

## THE IMPACT OF SOCIOECONOMIC STATUS ON CYBERSECURITY AWARENESS AMONG INDIVIDUALS IN SRI LANKA

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### INTRODUCTION

There is no argument whatsoever that the proliferation of devices and information are empowering. Technology is today far more democratically available than it was yesterday and less than it will be tomorrow (Geer, 2015). Although most people seem to consider the Internet to be a safe environment and use it daily. Cyberattacks, hacks, and security breaches on the Internet are no longer an exception. The need for cybersecurity is becoming increasingly important due to our dependence on Information and Communication Technology (ICT) (de Bruijn & Janssen, 2017). Cybersecurity awareness is defined as having a general knowledge and understanding of information security-related issues, their effects, and the necessary steps to address them (Khan et al., 2022). The lack of awareness and knowledge makes people unable to protect their data. Cybersecurity has become a key issue in Sri Lanka due to numerous reasons (Nagahawatta, Warren, and Yeoh, 2020). According to CERT 2020, the number of reported incidents in Sri Lanka surged to 16,376 in 2020, a drastic increase compared to the 3,566 cases reported in 2019, representing a nearly 460% rise in reported incidents. This startling rise underscores the escalating frequency of cyberattacks and thefts. Previous research has shown that socioeconomic status has a direct impact on cyber-preventive behaviors. Additionally, there is strong evidence that existing socioeconomic and structural inequalities contribute to digital inequalities. Different access and skill levels have been repeatedly linked to factors such as gender, age, education, and socioeconomic background. (Dodel & Mesch, 2019). All socioeconomic variables were identified as playing a major role in sustaining or enhancing customers' degree of knowledge of cyber security threats, attacks, advice, and best practices (Adholiya & Adholiya, 2019). Furthermore, Redmiles, Kross, and Mazurek (2017) examined whether socioeconomic status affects individual users' cyber security awareness and their likelihood of reporting a security incident. They found that users of lower socioeconomic status (SES) tended to rely on different sources of safety advice than wealthier users. When evaluating previous studies, the socioeconomic factor of income shows a positive relationship with cyber security awareness (Adholiya and Adholiya, 2019), while other research shows that there is a negative relationship or no relationship at all (Redmiles et al., 2017). So, the researcher identified a gap here. Accordingly, there is a problem: "What is the impact of socio-economic status on cybersecurity awareness among individuals in Sri Lanka". This research will help individuals to know their level of cybersecurity awareness and it will help the government spread cybersecurity awareness to those who don't know about it. It will also help the institutions dealing with it to make legislation. There are nine provinces in Sri Lanka. However, this study only considered three provinces. Also, a large number of factors are affecting cybersecurity awareness. However, this study only considered socioeconomic status. The main objective of this research is "to measure the level of impact of socio-economic status on cyber security awareness among individuals in Sri Lanka". The secondary objectives are "to measure the level of impact of the

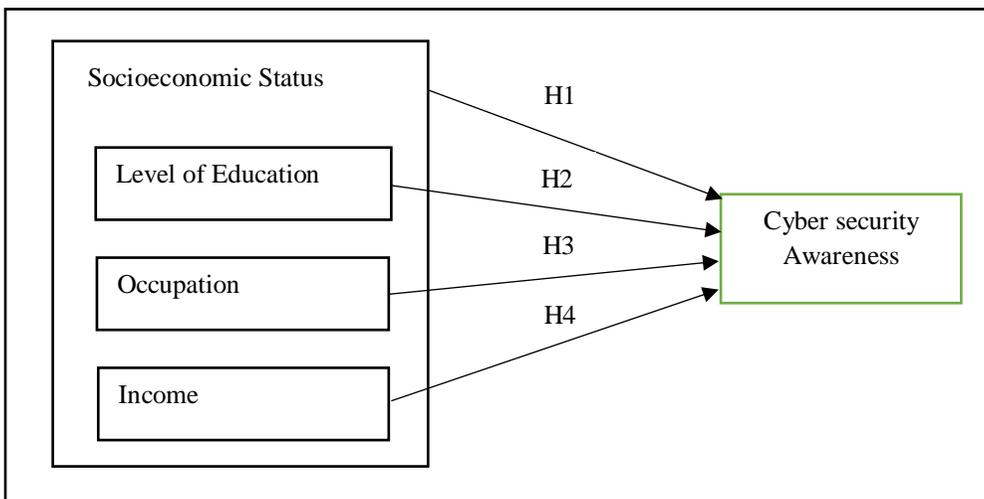
level of education, occupation and income on cyber security awareness among individuals in Sri Lanka.

