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CYBER SECURITY AND SOCIAL MEDIA: TRUSTING THE OPERATORS

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Abstract

There has been a massive increase in the popularity and the users of social networking sites over the years. Although, with this growth comes responsibility to its operators. This study aims to understand the drawbacks of revealing too much information and placing trust on social networks. It also considers the various security and privacy concerns with regard to social media sites and discusses a survey based on it. The results for which showed that some users needed to be more informed about their data security and the majority were indeed concerned about their private information being disclosed to the operators.

Keywords: *Personal information, Privacy, SNS, Data security*

Introduction

In recent times, Social Networking Sites (SNS) like Facebook, Whatsapp etc. have grown increasingly popular. According to most recent reports, Facebook has 2.7 billion users that are active monthly. Further research reveals that the number of social media users have increased from 2.07 billion users in 2015 to 3.96 billion users in 2020, a 92.76% rise in just 5 years. These sites have become an essential part of the personal lives of most individuals since communication can be done quickly and efficiently using these platforms. These platforms are used to interact with family, chat with friends, connect companies and even for marketing and advertising purposes. They enable users to create a personal profile where they can share pictures, videos and blogs that can beviewed by selected friends or everyone.

However, with these benefits come downsides, there is not just a boost in the number of users on the sites but also excessive data relating to social interactions is available and a fair amount of personal information is being shared with its operators. This includes contact details, personal details and addresses which need to be protected. This raises privacy concerns among the users about whether their data is safe or not because if they are not mindful about the content they share, it can lead to various security breaches, identity theft and misuse of private details. Furthermore, the fundamental concept of privacy is that the users should have control over how their information is being utilised. The users deserve some amount of privacy and should be able to share content with the intended audience only. And since all interactions are online at present, it adds on to the problem. Despite features provided by the operators like end-to-end encryption, these issues have to be considered. Most tend to ignore these risks and continue placing their trust on the operators, disclosing all personal details. The paper discusses these security concerns

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and provides a study based on an online survey where respondents put forward their opinions and experiences.

Theory

Social Networking Sites

SNS are defined as a medium through which people can build personal relations with others that have corresponding likes and dislikes. These relationships grow through sharing content with each other through photos, videos, and direct messaging.

In 1997, the first SNS that involved making friends online was SixDegrees.com after which a lot of other sites grew more and more conventional including Facebook, Whatsapp etc. Facebook has more than 2.7 billion users across the globe. These users may display personal information on their profiles without any second thoughts making them vulnerable to their private information getting leaked or the operators using it for illegal activities. They agree to privacy terms and conditions that grant access to their information, for example, their location, the device information and operating system.

Privacy Concerns

Most users disregard the privacy settings on their social media. With a public account anybody can access their information. The users do not understand the significance of the information they share and how it can be used without their knowledge. On Facebook, even with a private account, an acquaintance who the user does not know well can still access their information. These shoddy settings give way to cyber-attacks and leakage of personal information. Furthermore, Facebook is a SNS that allows third party applications to ask for access to users' information and when they provide that the apps can use any of that information without their knowledge.

Some worry that their personal preferences and behaviour can be interpreted by their browsing history. It records the users likes and preferences and the same kind of content gets recommended to them and that is what makes up the users' algorithm. In the documentary 'The Social Dilemma' [9] many experts claim that it is a way of manipulation because this data is harvested so that the users get addicted to the sites. In the same way, this technique is used for marketing where users are recommended advertisements based on their algorithm. They have a very basic business strategy and that is to track human behaviour and sell products based on their wants.

In 2018, the Facebook-Cambridge Analytica scandal happened where information of approximately 80 million US/ EU users was exploited for illegal political reasons. Their harvested data was utilized by third party apps for advertising campaigns for elections. The app was called "This Is Your Digital Life" and it had a survey in which the respondents gave out personal information and this was used as an analysis for the Trump election campaign in 2016.

The scandal was then unveiled in 2018 by a former employee of Cambridge Analytica. Facebook was then sued for 'losing control' of data with a penalty of £500,000. Even now there are concerns that the end-to-end encryption of WhatsApp has its limitations, some of the metadata gets shared with Facebook which is its parent company.

