

Impact of Cybersecurity Awareness on the Online Behavior of Residents in Barangay Batasan Hills, Quezon City: A Case Study

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ABSTRACT

This study examined the impact of cybersecurity awareness on the online behavior of residents in Barangay Batasan Hills, Quezon City, specifically focusing on their level of awareness, online practices, and ability to recognize cyber risks. A descriptive-quantitative research design was used, and data were gathered from 399 respondents through a researcher-made survey questionnaire using purposive sampling. Results were analyzed using frequency, percentage, and weighted mean. Findings revealed that respondents generally demonstrated a high level of cybersecurity awareness and safe online behavior, with an overall weighted mean of 3.98, interpreted as “Often.” Respondents showed strong practices in handling pop-up advertisements and online shopping, both interpreted as “Always,” while also demonstrating generally positive behaviors in password management, privacy protection, external link handling, email safety, public Wi-Fi usage, and response to online threats. In terms of awareness, respondents showed a good understanding of cybersecurity threats and online risks, indicating responsible digital engagement. However, weaker areas were identified in password management consistency and phishing identification skills, suggesting a gap between awareness and actual practice. Overall, the findings indicate that cybersecurity awareness significantly influences the online behavior of residents, although not all knowledge is consistently applied in practice. The study concludes that while residents generally practice safe online behavior, continuous cybersecurity education and community-based awareness programs are still necessary to strengthen weak areas such as password security and phishing detection, and to further enhance safe and responsible internet use within the community.

Keywords: Community-based Awareness, Cybersecurity Awareness, Digital Literacy, Online Behavior, Quantitative Research

INTRODUCTION

The rapid advancement of digital technology has significantly transformed the way individuals communicate, access information, and perform daily activities. The widespread use of smartphones, social media platforms, online banking systems, and e-commerce applications has provided greater convenience and accessibility. However, these technological developments have also increased users’ exposure to cybersecurity threats such as phishing, identity theft, malware, and online scams. As internet usage continues to expand globally, cybersecurity awareness has become an essential component of digital literacy that promotes safe and responsible online behavior. Recent studies emphasized that individuals with higher levels of cybersecurity awareness are more likely to adopt protective online practices, including creating strong passwords, recognizing suspicious links, and safeguarding personal information while using digital platforms (Zwilling et al., 2022; Hadlington, 2023). Furthermore, cybersecurity awareness has been identified as a critical factor in minimizing user vulnerability and improving decision-making when interacting within digital environments (Department of Information and Communications Technology [DICT], 2024).

In community settings, residents increasingly depend on digital technologies for communication, online transactions, education, entertainment, and access to government services. Despite the benefits of digital connectivity, varying levels of digital literacy and technological exposure may influence how individuals practice online safety and security. Studies conducted in community environments revealed that many residents

still lack sufficient knowledge regarding cyber safety practices, resulting in unsafe online behaviors such as sharing sensitive information, using weak passwords, and accessing unsecured networks (Limson et al., 2023). Public awareness initiatives also highlighted the growing need for localized cybersecurity education programs to help residents better understand online risks and adopt safer digital practices (University of the Philippines Open University [UPOU], 2023). These findings suggest that although digital platform usage continues to increase, cybersecurity awareness and online safety practices among community residents remain inconsistent.

In the Philippine context, cybersecurity incidents continue to rise due to the limited knowledge of internet users regarding online safety and preventive cybersecurity measures. Reports from national agencies emphasized that individuals remain vulnerable to cyber threats, particularly phishing attacks, online fraud, and identity theft, because of insufficient awareness and lack of protective practices (DICT, 2024). Community-based studies further revealed that residents often rely heavily on social media and messaging applications without fully understanding the associated risks, thereby increasing their exposure to cybercrime and other digital threats (Limson et al., 2023). These concerns highlight the importance of strengthening cybersecurity awareness among community residents to encourage safer online behavior and reduce cyber-related incidents.

Barangay Batasan Hills, Quezon City, is one of the most populated communities in the city, where residents actively utilize digital technologies for communication, online transactions, education, and access to various services. The large population and widespread internet usage within the barangay increase the likelihood of exposure to cybersecurity risks among residents (PhilAtlas, 2023). A study conducted in Barangay Batasan Hills reported incidents involving identity theft and misuse of personal information, indicating the need to improve cybersecurity awareness and promote safe online practices among community members (Tura et al., 2024). Additionally, studies conducted in barangay communities emphasized that residents often lack sufficient awareness of cybersecurity threats, making them vulnerable to phishing attacks, scams, and other online risks (Limson et al., 2023). Despite these findings, limited localized studies have specifically examined how cybersecurity awareness influences the online behavior of residents at the barangay level, particularly in Barangay Batasan Hills, Quezon City.

This research gap highlights the need to investigate cybersecurity awareness and its impact on the online behavior of residents in Barangay Batasan Hills. Understanding the residents' level of cybersecurity awareness and their online practices may provide valuable insights into potential vulnerabilities within the community. By identifying existing awareness levels and online behaviors, appropriate interventions and educational programs may be developed to promote safer online practices and strengthen community-based digital safety initiatives.

This study aims to determine the impact of cybersecurity awareness on the online behavior of residents in Barangay Batasan Hills, Quezon City. Specifically, it seeks to assess the level of cybersecurity awareness among residents, identify their online behavior when using digital technologies, and determine the relationship between cybersecurity awareness and online behavior. The findings of this study may serve as a basis for developing community-based cybersecurity awareness programs and educational initiatives tailored to the needs of residents.

