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# 5. Cybercrime Awareness Among Undergraduate Students: A Descriptive Study

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**Abstract**

*Cybercrime has emerged as a critical global issue in the digital age, affecting individuals, institutions and governments. This study investigates the level of cybercrime awareness among undergraduate students (UG) in Arunachal Pradesh, India. Using a descriptive survey method, data were collected from a sample of 185 students across three colleges selected through simple random sampling. A standardized Cybercrime Awareness Scale developed by S. Rajasekar was used to assess awareness levels. Results revealed that while 10.81% of students demonstrated high awareness, a majority fell within moderate to low awareness categories, which is indicating a significant gap in digital safety knowledge. No statistically significant difference was observed between male and female students, and differences by academic stream were also not significant. These findings emphasize the urgent need to raise awareness and introduce cyber safety education into undergraduate curricula so that students can use digital platforms safely and responsibly.*

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**Keywords:** Cybercrime awareness, UG students, digital literacy, cybersecurity education.

## 1.0 Introduction

The fast growth of digital technology has changed how we live, work, learn, and communicate every day. But along with these changes, cybercrime has also become a big and complicated problem for people, organizations and governments all over the world. Cybercrime means illegal activities done using computers or the internet. These crimes often target important data, networks or digital systems (Thomas & Loader, 2000; Wall, 2001). Examples include hacking, phishing, stealing identity, online fraud, cyberbullying, ransomware attacks and cyberterrorism.

Cybercrime has grown and changed as technology has developed. In the 1960s and 1970s, the earliest cases were about unauthorized access to large, isolated mainframe computers. In the 1980s, personal computers and networking became common, and cybercrime became more well known. For example, in 1983, a group called "The 414s" broke into several computer systems. This led to laws like the U.S. Computer Fraud and Abuse Act in 1986. When the internet spread in the 1990s, cybercrime became more varied. One big example is the "I LOVE YOU" virus in 2000, which affected computers worldwide. More recently, attacks like the 2017 WannaCry ransomware showed how serious and advanced cybercrime has become (Wall, 2001).

In India, as more people use the internet, digital banking, and online education, the chances of cybercrime are also increasing. Higher education students are particularly at risk because they rely on online platforms for learning, research, and communication. For undergraduate students, understanding digital safety and cybercrime is not just an additional skill but has become very important. Being aware helps them protect their personal information, maintain honesty in their studies, and use the internet responsibly (Mokha, 2017; Kumar and Narayan, 2019).

## Literature Review

Research has consistently shown that students in higher education face significant exposure to cyber threats. Mokha (2017) found that discipline and academic qualification influenced cybercrime awareness with science students often scoring higher. Kumar and Narayan (2019) reported that while urban students tend to have

greater exposure to cyber safety concepts, practical skills remain insufficient across disciplines.

Singh and Sharma (2019) revealed no gender-based differences in cyber law awareness among higher secondary students, although location impacted awareness levels. Choudhary (2020) found similar results, that students in professional programs exhibited higher awareness than traditional degree students.

Personality and psychological factors have also been linked to cyber safety awareness. Kavita (2019) concluded that emotionally mature and extroverted students were more proactive in avoiding risky online behaviour and staying updated about cyber threats. Keswani (2021) emphasized that user behaviour on social media significantly affects vulnerability, recommending stricter privacy settings and cautious sharing of personal information.

Globally, Tibi et al. (2019) found low cybercrime awareness in an Israeli teacher training college, suggesting that prior computer knowledge did not necessarily reduce vulnerability. Bele et al. (2014) demonstrated that e-learning and blended approaches improve cyber safety awareness. African studies (Kritzinger, 2017; Matlhare et al., 2020) also underscore the role of curriculum integration in improving student resilience against cybercrime.

### 1.3 Objectives of the Study

The present study was carried out with the following objectives:

1. To determine the overall level of cybercrime awareness among UG students.
2. To compare the cybercrime awareness levels of male and female UG students.
3. To compare the cybercrime awareness levels of Arts and Science stream UG students.

### 1.4 Hypotheses of the Study

The study tested the following null hypotheses at the 0.05 level of significance:

**$H_{o1}$:** There is no significant difference in cybercrime awareness between male and female UG students.

**$H_{o2}$:** There is no significant difference in cybercrime awareness between Arts and Science stream UG students.

### 1.5 Research Method

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This study followed a descriptive survey research design for the present study.