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In January of 2021 WhatsApp updated its privacy policy which raised doubts among most users. They received a notification asking them to agree to certain terms and conditions that entailed sharing some data which lead to them thinking it will be shared with Facebook, the parent company, too. And if they did not agree to them within a month their account would be deleted. During the week, the users dropped by more than a billion and so the issues had to be addressed and the date for the updates was pushed.

Role of the Government

The government of India recently released the new report of IT rules of 2021 and gave social media applications 3 months to comply with the changes. They are contributing to the problem of violation of users' privacy when they ask WhatsApp's operators, according to the rules, to trace the original sender of the text. WhatsApp had to file a complaint in the court against them and this is an ongoing issue. Furthermore, these rules are likely to break the end-to-end encryption that originally states that no third-party applications, WhatsApp or Facebook can access the users' texts. The government would be able to find the original senders of any message. The fundamental right to speech and expression would be violated with this, making the Indian users extremely apprehensive about their data privacy.

Research Design

The purpose of this research is to acknowledge the different privacy concerns faced regarding the trust placed on the operators of SNS. An online survey was conducted within a span of 10 days to understand the opinions and experiences of different age groups regarding privacy on Social Networking Sites like Facebook, Instagram etc.

Result

The survey was run in July and there were 25 respondents of different ages starting from 15. Each of them responded to questions about their issues with privacy and their own suggestions about how data security can be improved. The inference was that all of them use SNS and the most used SNS was WhatsApp. However, more than half of the respondents do have privacy issues of some kind and some of which include: usage of contact details and residential addresses, getting advertisements based on likes and fear of personal chats available to operators. This only proves that users are in fact facing issues yet continue to use the sites.

The questions that followed included hacking and what they thought best to do when they were hacked was: changing the password, deleting the account and informing people about the hacking. This only means that the operators need to make the applications more secure so that the users do not have to face hackers. If the operators do not do anything about it,the users will harbour more mistrust.

The last question was about the users' suggestions on what can be done better and the responses included: A two factor authentication if logged in through another device, making privacy terms and conditions simpler, an update as to 'who can see your post' prior to confirming every upload, not wanting pop-ups of marketing companies based on their preferences, the need of profiles to be verified and many more. This indicates that the users do have various suggestions and all of them valid yet they do not approach the authorities with them. It also

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suggests that the government can take the users' opinions before making decisions like changing the IT rules which violate their privacy.

Discussion

These are some of the figures that depict the results of the survey. There were respondents from every age group and most of them 35-45 years old. The purpose of this was to get accurate results since different age groups have different thought processes.

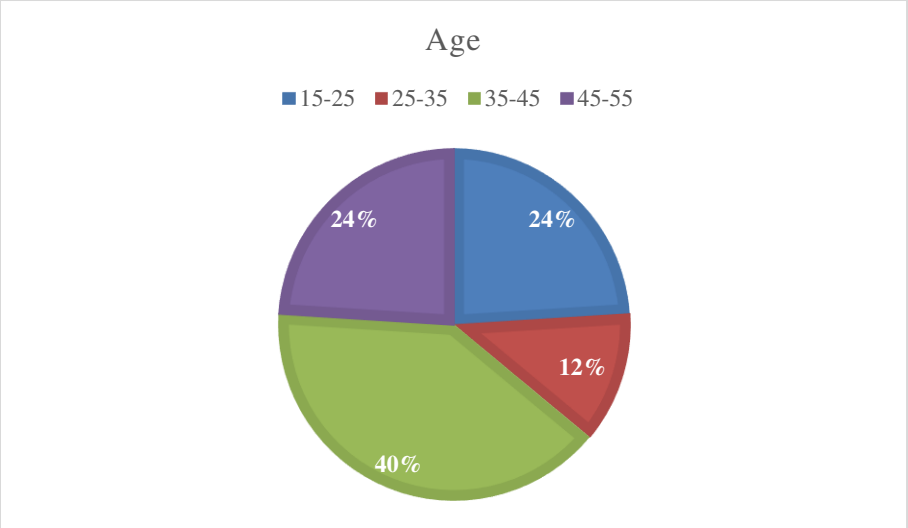

Fig. 1 Ages of respondents

All of the respondents who took the survey used social media sites and the most used site was WhatsApp. 24 out of 25 respondents use the app making it the most popular according to the results. Further analysis showed that most of the users of Facebook were between the ages of 35-55 and for Instagram between 15-35.

