hacking, malware, and data breaches are all too familiar to most students, yet they still take the most basic precautions to keep themselves safe online, like using strong passwords and keeping sensitive information private. The results do show, however, that many pupils do not have the proper cybersecurity education and are therefore unprepared to deal with the complex cyber threats of the future.

Research like these shows how critical it is for schools to step up their cybersecurity education and awareness programmes. To further equip students for ethical digital behaviour, colleges should regularly host workshops, training programmes, and awareness campaigns. In order to safeguard sensitive information, promote responsible online behaviour, and build a trustworthy digital infrastructure, it is critical to raise students' cybersecurity awareness. In order to create a cyber-safe environment among students, the study stresses the importance of ongoing education and vigilance.

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