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Exploring the Impact of Online Abuse on IT Identity

Short Paper

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Abstract

Social networking sites, such as Facebook, LinkedIn, Twitter, and Discord, are widely used and associated with many benefits such as social support and professional networking. However, social networking sites have also provided a forum for online abuse. After experiencing online abuse, individuals may be less likely to engage in IT use, which may exclude them from digital services and experiences. Additionally, an individual may be less likely to develop higher levels of IT identity with social networking sites after experiencing online abuse. In this research-in-progress, we examine how one's level of IT identity is impacted by one's experience with online abuse on social networking sites. We also consider the role of psychological wellbeing as a potential mediator and moderator in the relationship between one's experience with online abuse and IT identity. Finally, we investigate the disparate impact of online abuse on IT identity based on gender.

Keywords: Online abuse, Social networking sites, IT identity, Psychological wellbeing

Introduction

Social networking sites, such as Facebook, LinkedIn, Twitter, and Discord, are widely used and associated with many benefits such as social support (Eichhorn 2008) and professional networking (Davis et al. 2020). However, social networking sites have also provided a forum for online abuse. According to PEN America, online abuse is the “pervasive or severe targeting of an individual or group online through harmful behavior” (PEN America 2021, p. 1). Online abuse that occurs on social networking sites includes posts or messages that contain profanity, vulgarities, threats, harassment, or bullying directed at an individual or attacks against a group, also referred to as hate speech (Rheault et al. 2019; Vidgen et al. 2019).

Both anecdotal and empirical evidence suggests that online abuse is a gendered phenomenon wherein women experience online abuse at a high rate (Eckert 2018) and sometimes higher rate than men (Rheault et al. 2019). This is especially evident for women who are public figures and write about women's issues online. For example, roughly 73% of women in a study who are bloggers and who identify as feminist or discuss politics online, have experienced online abuse (Eckert 2018). A more recent study indicates that women who are prominent politicians are more likely to receive uncivil, malicious tweets compared to their male counterparts (Rhealt et al. 2019). In 2014, a coordinated online abuse campaign targeted video game developer Zoe Quinn. This campaign became known as Gamergate and the scope and scale of online abuse brought international attention to diversity and inclusion issues in the video game industry (Rott 2014; Salter 2018).

Online abuse can have offline and lasting consequences for victims. Women bloggers who experience online abuse reported instances where cyberstalking transitioned to offline stalking (Eckhert 2018). Some women who were threatened and harassed online during Gamergate now have heightened security at public events and continue to receive threats to their safety (Salter 2018). Online abuse such as cyberbullying and trolling are shown to have significant, negative psychological impacts on victims (Hoff and Mitchell 2009).

This research seeks to further research on the impact of online abuse by exploring the effect of this phenomenon on IT identity. After experiencing online abuse, individuals may be less likely to engage in IT use, which may exclude them from digital services and experiences. Additionally, an individual may be less likely to develop higher levels of IT identity with social networking sites after experiencing online abuse. IT identity is “the extent to which an individual views use of an IT as integral to his or her sense of self” (Carter and Grover 2015, p. 932). IT identity is not only an antecedent that impacts behavior and use of information technology (Carter Petter, Grover, and Thatcher 2020a), but also IT identity is a consequence that is affected by one’s experience (Carter and Grover 2015).

The research objective of this study is to examine how one’s level of IT identity is impacted by one’s experience with online abuse on social networking sites. We also consider the role of psychological wellbeing, or one’s positive emotions and happiness (Huppert 2009), as a potential mediator and moderator in the relationship between one’s experience with online abuse and IT identity.

This paper is organized as follows. First, we provide background literature on the phenomenon of online abuse, psychological wellbeing, and IT identity. Next, we provide a theoretical model for our study. We follow with a plan for collecting and analyzing data. Finally, we discuss potential contributions of this work.

Background Literature

Online Abuse

In general, abuse is defined as any intentional action that uses something or someone in a manner that is harmful, cruel, violent, unfair, and/or morally wrong (Tracy 2012). Abuse has also been described as physically, sexually, or mentally injuring a person (Legal Information Institute 2021). Although there is a lack of consensus on a common definition, abuse is generally classified as physical, sexual, and emotional/psychological abuse. Abuse can lead to harmful psychological outcomes that are based on unique personal experiences, and its impacts have been researched in various contexts and for various populations. As an example, intimate partner violence and abuse impacts women’s mental health and is of concern since intimate partner violence encompasses physical, psychological, and sexual abuse (Breiding et al. 2015). Intimate partner violence in combination with past child abuse is suggested to increase the risk of anxiety and depression (Carlson et al. 2003).

