

Practicing Safe Sex(t): Implementing mitigations to tackle the rise of technology-facilitated sexual violence

Tia Cotton
School of Design and Informatics
Abertay University
DUNDEE, DD1 1HG, UK

ABSTRACT

Context/Background

As more people across the world gain access to the internet and the coronavirus pandemic exacerbating the need for internet-based communication, technology-facilitated abuse and cybercrime has risen exponentially (Collier et.al, 2020.) Due to this, there are very limited resources available, and very little mitigation in place to prevent and protect users becoming victims of online sexual violence.

Aim

The aim of this project is to identify sexually violent crimes which are currently affecting users on the internet and understand the extent and impact of these crimes. The mitigations for these crimes will also be identified and investigated. This research will lead to the development of a suitable and user-friendly application to prevent these crimes from affecting potential victims.

Method

Research including an existing literature review will be gathered to highlight the range of technology-facilitated sexually violent crimes currently being carried out on the internet. When a suitable amount of information related to the crimes has been gathered, further research to identify existing mitigations for these crimes will be performed. An online serious game will be developed to help educate the public about tech-facilitated sexual violence, focusing mainly on how it is carried out and how to seek help if they become a victim. Pre and post test surveys will be carried out in the user-testing phase to gather quantitative and qualitative data to ascertain if knowledge about tech-facilitated sexual violence has increased.

Results

The crimes will be investigated and analysed to determine how they are carried out as well as the impact to victims, investigative and protective parties such as the police and dedicated charities. Each of the mitigations identified will be examined to ascertain both the suitability and accessibility for the crime and the victim. The game application should improve public knowledge around tech-facilitated sexual violence and should thus prevent and protect the public from these crimes.

Conclusion

These results will be used within the creation and development of a more user-friendly application that will aim to educate and prevent against technology-facilitated sexual abuse.

Keywords

Technology-Facilitated Abuse, Mitigations for online abuse, Online Sexual Exploitation, Technology-facilitated Sexual Violence, Cyber-enabled Crime

1. INTRODUCTION

In 2020, 92% of adults within the UK were regularly accessing the internet, with many using the internet for online banking, online shopping and IoT accessibility (Great Britain - Office for National Statistics, 2021). The pandemic and subsequent lockdowns exacerbated the need for internet access, as well as isolating millions of people from each other. This created the perfect storm for criminals to target potential victims online. These criminals have made use of different cyber-attacks such as phishing/smishing, fraud and romance scams – many of which preyed on victim's fear and isolation due to the pandemic (Collier et.al, 2020.).

Within cybercrime, there are two main areas – cyber-dependent and cyber-enabled. Cyber-dependent crimes are crimes that require a computer, such as Denial of Service, ransomware, and hacking. Cyber-enabled crimes are crimes that with the use of the internet carried out in larger scales or a different form such as fraud, cyberbullying, stalking and harassment (Police Scotland, Cyber Strategy 2020). Online sexual exploitation or technology-facilitated sexual abuse can be a cyber-enabled crime - for example, a domestic abuse victim could be coerced to stay in a relationship due to an abuser threatening to release private intimate photographs of the victim online.

There are mitigations to these crimes in place within the law, specialist charities and social media policies. Whilst these mitigations can protect victims once a crime has occurred on the internet, they do not educate or prevent users from becoming victims. The law and charity mitigations that protect victims have also become limited in terms of resources especially during the current pandemic. (Collier, et.al, 2020.).

This project aims to solve this issue by creating and developing an application tool to educate, prevent and protect users from technology-facilitated sexual abuse online. The application tool will be accessible and easy to use, whilst educational.

2. BACKGROUND

2.1 Technology-Facilitated Sexual Violence

Technology-facilitated sexual violence is defined as sexual violence that is carried out or aided using technology. Under the Sexual Offences (Scotland) Act 2009, the following

crimes would be considered sexual violence:- rape, sexual assault by penetration, sexual assault, sexual coercion, coercing a person into being present during a sexual activity, coercing a person into looking at a sexual image, communicating indecently, sexual exposure and voyeurism (Sexual Offences (Scotland) Act 2009, 2021).