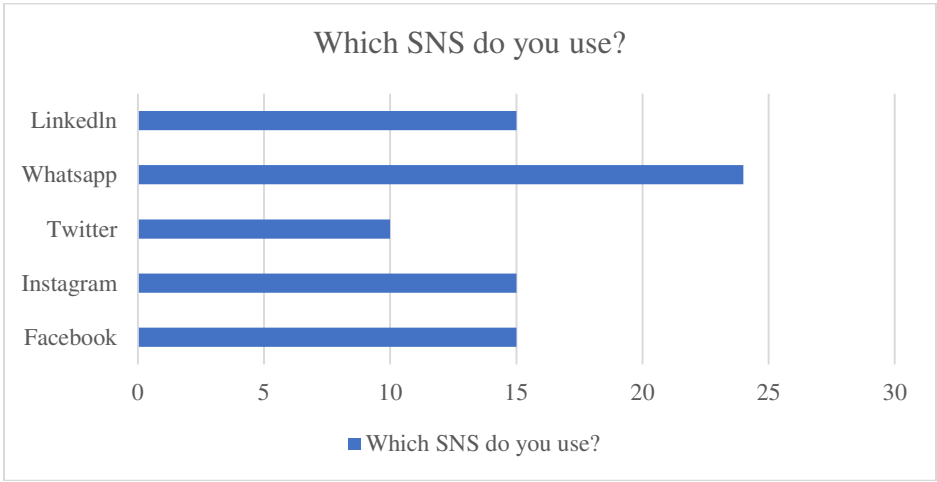

Fig. 2 Most used SNS

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The next question was asked to know if the users were aware of the data they were sharing. A majority of 72% of them do not read privacy terms and conditions which indicates that they have no idea about what can be done with their data. This is extremely dangerous because they agree to something that gives a lot of access to operators without knowing about it.

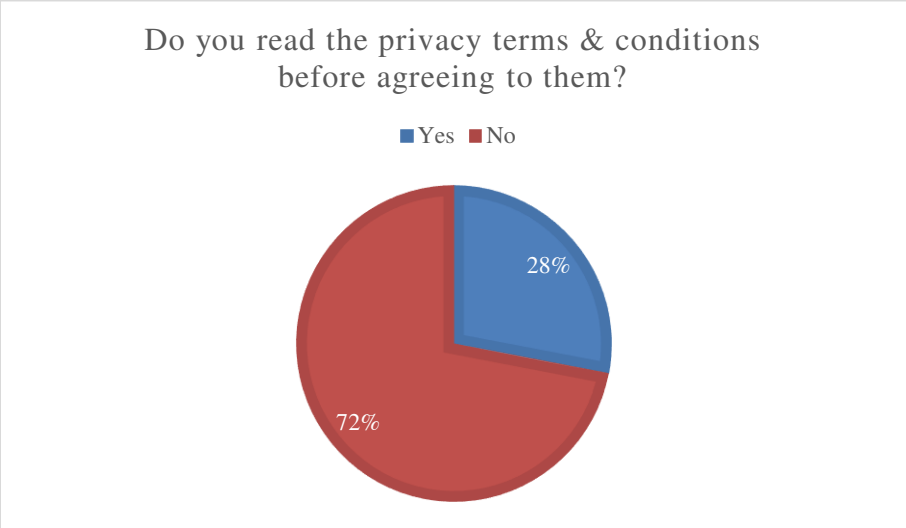

Fig 3. Reading terms & conditions

Fig 4 displays that more than half of the users do face privacy concerns. The results show how much online privacy matters to the users which is directly proportional to the information they reveal on SNS.