With advancements in information technology, including the proliferation of smartphones and the ubiquitous nature of internet access, abuse has transitioned to an online space. The Women’s Media Center Speech Project (2021) defines online abuse as a diverse array of tactics and malicious behaviors that range from sharing embarrassing or cruel content about a person to impersonation, doxing, stalking, electronic surveillance to using photographs without consent and violent threats. Online abusive behaviors are not unique to the cyberworld but share features of offline abuse in terms of frequency and types (Lewis et al. 2017), with social networking sites and other digital communication technologies facilitating sexual violence (Powell and Henry 2019). Researchers conceptualize technology facilitated sexual violence against adults as digital sexual harassment, image-based sexual abuse, sexual aggression and or/coercion, and gender and/or sexuality-based harassment (Powell and Henry 2019). Table 1 identifies selected terms related to abuse and provides selected definitions of each term. Table 2 offers definitions of selected forms, or tactics, of online abuse that individuals may experience when using social networking sites.

Term	Definition	Citation
Abuse	Any action that intentionally harms or injures another person	Tracy 2012
	Physically, sexually, or mentally injuring a person	Legal Information Institute, Cornell Law School 2021
Online Abuse	Pervasive or severe targeting of an individual or group online through harmful behavior	PEN America 2021
Table 1. Selected Descriptions of Abuse		

As many as 47% of those who use the internet have experienced online abuse (Lenhart and Zickuhr 2016). Past research has found differences in experiences and reporting of online abuse among demographic groups. For example, Powell and Henry (2019) found significant differences in technology facilitated sexual abuse among younger (18-24) and non-heterosexual identifying adults compared to older and heterosexual adults. In a study of online abuse within the United Kingdom, individuals who identify as White or Asian are less likely to experience online abuse as compared to those who are Black or are from 'other' ethnicities (Vidgen et al. 2019). Women tend to experience different types of online abuse behaviors than men, such as cyberstalking, doxing, and sexual harassment (Lenhart and Zickuhr 2016).

Term	Definition	Citation
Cyberstalking	The prolonged and repeated use of abusive behaviors online (a "course of conduct") intended "to kill, injure, harass, intimidate, or place under surveillance with intent to kill, injure, harass, or intimidate" a target	18 U.S.C. § 2261A 2015
Doxing	The unauthorized retrieving and publishing, often by hacking, of a person's personal information, including, but not limited to, full names, addresses, phone numbers, emails, spouse and children names, financial details	Women's Media Center 2021
Hashtag Poisoning	The creation of an abusive hashtag - or the hijacking of an existing hashtag - which is then leveraged as a rallying cry for cyber mob attacks	PEN America 2021
Sextortion	The threat to expose sexual images in order to make a person do something. These threats come from both strangers met online and once intimate romantic partners attempting to harass, embarrass, and control victims	Thorn 2021
Trolling	A behavior intended to provoke a reaction in another online user	Ortiz 2020
Table 2. Examples of Online Abuse Tactics		

Psychological Wellbeing

Another variable researched in the context of abuse and its impact is psychological wellbeing. Psychological wellbeing is the combination of both feeling good and functioning effectively (Huppert 2009). Another well-established approach considers five pillars of wellbeing: positive emotion, engagement, relationships, meaning, and accomplishment (Seligman 2012).

Higher levels of psychological wellbeing are associated with improved physical health (Huppert 2009); however, experiences with abuse can negatively impact one's wellbeing. Prior research has found a significant positive association between intimate partner violence and symptoms of depression, anxiety,

PTSD, suicide ideation, sleep disturbance and general psychological distress (Dillon et al. 2013). Women who are survivors of intimate partner violence are also subjected to economic abuse (behaviors that control a woman by limiting them to acquire, use and maintain economic resources), which is related to both quality of life and wellbeing (Adams and Beeble 2019). The effects of abuse can be long-lasting in that psychological abuse experienced during childhood can influence an individual's wellbeing as an adult (Sheikh et al. 2016). As adults, individuals who experience abuse in the workplace through bullying tend to have higher physiological stress levels (as measured via salivary cortisol) and poorer mental health than those who are not bullied in the workplace (Hansen et al. 2011).

IT Identity

Individuals develop and maintain multiple identities as they reflect on themselves and consider how to engage within social groups and structures (Burke 2013). Society plays an important role as individuals form their sense of self and interact with others according to perceived social structures (Cast and Stets 2016). Moreover, individuals realize and understand their identities based on their sense of self, their role, their social groups, and material objects (Dittmar 2011; Vignoles et al. 2011).