In terms of technology-facilitated sexual violence the physical crimes identified in the Act would be categorized as Image-Based Sexual Abuse, Video Voyeurism, Sending Unsolicited Sexual Images and The Use of Technology to Facilitate In-Person Sexual Violence. Within these categories are related crimes such as sextortion, revenge porn, up skirting, cyber-flashing and being sexually victimized through dating websites and apps. (Fisico, R. and Harkins, L., 2021).

Technology-facilitated sexual violence has been gradually increasing throughout the years and has exponentially grown during the pandemic, particularly during the lockdowns. The UK's revenge porn helpline had seen a 98% increase in cases in 2020 and had noted that more females were becoming victims of sextortion – which is unusual as it is typically men that become victims of this crime. (UK SIC, 2020).

There is little research on the impact that the cyber-enabled sexual offences have on adult victims. However a study into technology and sexual offending by Fisico and Harkins (2021) has identified that victims of non-consensual image can experience “anger, guilt, and depression, damaged relationships with partners, family, employers, job loss, social isolation, and even suicide”. The study also references that there is potential for physical harm from sexual violence that has been facilitated through technology. (Fisico, R. and Harkins, L., 2021).

2.2 Current Mitigations

The police and specialist charities are typically where victims of sexual violence are directed to after the offence has taken place. The police and charities are specially trained to help victims after experiencing sexual violence, and if the victim decides – gather evidence and begin legal proceedings. However, with the rise of technology-facilitated sexual violence and the current pandemic, they are struggling to help protect victims effectively (Tanczer, et. al., 2021, Collier, et.al., 2020).

Police Scotland are aware of the rise in technology-facilitated sexual violence. In their Cyber Strategy 2020 – in 2019-2020, 30% of cyber offences that were recorded were sexual offences. They have also admitted that “policing in Scotland is being blurred by the use of technology to aid, and facilitate crime” (Police Scotland, Cyber Strategy 2020). Within their cyber strategy, Police Scotland have suggested that they will begin to move away from reactive actions to proactive actions to tackle cyber-related crimes.

In terms of mitigations for technology-facilitated sexual violence within Scotland, Police Scotland currently have an active sexual violence campaign – the most recent being the ‘Don’t Be That Guy’ campaign which highlights sexual violence against adult women by men. The campaign mentions the act of sending unsolicited sexual images, “Ever slid into a girl’s DMs, then just went ahead and showed her it?” (Police Scotland, 2021). This campaign has generated a

conversation about sexual violence against women online – which has been heavily praised for placing the onus of sexual violence on the perpetrator rather than the victim.

There is currently no record of convictions for technology-facilitated sexual violence against adults in Scotland, which makes it difficult to determine how effective legal mitigations in Scotland are to prevent these crimes taking place. For sexually violent crimes, the maximum penalty varies from an imprisonment term less than a year - with or without a fine - to life imprisonment with a fine (Sexual Offences (Scotland) Act 2009, 2021). There is little to no evidence available to indicate that these penalties prevent perpetrators from committing these crimes or reoffending.

Dedicated specialist charities for issues such as Intimate Partner Violence have also admitted that they are struggling to deal with the rise in tech-facilitated abuse. Volunteers and workers for these charities have admitted that there is a lack of training, support and assistance for volunteers and support workers to administer adequate support for victims of technology-facilitated abuse. From a study into the IPV support sector surrounding the rise of tech-facilitated abuse, one participant highlighted that “there’s a real sense that statutory services and ourselves are behind, we’re behind the wave here” (Tanczer, L., et.al., 2021).

