Understanding Teens Online Awareness and Knowledge Regarding Cybersecurity in Bangladesh

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ABSTRACT

Teens usually share their personal information online without considering possible vulnerabilities. Teens nowadays face a lot of negative experiences and cyber abuses in cyberspace where they do not have knowledge regarding cybersecurity. In such a scenario, a curriculum design regarding cybersecurity in their institution would help the teens to be aware of possible online vulnerabilities, while also making them aware users in the future.

INTRODUCTION

Frequent users share their personal information online raising concerns regarding shared information safety. Today, access to one's data is easier than ever where users are not even aware of this access to their online personal information. That is why online security incidents or negative experiences online are very common in the 21st century. This raises concerns regarding cybersecurity where the concerns are higher for teen users. Teens' online usage is increasing globally where only in USA around 45% of the teens are active online constantly [4]. Teens in developed nations start to use online platforms at a very early stage [3] where these users often become victims of cyber abuse, cyberbullying, etc. [1]. In Bangladesh, the footprint of teens are increasing online, and on such concern, we explored n=28 teens of urban Bangladesh, to understand the teens' online behavior, which was an unexplored area. This study on urban teens gives us the insight that teens do not have ideas regarding cybersecurity, whereas all the participated teens in the study are connected online. This study can be useful to help the teens and connected community to understand the importance of knowledge of cybersecurity.

BACKGROUND

Teens always share their photos, daily activities, etc. constantly through numerous online platforms that decrease their online safety [6]. Pew research shows that around 95% of the teens

from the USA use online platforms and 81% of them share more personal information in public that may result in data vulnerability [2]. The recent Facebook-Cambridge Analytica incident [5] proved that any source or any party could get access to online personal data for further manipulation where no users' information is safe. Teens do not understand that their privacy is exposed, and also they cannot understand who is accessing their online profile from outside [6, 7]. This revealed that teens have a lack of ideas regarding cybersecurity. Through this research, we tried to find out teens' online behavior and their knowledge regarding online usage.

METHODOLOGY

We closely studied n=28 teens in 5 different groups from two different socioeconomic statuses as Higher Income Family and Middle or Lower Income family. We followed a qualitative study method to understand teens' online usage. These teens were aged from 12-16 and they all were in grades six to nine at their school. Socioeconomic status has an impact on online usage behavior because teens from higher-income families have multiple smart gadgets to use the internet. However, in this study, all participants had access to the internet. We recruited these teens from their tuition class by communicating through their teachers. We briefly discussed the research goal to the participants before the discussion. All the discussions happened in their tuition classes with the presence of their tuition teachers. We provide notebooks as incentives to all the participants.

FINDINGS

In this study among n=28 teens, 12 teens were from High-income Family and the rest of the 16 teens were from Middle or Lower Income families. All participants from higher-income families have full internet access, whereas only 38% of the teens from Middle or Lower-income families have constant internet access. It is noted that 89% of all these teens have an SNS account. Teens from Middle or Lower-income families always not use SNS because of a lack of internet connections, family pressure and sometimes for negative experiences online. Around 50% of the participating teens faced negative experiences at least once in their online usage. Some participants heard about online incidents from others around them but have not become aware of its implications. We found that these teens have no idea regarding cybersecurity, and some of them never heard about this term. They do not have any study materials in their curriculum to know about cybersecurity details from educational institutions.

A teen boy mentioned that he only heard about the term cybersecurity, but he doesn't have any idea regarding this term.

> *"I just heard the term cybersecurity, but I do not know the details of it"* – Teen 2 (Boy)"

Another teen boy from Higher Income family mentioned that he found the word cybersecurity only in news, whereas he knew about cyberbullying only.

> *"I read the word cybersecurity on news. I do not know the details. I know about online bullying by the way. Anyone can bully you via the internet or online by using your sensitive information."*- Teen 3 (Boy)

A teen girl from the Middle-Income family also mentioned that she never heard about cybersecurity before.

> *"What is Cybersecurity? I never heard of it."* - Teen 15 (Girl)

According to findings we understood that teens' awareness regarding information safety is not developed enough due to lack of knowledge regarding cybersecurity.

DISCUSSION AND FUTURE WORK

Teens do not know how their data or information are being exposed as we have seen in the literature. They are not aware of the possible negative consequences that might happen in cyberspace. On the other hand, recent online incidents proved that adult users also are not aware of such online events. The basic problems start with a lack of understanding regarding cybersecurity at a very early stage. However, we have seen in our findings that participating teens have already explored cyberspace but they do not have any institutional knowledge regarding cyberspace, cybersecurity and online information security in their curriculum. Development in Curriculum design regarding cybersecurity will help teens to understand the positive and negative consequences of online usage. It will also help them to be aware of the safety of their shared information online from the very beginning. Alternatively, teens can refrain themselves from bullying others through curriculum-based study. Thus, we can reduce negative experiences online for both teens and adults, thus making a safer online space for everyone. We hope to come up with new findings in further submissions.

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