One material object in which individuals can establish or expand their identity is IT identity. IT identity considers how individuals view and use IT as a means to expand or view one's self (Carter and Grover 2015). An individual's IT identity is reflected by their emotional energy, relatedness, and dependence on IT (Carter et al. 2020a; Carter and Grover 2015). IT identity was developed based on a structural symbolic interactionist perspective, which assumes that identities are stable (Serpe and Stryker 2011), but identities, including IT identity, can change over time (Carter and Grover 2015).

IT identity can be considered as a determinant of behavior or a consequence of experiences (Carter and Grover 2015). For example, individuals with higher levels of IT identity are more likely to use additional features and functionalities of IT as they seek to achieve their personal goals through an expanded view of one's self (Carter et al. 2020a, 2020b), demonstrating the role of IT identity in shaping IT use behavior. Additionally, social influence, effort expectancy, and performance expectancy are antecedents of IT identity in the context of MS Excel and smartphones (Carter et al. 2020b). In this study, our emphasis is on IT identity as a consequence of one's experiences with a technology (i.e., social networking sites); however, we will collect data on the influence of IT identity on behavior (i.e., social networking site use) to examine IT identity more completely within a specifically nomological network.

Research Model

To examine the relationship among online abuse, psychological wellbeing, and IT identity, we present the Model of Online Abuse and IT Identity, shown in Figure 1. The theoretical model presents our hypothesized relationships among the constructs. Specifically, we explore the relationship between the extent of online abuse and its impact on user psychological wellbeing and on IT identity. We further hypothesize the moderating impact of psychological wellbeing on IT identity.

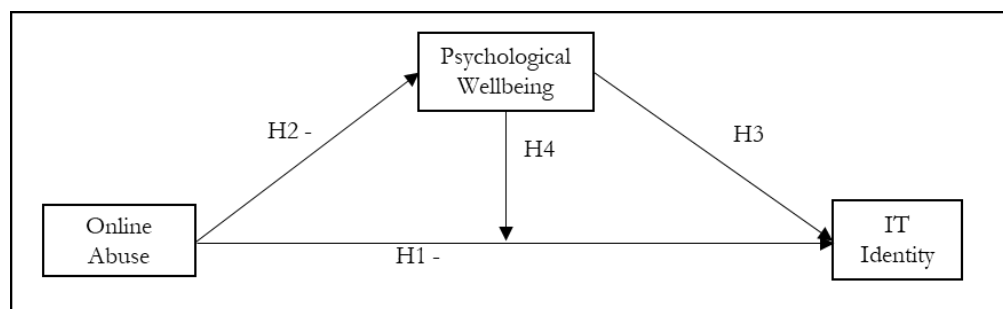


Figure 1. Model of Online Abuse and IT Identity

Carter and Grover (2015) discuss how one's experiences with IT can be a predictor of IT identity and posit that computer self-efficacy, actualized rewards, and embeddedness influence one's level of IT identity. Individuals who have experienced online abuse will experience fewer rewards from engaging with social networking sites. These individuals who experienced online abuse on social networking sites may continue to use this form of IT for work or social reasons; however, these individuals are likely to have lower levels of IT identity with social networking sites than individuals who did not experience online abuse on social networking sites. Therefore, we posit:

H1: Individuals with higher levels of exposure to online abuse on social networking sites will have lower levels of IT identity with social networking sites.

Prior research has identified how individuals' prior experience with abuse can negatively impact one's wellbeing (Sheikh et al. 2016). Prior research has focused on how abuse offline affects one's mental health and wellbeing (e.g., Hansen et al. 2011; Sheikh et al. 2016). Given the difficulty of separating one's online life from one's offline life (Gosse 2021), we propose:

H2: Individuals with higher levels of exposure to online abuse on social networking sites will have lower levels of psychological wellbeing.

Wellbeing is associated with one's identity (Farquhar 2012), and neuroscience posits that wellbeing, happiness, and positives emotions are interrelated (Alexander et al. 2021). Identity is not only formed by one's experiences, but also by one's emotions (Coleman and Williams 2013). In this study, we explore if psychological wellbeing partially mediates the relationship between online abuse and IT identity and propose:

H3: Psychological wellbeing partially mediates the relationship between an individual's level of exposure to online abuse on social networking sites and IT identity with social networking sites.