The results of this study are expected to benefit community residents, barangay officials, and local government units by providing baseline information regarding cybersecurity awareness within the community. The findings may support the implementation of targeted awareness campaigns and digital safety programs aimed at reducing cybersecurity risks and promoting responsible internet usage. Furthermore, this study contributes to the existing body of literature by addressing the gap in community-level cybersecurity awareness research and providing insights into the online behavior of residents in Barangay Batasan Hills, Quezon City.

A. Statement of the Problem

The increasing reliance on digital technologies among residents of Barangay Batasan Hills, Quezon City has exposed individuals to various cybersecurity threats such as phishing, identity theft, and online scams. Despite the growing use of online platforms for communication, transactions, and access to services, cybersecurity awareness among community residents remains inconsistent. This situation may influence how individuals

behave online, potentially increasing their vulnerability to cyber risks. Thus, this study aims to examine the impact of cybersecurity awareness on the online behavior of residents in Barangay Batasan Hills, Quezon City.

Specifically, it seeks to answer the following questions:

1. How often the residents check their cybersecurity awareness in terms of:
 - a. Changing Password
 - b. Privacy Settings
 - c. External Links
 - d. Anonymous Email
 - e. Pop-Up Ads
 - f. Public Wifis
 - g. Chatting to Strangers
 - h. Online Shopping
2. What is the level of online behavior of residents in terms of:
 - a. Safe browsing practices
 - b. Protection of personal information
 - c. Response to suspicious online threats
3. What is the level of cybersecurity awareness of the residents in terms of:
 - a. Knowledge of cybersecurity threats
 - b. Awareness in online shopping/safe online practices
 - c. Ability to recognize online risks

Related Studies

Cybersecurity awareness has consistently been identified in both international and local literature as a significant factor influencing individuals' online behavior. Studies revealed that individuals with greater knowledge of cybersecurity concepts are more likely to practice safe online behaviors, such as creating strong passwords, identifying phishing attempts, protecting personal information, and avoiding suspicious online activities. Research conducted by Lee and Chua (2023), Musaddag Elrayah and Jamil (2023), and Zwilling et al. (2022) emphasized that cybersecurity awareness contributes to responsible digital behavior, particularly when combined with broader digital literacy competencies. These studies collectively suggest that cybersecurity awareness serves as a foundation for secure online practices by enabling individuals to recognize potential cyber threats and apply appropriate protective measures while using digital technologies.

Despite the positive relationship between cybersecurity awareness and online safety practices, several studies identified the existence of a knowledge-behavior gap, wherein individuals possess cybersecurity knowledge but fail to consistently apply it in actual online situations. Bognár and Bottyán (2024), Khan et al. (2022), and Rotas and Cahapay (2021) found that many users demonstrate awareness of cybersecurity risks yet still engage in unsafe online behaviors due to convenience, negligence, overconfidence, and habitual internet use. Similar findings were observed in Philippine-based studies conducted by De Guzman and Rivera (2024), Escobar

(2022), and Alabab et al. (2024), which revealed that although respondents were aware of cybersecurity threats and preventive measures, the practical application of such knowledge remained inconsistent. These findings indicate that awareness alone is insufficient to ensure secure online behavior, highlighting the need for strategies that reinforce the consistent practice of cybersecurity measures.

The literature further emphasized that cybersecurity behavior is influenced not only by awareness but also by psychological, social, and demographic factors. Alanazi, Freeman, and Tootell (2022) explained that attitudes, subjective norms, and perceived behavioral control significantly influence individuals' cybersecurity intentions and actual practices. Likewise, Debb and McClellan (2021) noted that perceived vulnerability to cyber threats motivates individuals to adopt protective online behaviors. Social influence also emerged as a significant determinant of cybersecurity behavior. Hong et al. (2023) found that peer behaviors and social environments often shape cybersecurity practices more strongly than individual knowledge alone. In the local context, Loyola et al. (2026) and Booc et al. (2024) similarly revealed that factors such as age, confidence in using technology, and level of exposure to digital platforms influence cybersecurity awareness and online behavior among users. These findings suggest that cybersecurity behavior is multidimensional and shaped by both personal and environmental factors.

Moreover, the reviewed studies highlighted the importance of continuous and structured cybersecurity education in strengthening safe online practices. International studies recommended integrating cybersecurity awareness programs into educational systems and broader digital literacy initiatives to address the gap between knowledge and actual behavior. This perspective is supported by local studies conducted by Cuares and Casaña (2026), Dapitan et al. (2024), and Toso et al. (2023), which emphasized that regular reinforcement, targeted training programs, and curriculum integration are essential in developing practical cybersecurity skills and improving online safety behavior. Additionally, Pasia (2025) highlighted the value of community-based approaches, emphasizing that collective awareness efforts and collaboration with institutions can further enhance cybersecurity behavior beyond individual initiatives. These findings demonstrate the importance of sustained educational interventions in promoting responsible and secure online practices within communities.

Overall, the reviewed literature demonstrates that cybersecurity awareness significantly influences online behavior; however, its effectiveness is shaped by several interconnected factors, including behavioral intention, social influence, perceived risk, technological exposure, and practical experience. Both foreign and local studies consistently emphasized the need for comprehensive and behavior-focused cybersecurity education programs that extend beyond knowledge acquisition. The literature further suggests that effective cybersecurity behavior requires continuous reinforcement and strategies that address not only awareness but also the behavioral and social factors influencing how individuals act within digital environments. These findings support the present study by establishing the importance of examining cybersecurity awareness and online behavior at the community level, particularly among residents in Barangay Batasan Hills, Quezon City.