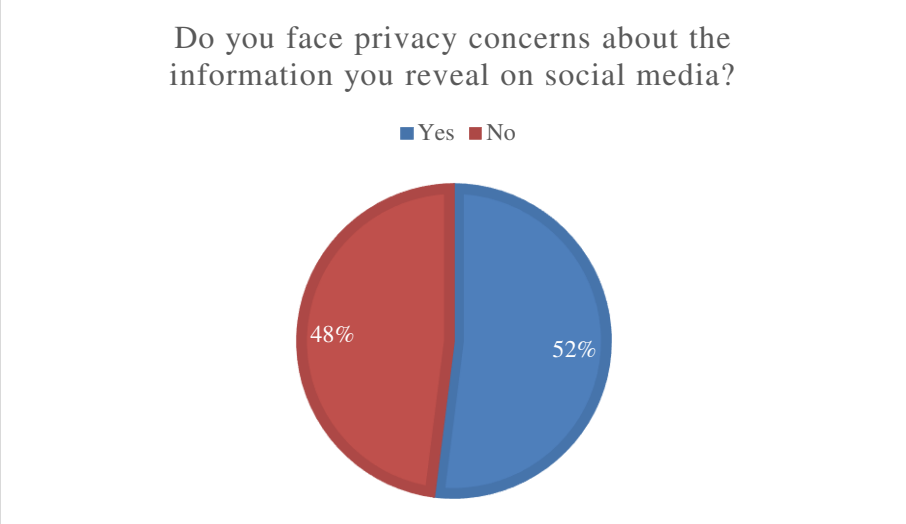

Fig 4. Facing privacy issues

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Lastly, Fig 5 illustrates that 20% of the users have been hacked before. This is a huge number and reflects how unsafe the sites are since 2 out of every 10 people could have been hacked. Hacking results in revealing of plenty of personal information, messages, pictures and more. It is an invasion of privacy and if the operators do nothing about it, it will add on to the problem of trust.

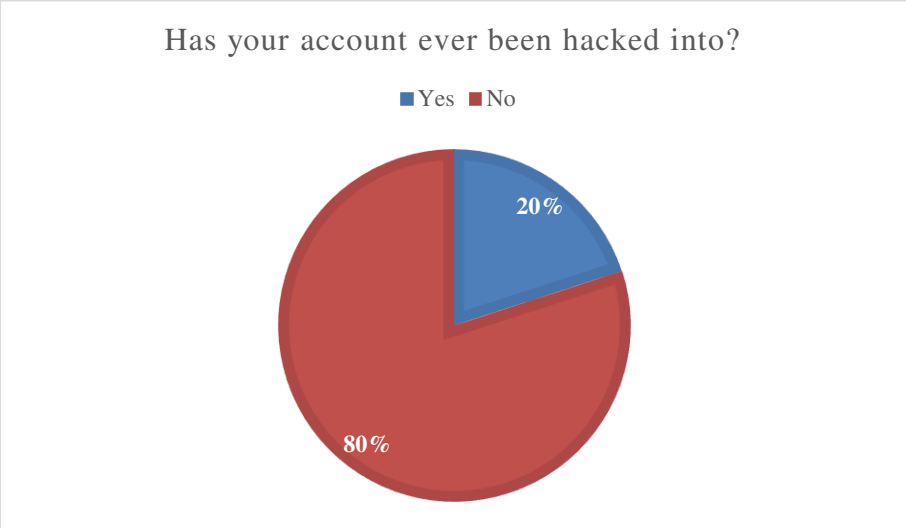

Fig 5. Hacking

Conclusion

To end with, this study helps to understand that almost half of the users were neither aware of the reciprocations of the content they share nor were they concerned about the problems they might face in the future. This research will help them understand and stay informed regarding the same. Moreover, the other users who were aware and apprehensive of the issues had listed down their concerns in addition to a few solutions too. Therefore, this study will be helpful to operators too who are looking to improve data security on their sites. However, there were limitations. All the respondents were from the same country and most of them aged 35-45. Hence, they had similar perceptions regarding the kind of issues they faced. Nevertheless, the study overall gives an insight into the opinions of various users which can be relied on for further study into the topic.

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Thanking the survey respondents that added value to the results by listing the most plausible suggestions and concerns: Simoni Kanani, Ruchita Jasani, Manish Singh, Amit B, SheebaPavamani, Ankit Naval, Tanisha Agrawal.

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