

# **How Do You Cope: Individuals' Responses to Identity Theft Victimization**

*Completed Research*

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## **Abstract**

This study examines individuals' responses to identity theft victimization and antecedents to their responses. An emotional response (i.e., distress) and four behavioral responses (i.e., avoidance of online transactions, avoidance of information disclosure, subscription to identity protection services, and emotional adjustment) are studied, along with four antecedents including the amount of financial loss, misuse of personal information by others, time spent resolving the issue, and time elapsed since the incident. A survey on 197 self-reported identity theft victims shows that the amount of financial loss, misuse of personal information, and time spent resolving the issue contribute to an overall assessment of victimization severity, and victimization severity, along with time elapsed since the incident, is mediated by emotional distress for the impact on behavioral responses. The study highlights the role of emotional distress in victims' choices of behaviors to deal with identity theft, calling for more attention to emotional responses of victims.

## **Keywords**

Identity theft, victimization severity, emotional distress, adaptive-maladaptive coping, emotional adjustment, identity protection services.

## **Introduction**

In recent two decades, identity theft has attracted increasing attention from researchers and practitioners due to the rising number of identity theft incidents occurred and the amount of financial loss caused (Anderson et al. 2008; Pascual et al. 2018; Slosarik 2002; United States Department of Justice 2016). Beyond financial loss, the emotional impact on victims is also severe (Harman 2017), as victims had to spend hours and even days to resolve the incident of identity theft, and some victims may suffer for years from emotional distress (Schmitz 2008). For working employees, this means productivity loss (Golladay and Holtfreter 2017; Slosarik 2002). Unfortunately, a large number of victims do not change their risky behaviors, falling to repeat victimization or re-victimization (International Mass-Marketing Fraud Working Group 2010). Thus, how to help victims deal with identity theft and minimize future re-victimization (Golladay and Holtfreter 2017; Turanovic and Pratt 2014) has become a critical task for researcher and practitioners (such as employers).

To date, studies on how individuals cope with identity theft victimization have been scarce. Specifically, little is known about the range of emotional and behavioral responses of victims, or factors that influence their responses (Golladay and Holtfreter 2017). Although a few studies have started to explore this topic, they are descriptive in nature and are limited to victims' reporting activities, such as reporting the incidents to policy or other authorities (Abbott and McGrath 2017; Anderson 2006; Betz 2012; Copes et

al. 2010; Golladay 2017; Harman 2017; Rosoff et al. 2014; Schmitz 2008). Other remedies that may change victims' behaviors and prevent re-victimization (Golladay and Holtfreter 2017) have been barely studied. It is important for us to recognize traumatic experiences of the victims and their psychological and behavioral responses, so that mechanisms can be developed to help them recover from the incidents and prevent re-victimization. Given the importance of addressing victimization experience and the limited knowledge on victims' psychological and behavioral responses, we address these issues in the study. Particularly, we examine what kinds of responses a victim may develop following the identity theft, and what factors influence their choices of the responses.

Drawing upon the Information Technology Threat Avoidance (ITTA) theory (Liang and Xue 2009), the Routine Activity Theory (RAT) (Cohen and Felson 1979; Reyns and Randa 2017), and literature on coping (Boss et al. 2015; Ogbanufe and Pavur 2016; Wang et al. 2017; Witte 1992) and identity theft (Anderson et al. 2008; Copes et al. 2010; Golladay and Holtfreter 2017; Reyns and Randa 2017; Rosoff et al. 2014), we examine a common type of emotional response to identity theft victimization called emotional distress (Golladay and Holtfreter 2017; Reyns and Randa 2017), and four types of behavioral responses including avoidance of online transactions, avoidance of information disclosure (Rosoff et al. 2014), subscription to identity theft protection services (Kim and Kim 2016; Ogbanufe and Pavur 2016; Rosoff et al. 2014), and emotional adjustment (Ogbanufe and Pavur 2016; Wang et al. 2017; Witte 1992). These responses cover one's adaptive and maladaptive coping to risky situations (Liang and Xue 2009; Ogbanufe and Pavur 2016; Wang et al. 2017) and may help reduce future re-victimization. In addition, we examine four factors that may drive the responses, including: the amount of financial loss (Anderson et al. 2008; Golladay and Holtfreter 2017), misuse of personal information by others (Anderson 2006; Copes et al. 2010; Reyns and Randa 2017), time spent resolving the issue (Anderson 2006; Copes et al. 2010; Golladay and Holtfreter 2017; Stafford 2004), and time elapsed since the incident (Gilbert et al. 1998; Wilson and Gilbert 2003). We argue that these factors influence a person's perception of victimization severity (Abbott and McGrath 2017), which in turn determines the emotional and behavioral responses.