METHODOLOGY

A. Research Design

This study employed a descriptive-quantitative research design to examine the impact of cybersecurity awareness on the online behavior of residents in Barangay Batasan Hills, Quezon City. The descriptive-quantitative design was deemed appropriate because it enables the researchers to systematically describe, measure, and analyze the current level of cybersecurity awareness and online behavior among community residents using numerical data. Through this approach, the researchers were able to objectively assess the frequency of cybersecurity practices, the level of cybersecurity awareness, and the respondents' online behaviors when using digital technologies.

This research design has been widely utilized in similar cybersecurity-related studies, particularly those conducted by Lee and Chua (2023), De Guzman and Rivera (2024), and Ahamed et al. (2026), which also focused on assessing and describing cybersecurity awareness and online behavior among community-based populations. The use of a quantitative approach further allowed the researchers to analyze the collected data

using statistical methods and determine patterns and trends related to cybersecurity awareness and online practices.

A total of 399 respondents participated in the study to ensure adequate sample representation and obtain statistically reliable results with a minimal margin of error.

B. Data Gathering

Population and Sampling

The respondents of this study were residents of Barangay Batasan Hills, Quezon City, which has a recorded population of 168,770 based on the 2024 POPCEN (Census of Population). To determine the required sample size, the researchers applied Slovin's Formula:

$$n = \frac{N}{1+Ne^2}$$

Where:

n = sample size

N = total population

e = margin of error

Using a 5% margin of error (e=0.05), the computed sample size resulted in 399 respondents.

The respondents were selected through purposive sampling. The primary criterion for participation was that the respondents must be residents of Barangay Batasan Hills, Quezon City, and active users of digital technologies or social media platforms. No specific age bracket was imposed in order to obtain responses from internet users belonging to different age groups within the community.

Data Gathering Tools

The researchers used a researcher-made survey questionnaire as the primary data gathering instrument for the study. The questionnaire was designed to assess the cybersecurity awareness and online behavior of residents in Barangay Batasan Hills, Quezon City. The instrument consisted of four major sections:

- a. **Technical Habits** – focused on password management and privacy settings;
- b. **Web Safety** – examined respondents' behavior in handling links, emails, and public Wi-Fi networks;
- c. **Consumer Awareness** – assessed online shopping and financial security practices; and
- d. **Cognitive Awareness** – evaluated respondents' knowledge regarding phishing, malware, and other cybersecurity threats.

The questionnaire utilized a 5-point Likert Scale to measure the respondents' answers. Two rating scales were used depending on the nature of the survey items.

Table 1 5-Point Likert Scale Used for Cybersecurity Practices

| Score | Interpretation |
|-------|----------------|
| 5 | Always |

| | |
|---|-----------|
| 4 | Often |
| 3 | Sometimes |
| 2 | Rarely |
| 1 | Never |

Table 2 5-Point Likert Scale Used for Cybersecurity Awareness

| Score | Interpretation |
|-------|------------------------|
| 5 | Strongly Agree (SA) |
| 4 | Agree (A) |
| 3 | Neutral (N) |
| 2 | Disagree (D) |
| 1 | Strongly Disagree (SD) |

Prior to the actual data collection, the questionnaire was validated by the research adviser and subject experts to ensure the clarity, relevance, and appropriateness of the survey items.

Data Gathering Procedure

Prior to conducting the study, the researchers secured permission from the appropriate authorities and obtained the consent of the respondents to ensure ethical compliance and proper coordination throughout the research process.

Data collection was conducted using two modes of survey administration. The primary method involved the distribution of an online survey questionnaire through Google Forms, which enabled efficient and wide-reaching participation among residents with internet access and smartphones.

For respondents who had limited access to mobile devices or internet connectivity, particularly middle-aged and older residents, the researchers employed a researcher-assisted survey approach. In this process, the researchers personally read the survey questions aloud and recorded the respondents' answers on their behalf. This dual-mode data collection approach ensured inclusivity and prevented the exclusion of participants due to technological limitations.

After all responses were collected, the data were organized, tabulated, analyzed, and interpreted using appropriate statistical tools.

C. Statistical Treatment of Data

The data gathered from the survey questionnaires were processed and analyzed using appropriate statistical tools to address the objectives of the study. The following statistical measures were utilized:

Frequency and Percentage

Frequency and percentage were used to describe the demographic profile of the respondents and summarize the distribution of responses across the survey items.

Weighted Mean

The weighted mean was used to determine the average response for each survey item and to measure the overall level of cybersecurity awareness and online behavior among the respondents. The formula used is shown below:

$$WM = \frac{\Sigma(f \times w)}{N}$$

Where:

WM= weighted mean

f = frequency of responses

w = weight assigned to each response

N = total number of respondents

Verbal Interpretation

The computed weighted means were interpreted using an appropriate verbal interpretation scale to categorize the level of cybersecurity awareness and online behavior of the respondents.

RESULT AND DISCUSSION

This chapter presents the data gathered through research instruments. This section aims to analyze and interpret the collected data based on the respondents' answers and relate them to the objectives of the study. Through this analysis, the study provides insights and conclusions that support the overall purpose of the research.