Individuals with lower levels of psychological wellbeing are more likely to experience a stronger inverse relationship between exposure to online abuse on social networking sites and their IT identity with social networking sites. Individuals engage with IT that is perceived as essential to one's self (Carter and Grover 2015); however, those with exposure to online abuse and lower levels of psychological wellbeing may attempt to distance themselves from these sites. As such, the individual is less likely to consider social networking sites as critical to their view of self. Based on these inferences, we suggest:

H4: Psychological wellbeing moderates the relationship between one's level of exposure to online abuse on social networking sites and one's IT identity with social networking sites.

Because online abuse is experienced at different rates based on one's gender (Eckert 2018; Rheault et al. 2019), we also expect that the magnitude or significance of the relationships within the Model of Online Abuse and IT Identity may vary based on gender. As a result, we will perform a multigroup comparison of the Model of Online Abuse and IT Identity. While prior research suggests that women are more likely to experience online abuse as compared to men (Rheault et al. 2019), it is unknown if differences in relationships will exist across genders for this study. Therefore, we propose the following null hypothesis:

H5: Gender will not influence the measures or relationships within the Model of Online Abuse and IT Identity.

Study Design

We will evaluate and test our hypotheses by conducting a survey among individuals who have used (but may or may not currently use) social networking sites. To measure exposure to online abuse via social networking sites, we will adapt existing measures related to online abuse (Álvarez-García et al. 2017; Powell and Henry 2019). To measure emotional wellbeing, we intend to use items from the PERMA profiler which includes questions about one's positive emotion, engagement, relationships, meaning, accomplishment, happiness, negative emotion, health, and loneliness (Butler and Kern 2016). We will measure IT identity using measures validated by Carter et al. (2020a).

For control variables, we will ask demographic questions to identify participants' gender, age, social networking site use, and any other relevant items. Although not hypothesized, we will also ask individuals to identify their level of IT use of social networking sites, including the measure Trying to Innovate (Ahuja

and Thatcher 2005). The inclusion of IT use as a construct will allow us to examine antecedents and consequences of IT identity within the context of exposure to online abuse on social networking sites.

For data collection, we intend to invite university students in the United States to complete the study. University students are likely to have used or currently use social networking sites, and many may have experienced online abuse (Vidgen et al. 2019). We will administer the survey using Qualtrics. We will screen participants to inquire if they have ever used social networking sites since we are asking individuals about their exposure to online abuse via social networking sites. To minimize the potential for harm as individuals complete the survey, we notify participants that this survey will ask participants questions regarding any experiences with online abuse on social networking sites¹. Also, we are not collecting any identifying information from participants as they complete the survey. Participants can exit the survey at any point if they have concerns about the subject matter or questions.

For data analysis, we intend to use structural equation modeling to evaluate the hypotheses. In addition to the identified hypotheses, we will examine our measures and structural model based on gender to identify differences regarding the prevalence and impact of online abuse across groups. To examine Hypothesis 5, we will analyze our data for measurement invariance and will analyze our model for between-group differences based on gender based on recommendations offered by Qureshi and Compeau (2009) or Yuan and Chan (2016).

Before conducting our full research study, we will conduct a pilot study to examine our measures and data collection procedures. The pilot study will include invited participants using a convenience, snowball sampling of individuals we know and their referrals who have used or are using social networking sites. The findings from the pilot study will inform changes needed to our survey instrument or study design prior to conducting the full study. We will present the pilot study results and any other results we have obtained at the 2nd AISWN International Research Workshop on Women, IS and Grand Challenges.

Conclusion

When individuals experience online abuse, they may be impacted in such a way that they are less likely to engage with IT or engage differently with IT. If individuals are reluctant to engage in IT use, they may be excluded from accessing services or support necessary for success and wellbeing. This study examines online abuse and its potential impact on psychological wellbeing and IT identity. By exploring this topic, we provide insight into and the impact of online abuse on users and outcomes related to IT identity, which may in turn impact IT use. This study has the potential to make theoretical contributions to online abuse and IT identity by identifying consequences of online abuse and antecedents of IT identity. In particular, we examine if one's negative experiences with IT have an effect on one's level of IT identity. If we find significant results, this study has the potential to prompt additional research related to factors that influence IT identity formation. Furthermore, the findings from this study may have the potential to impact policies governing social networking sites to protect users by reducing one's likelihood to experience online abuse or lessening the harm experienced by those who have been affected by online abuse. This research has the potential to stimulate additional research to consider how negative online experiences, including online abuse, impact users in terms of their psychological wellbeing and their relationship and interactions with information technology.

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¹ We are also working with our universities' Institutional Review Board (IRB) to identify additional means to minimize any potential harm to subjects based on the nature of the questions asked.

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