An online survey on 197 self-reported identity theft victims was conducted to study their victimization experience and emotional and behavioral responses. The results show that the amount of financial loss, misuse of personal information by others, and time spent resolving the issue contribute to an overall assessment of victimization severity, and victimization severity, along with time elapsed since the incident, is mediated by emotional distress for the impact on behavioral responses. In other words, the psychological response (i.e., distress) to identity theft victimization plays a central role in determining the behavioral responses of the victims.

Our study examines an under-investigated area in identity theft research, i.e., the post-victimization behaviors of individual victims. By analyzing the emotional and behavioral responses of victims and the antecedent factors, we gain knowledge of how they are related, and make recommendations to help develop techniques to deal with identity theft victimization. An interesting finding is that victims engage in emotional adjustment to recover from the distress of identity theft, which suggests that more efforts are needed to offer emotional support. Other theoretical and practical implications are discussed.

## **Literature Review and Theoretical Bases**

To date, studies on victims' responses to identity theft have focused on their reporting behaviors, such as reporting the incidents to credit card companies, law enforcement, or credit bureaus (Golladay 2017; Reyns and Randa 2017). This reflects victims' goal of pursuing justice when their identity was stolen. While reporting identity theft incidents may pose an immediate solution to the problem, the victims' other psychological and behavior responses that may have a long-term impact have been barely explored in literature.

Criminal victimization can be physically, economically, and psychologically harmful (Abbott and McGrath 2017). In terms of identity theft, first, economic and financial loss has been widely recognized, as studies show an average of \$1,000 loss per victim (Harman 2017). The psychological or emotional impact of identity theft was also observed: Golladay and Holtfreter (2017) examined the emotional outcome of victims based on the summation of multiple feelings such as anxiety, anger, depression, unsafe, and confused, and found that the amount of loss and the number of recent and prior identity theft victimizations positively influenced emotional consequences. Third, physical outcome such as headaches

and high blood pressure were observed in victims as well (Golladay and Holtfreter 2017; Reyns and Randa 2017). Above all, emotional impacts of identity theft on victims is common (Harman 2017; Schmitz 2008), and banks and credit card companies are increasingly covering much of the financial loss associated with identity theft (Golladay and Holtfreter 2017). Thus, in this study we particularly address the emotional impact of identity theft.

The Information Technology Threat Avoidance (ITTA) theory (Liang and Xue 2009) posits that individuals are motivated to avoid malicious IT when they perceive a threat and believe that the threat is avoidable by taking safeguarding measures (called problem-focused coping); if they believe that the threat cannot be fully avoided with safeguarding measures, they would engage in emotion-focused coping. Similarly, the coping literature suggests both adaptive coping (which is equivalent to problem-focused coping) and maladaptive coping (which is equivalent to emotion-focused coping) to deal with threats (Endler and Parker 1990; Witte and Allen 2000). In addition, other coping theories, particularly the Protection Motivation Theory (Rogers 1983; Rogers 2004) and the Extended Parallel Process Model (Witte 1992; Witte and Allen 2000), suggest that emotional response (fear, concern, or anxiety) may be generated from the threat and coping appraisals, which further influences the behavioral responses. Thus, several common responses to identity theft victimization, including emotional response (i.e., distress), problem-focused coping (i.e., avoidance of online transactions, avoidance of information disclosure, and subscription to identity protection services), and emotion-focused coping (i.e., emotional adjustment), are examined in this study.