Profile of the Respondents

Table 3 Demographic Profile of the Respondents According to Age and Gender

| DEMOGRAPHIC VARIABLE | CATEGORY | FREQUENCY | PERCENTAGE |
|----------------------|------------------------|------------|----------------|
| Age | 17 years old and below | 28 | 7.00% |
| | 18 – 24 | 83 | 20.8% |
| | 25 – 34 | 76 | 19.00% |
| | 35 – 44 | 65 | 16.30% |
| | 45 – 54 | 58 | 14.50% |
| | 55 – 64 | 49 | 12.30% |
| | 65 years old and older | 40 | 10.00% |
| | Total | 399 | 100.00% |
| Gender | Male | 198 | 49.50% |
| | Female | 181 | 45.30% |
| | Prefer not to say | 18 | 4.50% |

| | | | |
|--|--------------|------------|----------------|
| | Others | 2 | 0.50% |
| | Total | 399 | 100.00% |

Table 3 presents the demographic profile of the respondents according to age and gender. The majority of the respondents belonged to the 18–24 years old age group with a frequency of 83 or 20.8%, while most respondents were male with a frequency of 198 or 49.6% of the total 399 respondents. The findings indicate that the study gathered responses from residents with diverse demographic backgrounds regarding cybersecurity awareness and online behavior.

Degree of Cybersecurity Practices Among Residents

Passwords Management

Table 4 Respondent’s Assessment of their Password Management Practices

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|---|---------------|--------------|------------------|---------------|--------------|------------------|--------------------------|
| I change my passwords regularly | 47 | 75 | 132 | 122 | 23 | 3.00 | Sometimes |
| I create strong passwords for my accounts | 156 | 101 | 104 | 28 | 10 | 3.91 | Often |
| I avoid reusing the same password on multiple accounts | 74 | 89 | 141 | 69 | 26 | 3.91 | Often |
| Overall Mean | | | | | | 3.61 | Often |

Table 4 presents the respondents’ assessment regarding their password management practices. The table shows an overall weighted mean of 3.61, verbally interpreted as “Often,” indicating that the respondents generally practice proper password security measures in their online accounts. The statements “I create strong passwords for my accounts” and “I avoid reusing the same password on multiple accounts” both obtained a weighted mean of 3.91, interpreted as “Often.” These findings suggest that respondents are aware of the importance of using strong and unique passwords to protect their online accounts from unauthorized access and cyber threats.

Meanwhile, the statement “I change my passwords regularly” obtained the lowest weighted mean of 3.00, verbally interpreted as “Sometimes.” This indicates that although respondents practice creating strong and unique passwords, they do not consistently update their passwords regularly. The result suggests a need to further strengthen cybersecurity awareness programs emphasizing the importance of regular password changes as part of safe online behavior.

Privacy Settings and Account Management

Table 5 Respondent’s Assessment of their Privacy and Account Management Practices

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|--|---------------|--------------|------------------|---------------|--------------|------------------|--------------------------|
| I review my privacy settings on social media accounts | 111 | 119 | 117 | 49 | 12 | 3.69 | Often |

| | | | | | | | |
|--|-----|-----|-----|----|---|-------------|--------------|
| I limit who can view my personal information online | 139 | 126 | 96 | 31 | 7 | 3.90 | Often |
| I update my account privacy settings when needed | 135 | 107 | 104 | 44 | 9 | 3.90 | Often |
| Overall Mean | | | | | | 3.83 | Often |

Table 5 presents the respondents' assessment of their privacy and account management practices. The table obtained an overall weighted mean of 3.83, verbally interpreted as "Often," indicating that the respondents generally practice proper privacy management in their online accounts. Among the indicators, the statements "I limit who can view my personal information online" and "I update my account privacy settings when needed" both received the highest weighted mean of 3.90, interpreted as "Often." This suggests that respondents are generally aware of the importance of protecting personal information and maintaining updated privacy settings to reduce online risks. Meanwhile, the statement "I review my privacy settings on social media accounts" obtained the lowest weighted mean of 3.69, although still verbally interpreted as "Often." Overall, the findings imply that respondents demonstrate positive online privacy management practices, reflecting a relatively good level of cybersecurity awareness regarding the protection of personal information online.

External Links

Table 6 below shows the respondents' assessment of their practices in handling external links. The table obtained an overall weighted mean of 4.06, verbally interpreted as "Often," indicating that the respondents generally practice caution when dealing with online links and websites. Among the indicators, the statement "I avoid clicking links from unknown sources" received the highest weighted mean of 4.17, interpreted as "Often," suggesting that respondents are highly aware of the risks associated with suspicious or unfamiliar links. Similarly, the statement "I check if a link is safe before clicking it" obtained a weighted mean of 4.07, while "I verify website URLs before entering information" garnered the lowest weighted mean of 3.95, though still interpreted as "Often." Overall, the findings indicate that respondents commonly practice safe behaviors when handling external links, reflecting a good level of cybersecurity awareness in protecting themselves from phishing attacks, scams, and malicious websites.

Table 6 Respondent's Assessment of their Practices in Handling External Links

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|--|------------|-----------|---------------|------------|-----------|---------------|-----------------------|
| I check if a link is safe before clicking it | 481 | 107 | 81 | 24 | 6 | 4.07 | Often |
| I avoid clicking links from unknown sources | 195 | 116 | 57 | 23 | 8 | 4.17 | Often |
| I verify website URLs before entering information | 163 | 100 | 102 | 23 | 11 | 3.95 | Often |
| Overall Mean | | | | | | 4.06 | Often |

Anonymous Email

Table 7 Respondent’s Assessment of their Anonymous Email Handling Practices

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|--|---------------|--------------|------------------|---------------|-----------|------------------|--------------------------|
| I check the sender’s identity before opening emails | 167 | 119 | 85 | 22 | 6 | 4.05 | Often |
| I avoid replying to suspicious emails | 196 | 117 | 56 | 25 | 5 | 4.19 | Often |
| I delete anonymous emails immediately | 148 | 111 | 93 | 38 | 9 | 3.88 | Often |
| Overall Mean | | | | | | 4.04 | Often |

Table 7 illustrates the respondents’ assessment of their anonymous email handling practices. The table obtained an overall weighted mean of 4.04, verbally interpreted as “Often,” indicating that the respondents generally practice caution when dealing with suspicious or anonymous emails. Among the indicators, the statement “I avoid replying to suspicious emails” received the highest weighted mean of 4.19, interpreted as “Often,” suggesting that respondents are highly aware of the potential risks associated with fraudulent or malicious emails. The statement “I check the sender’s identity before opening emails” also obtained a high weighted mean of 4.05, while “I delete anonymous emails immediately” received the lowest weighted mean of 3.88, though still verbally interpreted as “Often.” Overall, the findings indicate that respondents commonly practice safe email handling behaviors, reflecting a good level of cybersecurity awareness in protecting themselves from phishing attempts, scams, and other email-related cyber threats.