## METHODOLOGY

The nature of the study is quantitative and the research approach is deductive. In this research, the researcher intends to use primary data for data collection and it is collected through a structured questionnaire. Data collection methods were Cluster Sampling and Simple Random Sampling. The population of this research is people over 18 years of age in Sri Lanka. 16,074,658 people are 18 years of age and older in Sri Lanka. (Sri Lanka Labor Force Survey Quarterly Report, 3<sup>rd</sup> Quarter, 2022). Through the application of Krejcie and Morgan (1970), the sample consists of 384 people from Sri Lanka.

**Figure 1**

*Conceptual Framework*



*H<sub>1</sub>*: There is a significant positive impact of socioeconomic status on cyber security awareness among individuals in Sri Lanka.

*H<sub>2</sub>*: There is a significant positive impact of the level of education on cyber security awareness among individuals in Sri Lanka.

*H<sub>3</sub>*: There is a significant positive impact of income on cyber security awareness among individuals in Sri Lanka.

*H<sub>4</sub>*: There is a significant positive impact of occupation on cyber security awareness among individuals in Sri Lanka.

## RESULTS AND DISCUSSION

The reliability test is used to assess the internal consistency of the dependent and independent variables in a research study. In this study, the reliability values (Cronbach's alpha) for all variables were above 0.685, indicating that they are reliable and internally consistent. According to the model, a reliability value above 0.7 is considered very good, and a value between 0.7 and 0.6 is considered good. The researcher also conducted a descriptive analysis

to identify the behavior of the data by calculating the mean, standard deviation, and skewness of the dependent and independent variables. The mean values of the variables ranged from 2.08 to 3.89, and the SD values ranged from 0.921 to 1.537. Level of Education and Cybersecurity Awareness were negatively skewed, while Occupation and Income were positively skewed. Finally, four hypotheses were tested to measure the impact of socioeconomic status on cybersecurity awareness using correlation analysis and regression analysis. The results of these tests are summarized in the following tables:

**Table 1**  
*Correlations*

	SES	LE	OC	IN
CA	0.202**	0.438**	0.062	0.048

\*\*P<0.01

The significance values of Socioeconomic Status and Level of Education are less than 0.05 and Occupation and income are higher than 0.05 in correlation analysis. So, Pearson's correlation analysis accepted two hypotheses (H1, H2) and rejected two hypotheses (H3, H4).

**Table 2**  
*ANOVA*

Model	Sum of Square	df	Mean Square	F	Sig
Regression	64.988	3	21.663	31.717	.000 <sup>b</sup>
Residual	259.540	380	0.683		
Total	328.528	383			

R Square= 0.200

**Table 3**  
*Coefficients*

Model	Unstandardized Coefficient		Standardized Coefficients	t	Sig.
	$\beta$	Std. Error	$\beta$		
Constant	.2.490	0.164		15.225	0.000
Level of Education	0.407	0.042	0.470	9.659	0.000
Occupation	-0.032	0.036	-0.054	-0.890	0.374
Income	-0.037	0.420	-0.052	-0.871	0.385

According to the regression analysis, the R-squared value of 20% indicates that 20% of the variance in individuals' cybersecurity awareness in Sri Lanka can be explained by the variables Level of Education, Occupation, and Income. This means that the remaining 80% of the variance is explained by other factors that were not explicitly considered in the study. The regression analysis also found that Occupation (H<sub>3</sub>) and Income (H<sub>4</sub>) did not have a significant impact on individuals' cybersecurity awareness in Sri Lanka ( $p > 0.05$ ). However, Socioeconomic Status (H<sub>1</sub>) and Level of Education (H<sub>2</sub>) did have a significant positive impact on individuals' cybersecurity awareness ( $p < 0.05$ ).

## CONCLUSION AND IMPLICATIONS

This study investigated the impact of socioeconomic status (SES) on cybersecurity awareness among individuals in Sri Lanka. Level of education, occupation, and income were tested as factors of SES that affect cybersecurity awareness. Regression analysis results showed that SES and level of education have a positive impact on cybersecurity awareness, while income and occupation do not. This suggests that level of education is the most important factor of SES that influences cybersecurity awareness. In today's world, with the increasing prevalence of cyberattacks and threats, anyone can be a victim. The losses from cyberattacks can be devastating, and sometimes irreparable. Therefore, everyone needs to be aware of cybersecurity best practices. However, cybersecurity is not a well-known topic in Sri Lanka. Many people are not familiar with the concept, and even more, people do not know how to protect themselves from cyberattacks. In light of this, the researcher recommends that the government take steps to raise awareness of cybersecurity among the Sri Lankan population. Additionally, the researcher recommends that more research be done on cybersecurity in Sri Lanka, given the increasing number of cyber threats. This research could help to identify the specific needs of the Sri Lankan population and develop tailored cybersecurity awareness programs.

**Keywords:** Cybersecurity awareness, income, level of education, occupation, socioeconomic status

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