There are currently no application-based mitigations for technology-facilitated sexual violence apart from one by Rape Crisis Scotland and the Scottish Women’s Rights Centre for Stalking. FollowItApp is a mobile application that has been created to record incidents of stalking – including technology-facilitated stalking. These incident logs can also be used as evidence within Scottish Courts. However, to download and obtain an account for the app, the user must have a phone-call or other means of communication with the Scottish Women’s Rights Centre/SWRC. This is not entirely suitable for victims who may not be able to safely communicate with the SWRC, especially if the stalker has access to these devices. The app is also only specifically for women that are eighteen and over, living in Scotland, which excludes Scottish female victims younger than eighteen and Scottish men who may also be experiencing stalking.

There are also mitigations built into digital platforms that allow photo-sharing and messaging such as Facebook, Twitter, Reddit, Google, etc. – particularly surrounding image based sexual abuse. These mitigations can be built into terms of use policies, however the wording within these policies can be ambiguous which blurs the lines of what they consider non-consensual or abusive. Other mitigations may include acting on reported content, which is when a user will flag up an item on the platform for abusive behavior/content – typically a human or machine will review the item and make the decision of whether it breaches the terms of use or is illegal/harmful. Some digital platforms have also begun to use technical methods such as digital foot printing and AI to detect non-consensual image sharing and abusive content (Henry, N., et.al 2021).

3. METHOD

3.1 Research

The first step of research for this project will be to carry out an expansive literature review of the technology-facilitated sexually violent crimes currently exist, how these crimes are typically carried out and the resulting impact to victims.

Relevant material for this project such as journals, publications and papers will be gathered and reviewed.

The research carried out for the background of this proposal will also be used for further research into the mitigations and to gauge the suitability of the mitigations for the crime and the victim. The successes and shortcomings of these mitigations will be noted and will be used within the mitigation development phase.

3.2 Mitigation Development

Using gamification as a tool for education, a serious game will be developed with an aim to educate, prevent, and protect users against technology-facilitated sexual violence.

The research collected within the first phase about technology-facilitated sexual violence and the corresponding mitigations will shape the development of the serious game. The game will attempt to educate the user about these crimes, the impacts they can have and how they are carried out. There will also be information on how to seek help surrounding these crimes if the user was to ever become a victim.

The game will be developed specifically to be playable on both mobile and desktop which will allow people to access the game much easier. To do this, there are two options for development available, there is Unity and phaser.io. Unity game engine uses C# as the main programming language and phaser.io is an open-source web-based framework. Both options will require learning through tutorials, however phaser.io is likely to be the easier of the two due to existing knowledge of web development languages.

3.3 Evaluation

To evaluate the suitability of the game as a tool for education, quantitative and qualitative data will be gathered and reviewed. The method being used to gather this data will be two surveys with a mix of closed and open-ended questions. These surveys will be completed by participants before and after they have played the serious educational game.

Participants will have a pre-game survey to complete. This will generate data on the participant's knowledge and opinion around technology-facilitated sexual violence, its impact and how the crimes are carried out. It will also investigate if participants knew how to access support for these crimes if they were ever to become a victim.

Participants will then play the serious game and learn about technology-facilitated sexual violence. Once they have played the game, they will then be asked to complete a post-game survey. The participant will be asked the same questions as the pre-game survey as well as if they would be able to identify these crimes in real life and where they would go to get help after playing the game.

The responses from both surveys will be reviewed and compared to ensure that there is an improvement in the participant's knowledge of technology-facilitated sexual violence. The quantitative data will be interpreted through bar graphs, which allow for the comparison of the pre and post survey results. The qualitative data will be interpreted using word clouds. These word clouds will consist of words and statements of participant's opinions and ideas surrounding technology-facilitated sexual violence. Words and

statements that have been used consistently or more than others will appear larger or more prominent within the word cloud.

4. Summary

In summary, this project will investigate technology-facilitated sexual abuse and the current mitigations in place to prevent and protect against them. The data gathered will then be used to determine the overall impact the crimes have on victims and policing, as well as the overall suitability and accessibility of the mitigations for each.

Using the information gathered, an accessible and user-friendly serious game will be created and developed. This game will be aimed at users of the internet, to prevent and protect them from becoming victims to these crimes.

5. REFERENCES

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