Pop-up Advertisements

Table 8 Respondent’s Assessment of their Practices Regarding Pop-p Ads

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|--|---------------|--------------|------------------|---------------|--------------|------------------|--------------------------|
| I avoid clicking on suspicious pop-up ads | 210 | 101 | 67 | 14 | 7 | 4.24 | Always |
| I close unwanted pop-up windows immediately | 213 | 103 | 56 | 22 | 5 | 4.25 | Always |
| I avoid downloading files from pop-up ads | 201 | 96 | 75 | 20 | 7 | 4.16 | Often |
| Overall Mean | | | | | | 4.22 | Always |

Table 8 presents the respondents’ assessment of their practices regarding pop-up advertisements. The table obtained an overall weighted mean of 4.22, verbally interpreted as “Always,” indicating that the respondents consistently practice safe behaviors when encountering suspicious pop-up ads online. Among the indicators, the statement “I close unwanted pop-up windows immediately” received the highest weighted mean of 4.25,

interpreted as “Always,” followed closely by “I avoid clicking on suspicious pop-up ads” with a weighted mean of 4.24. Meanwhile, the statement “I avoid downloading files from pop-up ads” obtained the lowest weighted mean of 4.16, although it was still verbally interpreted as “Often.” Overall, the findings suggest that respondents demonstrate a high level of cybersecurity awareness and caution in handling pop-up advertisements, which may help reduce their exposure to malware, scams, and other online threats.

Public Wi-Fi Usage

Table 9 Respondent’s Assessment of their Practices in Public Wi-Fi Usage

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|---|---------------|--------------|------------------|---------------|--------------|------------------|--------------------------|
| I avoid connecting to unsecured public Wi-Fi? | 154 | 123 | 101 | 14 | 7 | 4.01 | Often |
| I use secure connections when using public Wi-Fi | 212 | 103 | 56 | 22 | 6 | 4.24 | Always |
| I avoid accessing into sensitive accounts on public Wi-F | 201 | 96 | 75 | 20 | 7 | 4.16 | Often |
| Overall Mean | | | | | | 4.22 | Always |

Table 9 displays the respondents’ assessment of their practices regarding the use of public Wi-Fi networks. The table obtained an overall weighted mean of 4.22, verbally interpreted as “Always,” indicating that the respondents consistently practice safe behaviors when using public internet connections. Among the indicators, the statement “I use secure connections when using public Wi-Fi” received the highest weighted mean of 4.24, interpreted as “Always,” suggesting that respondents are highly aware of the importance of securing their internet connection in public environments. Meanwhile, the statements “I avoid accessing sensitive accounts on public Wi-Fi” and “I avoid connecting to unsecured public Wi-Fi” obtained weighted means of 4.16 and 4.01, respectively, both interpreted as “Often.” Overall, the findings indicate that respondents generally demonstrate responsible and secure practices when using public Wi-Fi, reflecting a good level of cybersecurity awareness in protecting personal and sensitive information from potential cyber threats.

Chatting to Stranger

Table 10 Respondent’s Assessment of their Practices in Regarding Chatting to Strangers

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|---|---------------|--------------|------------------|---------------|--------------|------------------|--------------------------|
| I avoid sharing personal information with strangers online | 196 | 105 | 68 | 21 | 9 | 4.15 | Often |
| I block suspicious strangers who contact me | 212 | 103 | 56 | 22 | 6 | 4.24 | Always |

| | | | | | | | |
|--|-----|-----|----|----|----|-------------|---------------|
| I stay cautious when chatting with strangers online | 189 | 102 | 75 | 23 | 10 | 4.10 | Often |
| Overall Mean | | | | | | 4.16 | Always |

Table 10 exhibits the respondents’ assessment of their practices regarding communicating with strangers online. The table obtained an overall weighted mean of 4.16, verbally interpreted as “Always,” indicating that the respondents consistently practice caution and safety when interacting with unfamiliar individuals online. Among the indicators, the statement “I block suspicious strangers who contact me” received the highest weighted mean of 4.24, interpreted as “Always,” suggesting that respondents actively protect themselves from potentially harmful or suspicious online interactions. Meanwhile, the statements “I avoid sharing personal information with strangers online” and “I stay cautious when chatting with strangers online” obtained weighted means of 4.15 and 4.10, respectively, both verbally interpreted as “Often.” Overall, the findings indicate that respondents generally demonstrate responsible online communication practices, reflecting a high level of cybersecurity awareness in protecting themselves from scams, identity theft, and other online threats associated with interacting with strangers.