First, emotional distress refers to the depression and anxiety one feels due to identity theft (Golladay and Holtfreter 2017). It is perhaps the mostly commonly discussed emotional response in identity theft literature; it was reported that some victims suffered years from the trauma of identity theft (Schmitz 2008). In addition to the emotional response, several behavioral responses were recognized from the RAT perspective (Cohen and Felson 1979), suggesting that risky behaviors of individuals, such as online banking, shopping, emailing, and messaging (Reyns and Randa 2017), may contribute to their victimization and re-victimization, and should be reduced or avoided. Avoidance of online transactions and information disclosure stand for the discontinuance or reduction in one's online activities in dealing with transactions (such as online shopping and banking) and information transfer (such as email communication), which are typical long-term behavioral responses (Rosoff et al. 2014). In addition, subscription to identity theft protection services such as credit monitoring (Ogbanufe and Pavur 2016) refers to the use of a third-party service (e.g., LifeLock, TrustedID, and Equifax ID patrol, etc.) to help safeguard one's online identity (Kim and Kim 2016; Rosoff et al. 2014). As identity protection services can reduce the chances of fraudulent use of stolen identity (for example, via credit freeze), it may mitigate some damages of identity theft. Finally, emotional adjustment refers to an emotion-focused coping to address stressful situations (Wang et al. 2017; Witte 1992). Although this type of response is not widely studied in the identity theft literature, it has received increasing attention in the coping literature (Liang and Xue 2009; Wang et al. 2017). By incorporating this type of response in the study, we extend the identity theft literature.

The next question is to understand potential drivers of these responses. We focus on one's victimization experience in identity theft. To date, it is unknown how one's victimization experience contribute to the emotional and behavioral responses, so that we employ an exploratory approach and recognize factors from available literature, especially some government-sponsored public surveys on identity theft (United States Department of Justice 2016). The first and foremost experience deals with financial loss (Anderson et al. 2008; Golladay and Holtfreter 2017; Harman 2017). In addition, victims also suffer from misuse of personal information by others to complete online payments; to open new accounts; to obtain loans, employment, medical services, and government benefits; or to obtain other benefits illegally (Anderson et al. 2008; Reyns and Randa 2017). To resolve the inconveniences caused by identity theft, victims must spend time contacting their banks and credit card companies, credit bureaus, and/or other authorities (Anderson 2006; Copes et al. 2010); this has led to productivity loss for employers (Golladay and Holtfreter 2017; Slosarik 2002). Finally, we suggest that in contrast to the above factors that may escalate the victimization experience, the passing of time may attenuate the bad experience, as psychological literature shows that as time goes by, victims will recover from a stressful feeling via emotion coping (Gilbert et al. 1998; Wilson and Gilbert 2003). We also argue that the above factors, especially financial loss, misuse of information, and time spent clearing the issue, may influence behavioral responses indirectly via their impact on an overall perception of victimization severity (Abbott and McGrath 2017).

## **Hypotheses Development**

We argue that one's identity theft victimization experience, including financial loss, misuse of information by others, and time spent clearing the issue, contribute to an overall assessment of victimization severity, and the latter has an impact on emotional distress. In addition, time spent on resolving the issue and time elapsed since the incident also influence emotional distress. On the other hand, emotional distress influences the subsequent behavioral responses including avoidance of online transaction and information disclosure, subscription to identity protection services, and emotional adjustment (i.e., emotion-focused coping). The hypotheses are shown in Figure 1.

### ***Perceived victimization severity and its antecedents***

The coping literature posits perceived severity as a critical determinant of protective behaviors (Boss et al. 2015; Rogers 1983; Wang et al. 2017; Witte 1992). In terms of identity theft victimization, perceived victimization severity refers to a person's subjective assessment of the damages caused by the fraudulent use of the person's identity. It is built upon the various experiences with victimization (such as financial loss and misuse of identity), but is more "fruitful" than the latter in predicting victims' cognitions and behaviors (Abbott and McGrath 2017; Lee and Earnest 2003). We examine the formation of perceived victimization severity first.