**1.6 Sample and Sampling Technique**

The study involved 185 undergraduate students from three colleges in Arunachal Pradesh: Government Model Degree College in Daporijo, Government Degree College in Doimukh and Jawaharlal Nehru College in Pasighat. These colleges were randomly selected to ensure that every student had an equal chance to participate.

**1.7 Variables of the study**

- **Independent variables:** Gender (male, female), academic stream (arts, science).
- **Dependent variable:** Cybercrime awareness score.

**1.8 Tools for the study**

The study used the **Cybercrime Awareness Scale (CCAS-RS)** developed by Dr. S. Rajasekar in 2011 , which consists of 36 items rated on a 5-point Likert scale. Positive statements were scored from 5 to 1, while negative statements were scored in reverse.

**1.9 Procedure of data collection**

After getting permission from the colleges, the questionnaires were given to students during their class time. Taking part in the study was completely voluntary and all responses were kept confidential to protect the students' privacy.

**1.10 Statistical Techniques Used**

Data were analysed using descriptive statistics (mean, percentage) and inferential statistics (independent samples t-tests). Significance was set at 0.05.

**1.11 Delimitations of the study**

The study was delimited to the following:

1. The study was delimited to undergraduate students from three selected colleges: Government Model Degree College, Daporijo, Government Degree College, Doimukh and Jawaharlal Nehru College, Pasighat.
2. It also delimited to Arunachal Pradesh.
3. The sample size was limited to 185 students selected through simple random sampling.
4. The study focused only on assessing cybercrime awareness.

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5. The study was delimited to the Cybercrime Awareness Scale developed by S. Rajasekar (2011), which was used for data collection.

**1.12 Analysis and Interpretation**

**Obj1: To determine the overall level of cybercrime awareness among UG students.**

The awareness scores from the Cybercrime Awareness Scale were categorised into five levels: Excellent, High, Above Average, Moderate, and Low. The distribution of students across these levels is shown in **Table 1**.

**Table 1***: Distribution of Students by Level of Cybercrime Awareness*

| Awareness Level | Frequency (N) | Percentage (%) |
|---|---|---|
| Excellent | 0 | 0.00 |
| High | 20 | 10.81 |
| Above Average | 53 | 28.65 |
| Moderate | 54 | 29.19 |
| Low/Below Average | 58 | 31.35 |
| **Total** | **185** | **100.00** |

*Note.* Levels are based on the scoring guidelines of the Cybercrime Awareness Scale by S. Rajasekar (2011).

**Interpretation:**

From the table 1, it can be analysed that no student achieved an “Excellent” level of awareness. The majority of group (31.35%) had low or below average awareness, followed by moderate (29.19%) and above average (28.65%) levels. Only 10.81% of students were in the high awareness category. This shows that most students have some knowledge of cybercrime but there is still a significant gap when it comes to deeper and practical understanding.

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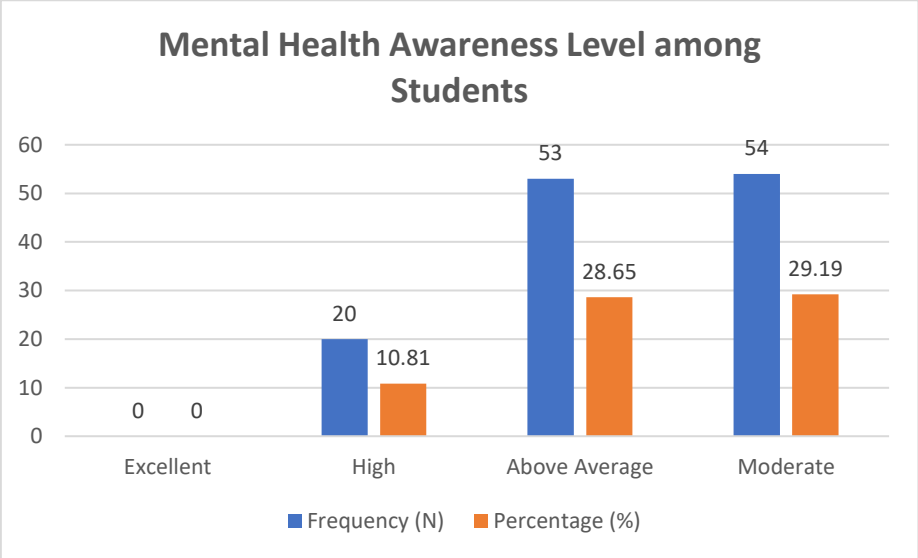