Online Shopping

Table 11 below, shows the respondents’ assessment of their practices regarding online shopping. The table obtained an overall weighted mean of 4.22, verbally interpreted as “Always,” indicating that the respondents consistently practice safe and responsible behaviors when engaging in online shopping activities. Among the indicators, the statement “I read reviews before purchasing online” received the highest weighted mean of 4.27, interpreted as “Always,” suggesting that respondents commonly verify the credibility and reliability of products or sellers before making purchases. Similarly, the statement “I check if a shopping platform is secure before buying” obtained a weighted mean of 4.23, while “I avoid sharing payment details on suspicious platforms” received the lowest weighted mean of 4.17, though still verbally interpreted as “Often.” Overall, the findings indicate that respondents demonstrate a high level of cybersecurity awareness in online shopping, particularly in verifying platform security and avoiding suspicious transactions to protect their personal and financial information.

Table 11 Respondent’s Assessment of their Practices in Regarding Online Shopping

| Question | 5 (Always) | 4 (Often) | 3 (Sometimes) | 2 (Rarely) | 1 (Never) | Weighted Mean | Verbal Interpretation |
|--|---------------|--------------|------------------|---------------|--------------|---------------|-----------------------|
| I check if a shopping platform is secure before buying | 209 | 106 | 56 | 22 | 6 | 4.23 | Always |
| I read reviews before purchasing online | 220 | 99 | 53 | 21 | 6 | 4.27 | Always |
| I avoid sharing payment details on suspicious platforms | 202 | 97 | 72 | 21 | 7 | 4.17 | Often |
| Overall Mean | | | | | | 4.22 | Always |

Summary

Table 12 Respondent’s Assessment of their Cybersecurity Awareness Across All Indicators

| Indicators | Weighted Mean | Verbal Interpretation |
|------------------------------|---------------|-----------------------|
| Passwords Management | 3.61 | Often |
| Privacy Settings | 3.83 | Often |
| External Links | 4.06 | Often |
| Anonymous Email | 4.04 | Often |
| Pop-up Advertisements | 4.24 | Always |
| Public Wi-Fi | 4.14 | Often |
| Chatting to Strangers | 4.16 | Often |
| Online Shopping | 4.22 | Always |
| Overall Weighted Mean | 3.98 | Often |

Table 12 presents the respondents’ overall assessment of their online behavior across different cybersecurity-related practices. The table obtained an overall weighted mean of 3.98, verbally interpreted as “Often,” indicating that the respondents generally practice safe and responsible online behaviors in their daily use of digital technologies. Among the indicators, “Pop-up Advertisements” obtained the highest weighted mean of 4.24, verbally interpreted as “Always,” followed closely by “Online Shopping” with a weighted mean of 4.22. These findings suggest that respondents consistently practice caution when dealing with suspicious advertisements and online shopping activities. Meanwhile, “Password Management” obtained the lowest weighted mean of 3.61, although still interpreted as “Often,” indicating that password-related security practices are less consistently observed compared to other cybersecurity behaviors.

Overall, the findings indicate that the respondents demonstrate a relatively good level of cybersecurity awareness and online safety practices, particularly in handling online transactions, suspicious advertisements, and external online interactions. However, the lower result in password management suggests the need for further awareness initiatives and educational programs emphasizing the importance of maintaining strong and regularly updated passwords as part of effective cybersecurity behavior.

Resident’s Level of Online Behaviors

Safe Browsing Practices

Table 13 Respondent’s Assessment of their Safe Browsing Practices

| Question | 5 (SA) | 4 (A) | 3 (N) | 2 (D) | 1 (SD) | Weighted Mean | Verbal Interpretation |
|---|--------|-------|-------|-------|--------|---------------|-----------------------|
| I only visit secure and trusted websites when browsing online. | 177 | 124 | 73 | 16 | 9 | 4.11 | Agree |

| | | | | | | | |
|--|-----|-----|----|----|---|-------------|----------------|
| I avoid clicking on unknown or suspicious links. | 206 | 118 | 51 | 18 | 6 | 4.25 | Strongly Agree |
| I regularly update my browser and applications for security. | 158 | 120 | 87 | 28 | 6 | 3.99 | Agree |
| I check website URLs to ensure they are legitimate before entering information. | 162 | 124 | 86 | 22 | 5 | 4.04 | Agree |
| Overall Mean | | | | | | 4.10 | Agree |

Table 13 presents the respondents' assessment of their safe browsing practices. The table obtained an overall weighted mean of 4.10, verbally interpreted as "Agree," indicating that the respondents generally practice safe and secure browsing behaviors when using the internet. Among the indicators, the statement "I avoid clicking on unknown or suspicious links" received the highest weighted mean of 4.25, verbally interpreted as "Strongly Agree," suggesting that respondents are highly cautious when encountering potentially harmful links online. Meanwhile, the statement "I regularly update my browser and applications for security" obtained the lowest weighted mean of 3.99, although still verbally interpreted as "Agree." The remaining indicators, including visiting secure websites and verifying website URLs before entering information, also received positive assessments from the respondents. Overall, the findings indicate that respondents demonstrate a good level of cybersecurity awareness in practicing safe browsing behaviors to protect themselves from online threats such as phishing, malware, and fraudulent websites.