Financial loss represents a common experience with identity theft: studies show that more than half (57%) of the victims suffered from it (Harman 2017). The amount of financial loss is also significant, in the range of several hundred to several thousand dollars per person (Anderson et al. 2008; Golladay and Holtfreter 2017), and in some cases, the per capita loss can be more than \$13,000 (Anderson et al. 2008). The amount of monetary loss was also found to be positively associated with emotional distress, but with a small effect size (Golladay and Holtfreter 2017). We suggest that this may be due to the possibility that financial loss, along with other victimization experience, may contribute to an overall assessment of victimization severity, so that financial loss does not exert a separate impact on emotional or behavioral responses but through the impact on victimization severity.

The second type of identity theft victimization experience deals with the misuse of personal information by others. Victims have seen their identity being used to open new bank accounts, obtain new loans, apply for jobs, rent houses, and even apply for government aid (Anderson 2006; Reyms and Randa 2017). Some of the misuse of information may result in further monetary loss, while others may cause reputation damage, thus adding to the overall perception of severity of victimization. Thus, we hypothesize:

H1: The amount of financial loss due to identity theft is positively associated with perceived victimization severity.

H2: The extent of misuse of personal information due to identity theft is positively associated with perceived victimization severity.

The resolution of identity theft can be time-consuming, which causes more pains to the victims (Rosoff et al. 2014). Earlier on, it was reported that the median amount of time to resolve problems from identity theft was 4 hours, and in some cases, it could reach 55 hours or longer (Anderson et al. 2008). Further research shows that on average, victims spend about 15-30 hours, often spread out over several years, resolving financial problems caused by identity theft (Golladay and Holtfreter 2017). The long hours spent on resolving the aftermath of identity theft causes a number of side effects, such as emotional stress and monetary loss (due to missed work, for example) (Copes et al. 2010). Thus, time spent on addressing the aftermath of identity theft adds to the overall perceptions of victimization severity, and we hypothesize:

H3: Time spent resolving identity theft is positively associated with perceived victimization severity.

### ***Perceived distress and its antecedents***

The coping literature suggests that perceived severity of a threat triggers emotional response such as fear and anxiety (Boss et al. 2015; Wang et al. 2017). According to the Protection Motivation Theory (Rogers 1983) and the Extended Parallel Process Model (Witte 1992), perceived severity, along with perceived vulnerability, drives a fearful or stressful feeling of the victim, which then influences adaptive and/or

maladaptive coping to the threat (Wang et al. 2017). As we study the actual victimization experience, perceived vulnerability is thus a constant, leaving perceived severity the only determinant of perceived distress. Past research shows that a significant portion of victims (72%, according to (Harman 2017)) felt distress over their victimization (Reyns and Randa 2017), and past victimization leads to perceived risks (Abbott and McGrath 2017). Thus, we expect a positive impact of perceived victimization severity on perceived distress of the victims. We hypothesize:

H4: Perceived victimization severity is positively associated with perceived distress.

“Time is the best medicine” is a phrase people use to explain the mechanism of an adaptive system, such as a human being, to recover from trauma. Although the monetary, psychological, and even physical impact of identity theft can be painful, people learn to deal with the pain and recover over time. The psychological literature recognizes an inherent self-defense system, called psychological immune system, in humans that detects and neutralizes events that challenge their sense of well-being and help to recover from stressful feelings (Gilbert et al. 1998; Wilson and Gilbert 2003). According to this system, people are motivated to interpret negative events in ways that minimize their impact: for example, they may re-appraise a negative event, giving it less weight in comparison to other life events. Through the reappraisal, the significance of the negative event (i.e., identity theft) becomes weak, leading to less negative emotions. Thus, time elapsed since the identity theft incident can be a good medicine to recover from the stressful feeling of the incident, and we hypothesize:

H5: Time elapsed since last identity theft incident is negatively associated with perceived distress.