(Figure 1 : Level of mental health awareness)

**Obj2: To compare the cybercrime awareness levels of male and female UG students.**

**$H_{01}$:** There is no significant difference in cybercrime awareness between male and female UG students.

To examine whether there was any difference between male and female students in their level of awareness, an **independent samples t-test** was conducted. The results are given in **Table 2**.

**Table 2**: ***Comparison of Cybercrime Awareness by Gender***

| Gender | N | Mean | SD | t | p-value |
|---|---|---|---|---|---|
| Male | 88 | 136.25 | 13 | 0.18 | >.05 |
| Female | 97 | 134.21 | 14 | | |

*Note.* Independent samples t-test; p > .05 indicates no statistically significant difference between male and female students.

**Interpretation:** The results show that male students had a slightly higher mean score (M = 136.25, SD = 13.00) compared to female students (M = 134.21, SD = 14.00). However, the difference between the two groups was very small and statistically not significant ($t$ = 0.18, $p$ > .05). This means gender does not appear to have any meaningful effect on the level of cybercrime awareness among the UG students in this sample.

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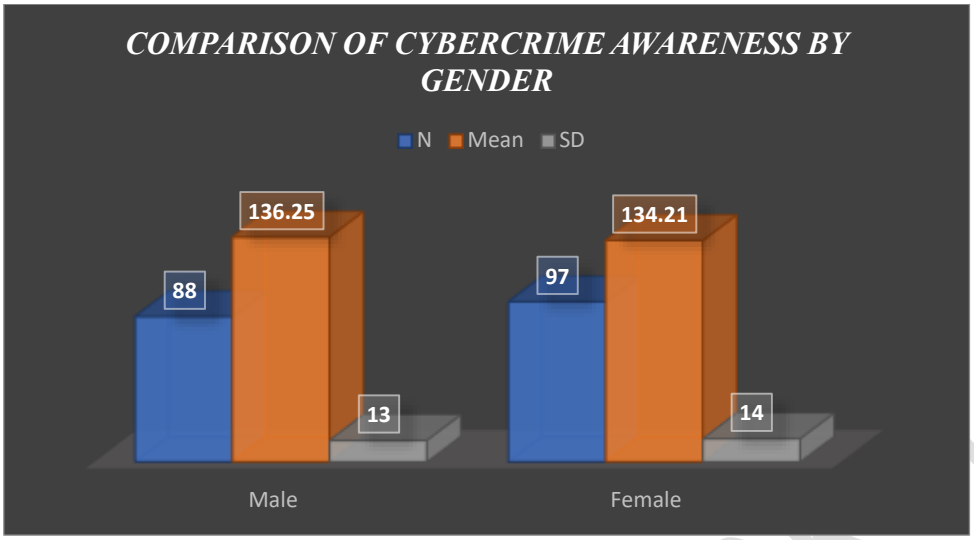


(Figure 2 : Gender wise comparison on cybercrime awareness)

**Obj3: To compare the cybercrime awareness levels of Arts and Science stream UG students.**

**$H_{02}$:** There is no significant difference in cybercrime awareness between Arts and Science stream UG students.

An independent samples t-test was also conducted to compare awareness levels between Arts and Science students. The results are presented in **Table 3**.

**Table 3**: ***Comparison of Cybercrime Awareness by Academic Stream***

| Academic Stream | N | Mean | SD | t | p-value |
|---|---|---|---|---|---|
| Arts | 95 | 134.87 | 15 | 0.82 | >.05 |
| Science | 90 | 136.75 | 14 | | |

*Note.* Independent samples t-test; p > .05 indicates no statistically significant difference between Arts and Science students.

**Interpretation:** The results show that Science students had a slightly higher mean score (M = 136.75, SD = 14.00) compared to Arts students (M = 134.87, SD = 15.00). However, the difference between the two groups was small and statistically not significant ($t = 0.82$, $p > .05$). This indicates that the academic stream of study does not have a significant effect on cybercrime awareness levels among UG students in this sample.