Online Protections of Personal Information

Table 14 Respondent's Assessment Regarding their Protection of Personal Information Online

| Question | 5 (SA) | 4 (A) | 3 (N) | 2 (D) | 1 (SD) | Weighted Mean | Verbal Interpretation |
|--|--------|-------|-------|-------|--------|---------------|-----------------------|
| I avoid sharing personal information on social media platforms. (e.g., Facebook, Twitter, Instagram, and online forums) | 179 | 137 | 66 | 10 | 7 | 4.18 | Agree |
| I use strong and unique passwords for my online accounts. | 180 | 133 | 61 | 17 | 8 | 4.15 | Agree |
| I enable privacy settings on my social media accounts. | 179 | 128 | 67 | 21 | 4 | 4.15 | Agree |
| I do not save sensitive information on shared or public devices. | 182 | 131 | 59 | 22 | 5 | 4.16 | Agree |
| Overall Mean | | | | | | 4.16 | Agree |

Table 14 presents the respondents’ assessment regarding their protection of personal information online. The table obtained an overall weighted mean of 4.16, verbally interpreted as “Agree,” indicating that the respondents generally practice responsible behaviors in protecting their personal information while using online platforms and digital technologies. Among the indicators, the statement “I avoid sharing personal information on social media platforms” received the highest weighted mean of 4.18, suggesting that respondents are cautious in disclosing sensitive information on social networking sites and online forums. The statements “I do not save sensitive information on shared or public devices,” “I use strong and unique passwords for my online accounts,” and “I enable privacy settings on my social media accounts” also obtained high weighted means of 4.16 and 4.15, respectively, all verbally interpreted as “Agree.” Overall, the findings indicate that respondents demonstrate a good level of cybersecurity awareness and practice preventive measures to safeguard their personal information from potential online threats and privacy risks.

Response to Online Threats

Table 15 Respondent’s Assessment Regarding their Response to Online Threats

| Question | 5 (SA) | 4 (A) | 3 (N) | 2 (D) | 1 (SD) | Weighted Mean | Verbal Interpretation |
|--|--------|-------|-------|-------|--------|---------------|-----------------------|
| I ignore suspicious emails or messages. | 182 | 130 | 73 | 11 | 3 | 4.20 | Agree |
| I report suspicious accounts, links, or messages when I encounter them. | 164 | 122 | 93 | 17 | 3 | 4.07 | Agree |
| I verify the source before responding to unexpected online requests. | 172 | 128 | 82 | 14 | 3 | 4.13 | Agree |
| I avoid downloading files from untrusted sources. | 165 | 143 | 67 | 18 | 6 | 4.11 | Agree |
| Overall Mean | | | | | | 4.13 | Agree |

Table 15 presents the respondents’ assessment regarding their response to online threats. The table obtained an overall weighted mean of 4.13, verbally interpreted as “Agree,” indicating that the respondents generally practice appropriate and cautious responses when encountering potential cybersecurity threats online. Among the indicators, the statement “I ignore suspicious emails or messages” received the highest weighted mean of 4.20, suggesting that respondents are highly cautious in dealing with potentially harmful communications. Meanwhile, the statements “I verify the source before responding to unexpected online requests,” “I avoid downloading files from untrusted sources,” and “I report suspicious accounts, links, or messages when I encounter them” obtained weighted means of 4.13, 4.11, and 4.07, respectively, all verbally interpreted as “Agree.” Overall, the findings indicate that respondents demonstrate a good level of cybersecurity awareness and apply preventive measures to protect themselves from phishing attempts, scams, malware, and other online threats.

Resident’s Level of Cybersecurity Awareness

Knowledge of Cybersecurity Threats

Table 16 Respondent’s Assessment of their Knowledge of Cybersecurity Threats

| Question | 5 (SA) | 4 (A) | 3 (N) | 2 (D) | 1 (SD) | Weighted Mean | Verbal Interpretation |
|--|--------|-------|-------|-------|--------|---------------|-----------------------|
| I am familiar with common cybersecurity | 170 | 114 | 82 | 17 | 16 | 4.02 | Agree |

| | | | | | | | |
|---|-----|-----|----|----|----|-------------|--------------|
| threats such as phishing, malware, and scams. | | | | | | | |
| I understand how cyberattacks can affect my personal information. | 189 | 116 | 60 | 20 | 14 | 4.12 | Agree |
| I can identify signs of a phishing email or message. | 148 | 115 | 94 | 24 | 18 | 3.88 | Agree |
| Overall Mean | | | | | | 4.01 | Agree |

Table 16 presents the respondents’ assessment of their knowledge of cybersecurity threats. The table obtained an overall weighted mean of 4.01, verbally interpreted as “Agree,” indicating that the respondents generally possess a good level of awareness regarding common cybersecurity threats and their possible effects. Among the indicators, the statement “I understand how cyberattacks can affect my personal information” received the highest weighted mean of 4.12, suggesting that respondents are aware of the risks cyberattacks pose to their privacy and security. Meanwhile, the statement “I am familiar with common cybersecurity threats such as phishing, malware, and scams” obtained a weighted mean of 4.02, while “I can identify signs of a phishing email or message” received the lowest weighted mean of 3.88, although still verbally interpreted as “Agree.” Overall, the findings indicate that respondents demonstrate a relatively good understanding of cybersecurity threats; however, the lower result in identifying phishing attempts suggests a need for additional awareness programs and training focused on recognizing suspicious emails and online scams.