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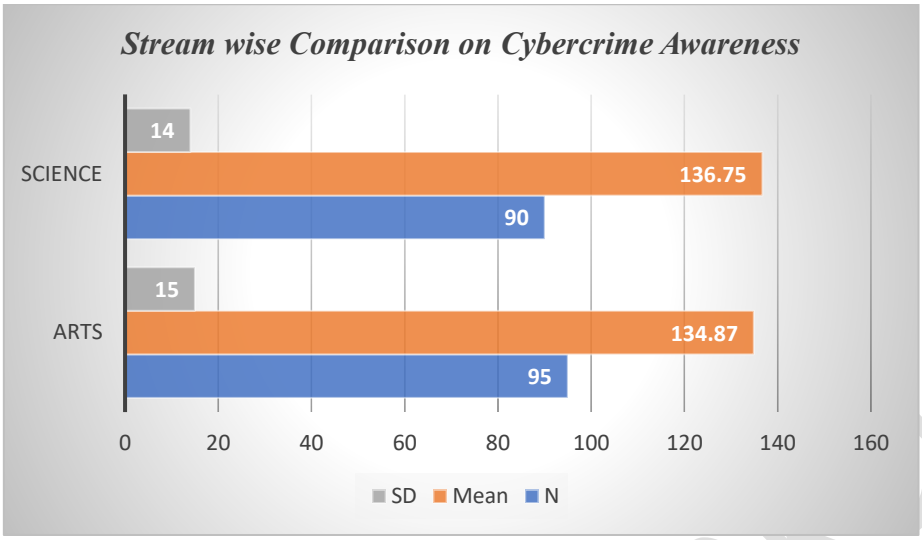


(Figure 3: Mental Health Awareness by Academic Stream)

### 1.13 Findings of the Study

1. Only 10.81% of students had high awareness; none had excellent awareness. The majority fell into moderate (29.19%) or above average (28.65%) categories, while 31.35% were below average or low.
2. No significant difference was found between males (M = 136.25, SD = 13.00) and females (M = 134.21, SD = 14.00), $t(183) = 0.18$, $p > .05$.
3. No significant difference was found between Arts students (M = 134.87, SD = 15.00) and Science students (M = 136.75, SD = 14.00), t (183) = 0.82, $p > .05$.

### 1.14 Discussion

The findings show that, overall, students have a moderate level of awareness about cyber safety, but there are important gaps when it comes to advanced knowledge. The lack of significant differences by gender or stream contrasts with some earlier studies (Mokha, 2017) but aligns with others (Singh & Sharma, 2019) and suggests that exposure to technology is becoming more equal among different groups. Because of this, awareness programs can be designed to include all students rather than focusing on specific groups. Targeted workshops on phishing, privacy, cyber laws and emerging threats could raise awareness levels.

### 1.15 Educational Implication

1. The findings of the study show that many students have only moderate or low awareness about cybercrime. This means there is a need to add cyber safety topics in the undergraduate syllabus. These topics can include safe use of the internet, how to recognise online fraud, keeping personal data private and knowing the laws related to cyber offences. Colleges can organise workshops, seminars and awareness campaigns to teach these skills in a practical and interesting way.
2. Teachers should also get proper training in cyber safety so they can guide their students better. Even subjects that are not related to computers can include small lessons on safe online behaviour. To reach all students, information should be provided not only in English but also in local languages.
3. Colleges can work with cybersecurity experts, NGOs and government agencies to give students updated and correct information about new online threats. Students should also be encouraged to change their habits, think carefully before sharing personal details online and report any suspicious activity they see. This will help create a culture of safe internet use in educational institutions.

**1.16 Conclusion**

The study reveals that while undergraduate students in Arunachal Pradesh are actively engaged in the digital world, their understanding of cyber threats is still limited. With no major differences found between male and female students or between Arts and Science streams, it is evident that access to technology is now widespread, but so is the risk of falling victim to online dangers. This makes it essential to treat cyber safety education as a core part of undergraduate learning, helping students develop the awareness, skills, and responsible habits they need to protect themselves and participate in the digital age with confidence and security.

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