Awareness in Online Shopping /Safe Browsing Practices

Table 17 Respondent’s Assessment of their Online Shopping/Safe Browsing Practices

| Question | 5 (SA) | 4 (A) | 3 (N) | 2 (D) | 1 (SD) | Weighted Mean | Verbal Interpretation |
|--|--------|-------|-------|-------|--------|---------------|-----------------------|
| I check if an online store is legitimate before making a purchase. | 180 | 135 | 68 | 11 | 5 | 4.19 | Agree |
| I use secure payment methods when shopping online. | 193 | 128 | 63 | 11 | 4 | 4.24 | Strongly Agree |
| I read reviews or ratings before buying products online. | 198 | 110 | 76 | 12 | 3 | 4.22 | Strongly Agree |
| I avoid sharing financial information on unsecured websites. | 187 | 125 | 64 | 19 | 4 | 4.18 | Agree |
| Overall Mean | | | | | | 4.21 | Strongly Agree |

Table 17 exhibits the respondents’ assessment of their online shopping and safe browsing practices. The table obtained an overall weighted mean of 4.21, verbally interpreted as “Strongly Agree,” indicating that the respondents consistently practice safe and responsible behaviors when engaging in online shopping and browsing activities. Among the indicators, the statement “I use secure payment methods when shopping online” received the highest weighted mean of 4.24, followed closely by “I read reviews or ratings before buying products online” with a weighted mean of 4.22, both verbally interpreted as “Strongly Agree.” These findings suggest that respondents are highly cautious when conducting online transactions and actively verify the

credibility of products and sellers before making purchases. Meanwhile, the statements “I check if an online store is legitimate before making a purchase” and “I avoid sharing financial information on unsecured websites” obtained weighted means of 4.19 and 4.18, respectively, both verbally interpreted as “Agree.” Overall, the findings indicate that respondents demonstrate a high level of cybersecurity awareness and safe online shopping practices aimed at protecting their financial and personal information from online threats and fraudulent activities.

Ability to Recognize Online Risks

Table 18 Respondent’s Assessment of their Ability to Recognize Online Risks

| Question | 5 (SA) | 4 (A) | 3 (N) | 2 (D) | 1 (SD) | Weighted Mean | Verbal Interpretation |
|---|--------|-------|-------|-------|--------|---------------|-----------------------|
| I can identify suspicious links or fake websites. | 152 | 135 | 88 | 20 | 4 | 4.03 | Agree |
| I am aware of the risks of using public Wi-Fi for sensitive transactions | 189 | 130 | 59 | 18 | 3 | 4.21 | Strongly Agree |
| I recognize when an online offer or message seems too good to be true. | 180 | 119 | 78 | 16 | 6 | 4.13 | Agree |
| I can differentiate between legitimate and fake online accounts. | 164 | 138 | 71 | 23 | 3 | 4.09 | Agree |
| Overall Mean | | | | | | 4.12 | Agree |

Table 18 presents the respondents’ assessment of their ability to recognize online risks. The table obtained an overall weighted mean of 4.12, verbally interpreted as “Agree,” indicating that the respondents generally possess a good level of awareness in identifying potential online threats and suspicious online activities. Among the indicators, the statement “I am aware of the risks of using public Wi-Fi for sensitive transactions” received the highest weighted mean of 4.21, verbally interpreted as “Strongly Agree,” suggesting that respondents are highly aware of the security risks associated with public internet connections. Meanwhile, the statements “I recognize when an online offer or message seems too good to be true,” “I can differentiate between legitimate and fake online accounts,” and “I can identify suspicious links or fake websites” obtained weighted means of 4.13, 4.09, and 4.03, respectively, all verbally interpreted as “Agree.” Overall, the findings indicate that respondents demonstrate a relatively strong ability to recognize online risks and potential cyber threats, reflecting a good level of cybersecurity awareness in protecting themselves from scams, phishing attempts, and fraudulent online activities.

CONCLUSION

The findings of the study revealed that the residents of Barangay Batasan Hills, Quezon City generally demonstrate a good level of cybersecurity awareness and responsible online behavior. The respondents commonly practice safe online habits such as avoiding suspicious links and anonymous emails, checking the legitimacy of websites and online stores, using secure payment methods, managing privacy settings, and protecting personal information online. The results further showed that respondents consistently practice caution when encountering pop-up advertisements, using public Wi-Fi connections, and communicating with strangers online. These findings indicate that the residents are aware of common cybersecurity risks and apply preventive measures to protect themselves from cyber threats such as phishing, scams, malware, identity theft, and fraudulent online activities.

The study also revealed that respondents possess a relatively good understanding of cybersecurity threats and online risks. Most respondents agreed that they are familiar with common cybersecurity threats, understand the effects of cyberattacks on personal information, and can recognize suspicious online offers, fake websites, and risky online activities. Additionally, the respondents demonstrated responsible online shopping and safe browsing behaviors by verifying website legitimacy, reading online reviews, and avoiding the sharing of sensitive financial information on unsecured platforms. These findings suggest that cybersecurity awareness among the residents contributes positively to their online decision-making and safety practices when using digital technologies.

Despite the generally positive results, the study identified certain areas that still require improvement. Among all indicators, password management practices obtained comparatively lower assessments, particularly regarding the regular changing of passwords. Similarly, the ability to identify phishing emails and suspicious online messages received lower weighted means compared to other indicators. These findings imply that although respondents are aware of cybersecurity threats, some preventive cybersecurity practices are not always applied consistently in actual online situations. This reflects the presence of a knowledge-practice gap, wherein awareness does not always translate into continuous and effective cybersecurity behavior.

Based on the results presented, the study concludes that cybersecurity awareness plays a significant role in shaping the online behavior of residents in Barangay Batasan Hills, Quezon City. The respondents generally exhibit safe and responsible online practices; however, continuous reinforcement through cybersecurity awareness programs, community-based digital safety initiatives, and educational campaigns remains necessary to further strengthen cybersecurity behavior among residents. It is recommended that barangay officials, local government units, and educational institutions collaborate in conducting regular cybersecurity seminars, workshops, and awareness campaigns focused on practical online safety skills such as password management, phishing detection, privacy protection, and safe internet usage. Community-based training programs and information dissemination activities may further improve residents' cybersecurity awareness and encourage the consistent application of safe online practices. Future researchers may also conduct related studies involving other communities or additional variables to further understand the factors influencing cybersecurity awareness and online behavior.

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