### ***Behavioral responses***

The coping literature predicts behavioral responses to stressful situations, either adaptive (called danger control) or maladaptive (called fear control)(Witte 1992). The danger control process employs problem-focused coping activities to reduce the causes of a stressful situation, and the fear control process employs emotion-focused coping activities to adjust the fearful feeling of the victim without reducing the causes of the threat. For problem-focused coping, the Routine Activity Theory (Cohen and Felson 1979; Reyns and Randa 2017) suggests that certain online behaviors, such as online banking, online shopping, and emailing, etc., influence one’s risks of victimization; such behaviors should be restrained or conducted with care to avoid future re-victimization. Regarding this, Rosoff et al (2014) conducted an exploratory study on 12 long-term behavioral intentions, such as using credit cards significantly less than before, requesting free fraud alert service from a credit bureau or subscribing to the services, using pseudonyms in social network, and refraining from online transactions that require personal information. They aggregated those 12 behaviors into a single construct, despite the heterogeneity in the items. We suggest that those behaviors can be classified based on their different strategies in coping with victimization; in addition, other behavioral response may be added to the list. Extending RAT and Rosoff et al’s list, we recognize and focus on four behavioral response, including three adaptive copings (avoidance of online transactions, avoidance of information disclosure, and subscription to identity theft protection services), and one maladaptive coping (emotional adjustment).

First, avoidance of online transactions refers to refraining from online shopping (Youn 2009; Zviran 2008). It is not a total retreat from online hopping, but limiting one’s use of online storefronts, and shopping trusted merchants only. It helps reduce the exposure of one’s personal information online and thus the chance of (re-)victimization (Reyns and Randa 2017), as online merchants are frequent targets of cybercriminals. Avoidance of information disclosure, then, refers to limiting giving out personal information to others. This may or may not involve online transactions, as many people give out information in social media. By restricting the use and disclosure of personal information in online shopping or other activities, one can reduce further damage called by victimization. The motivation to do so, then, is perceived distress of past victimization experience according to the coping literature. Thus, we hypothesize:

H6: Perceived distress is positively associated with avoidance of online transactions.

H7: Perceived distress is positively associated with avoidance of information disclosure.

In addition to self-protective behaviors, victims of identity theft may also seek external measures such as identity theft protection services (Kim and Kim 2016). After some high-profile data breaches in recent



	- The loss that resulted because of the scam incident was significant for me.
Emotional distress (Boss et al. 2015; Wang et al. 2017)	Below is a list of comments made by people after experiencing a scam incident. Please mark each item, indicating how frequently these comments were true for you. If they did not occur during that time, please mark the “not at all” column. [Not at all...Often]  <ul style="list-style-type: none"> <li>- I had trouble falling asleep or staying asleep because of pictures or thoughts about the incident that came to my mind.</li> <li>- I had waves of strong feelings about the incident.</li> <li>- I had dreams about the incident.</li> <li>- Pictures about the incident popped into my mind.</li> <li>- Other things kept making me think about the incident.</li> </ul>
Avoid transactions (Rosoff et al. 2014)	Whenever I can I will avoid... [Strongly disagree...Strongly agree]  <ul style="list-style-type: none"> <li>- making online purchases.</li> <li>- communicating with my bank via emails or websites.</li> <li>- making online bill payments.</li> <li>- accessing my financial accounts online.</li> </ul>
Avoid info disclosure (Rosoff et al. 2014)	Whenever I can I will avoid... [Strongly disagree...Strongly agree]  <ul style="list-style-type: none"> <li>- talking people over the phone for my personal information.</li> <li>- sending my personal information via emails</li> <li>- filling my personal information online.</li> </ul>
Subscription to ID protection service (Boss et al. 2015)	Please indicate the extent to which you agree with the following statements regarding your intention to subscribe to identity protection services. [Very unlikely...Very likely]  In the short future...  <ul style="list-style-type: none"> <li>- I am likely to subscribe to identity protection services.</li> <li>- It is possible that I subscribe to identity protection services.</li> <li>- I am certain that I will subscribe to identity protection services.</li> </ul>
Emotional adjustment (Wang et al. 2017)	Below is a list of comments made by people after experiencing a scam incident. Please mark each item, indicating how frequently these comments were true for you. If they did not occur during that time, please mark the “not at all” column. [Not at all...Often]  <ul style="list-style-type: none"> <li>- I stayed away from reminders about the incident.</li> <li>- I felt as if the incident hadn't happened or was unreal.</li> <li>- I tried not to talk about the incident.</li> </ul>

**Table 1. Measurement Items**

Of all the subjects, 197 were identified as identity theft victims, including 141 females and 56 males. Compared to all the subjects (N=636) in the study, this means 32.4% females and 27.9% males suffered from identity theft. Detailed profile of the respondents is available upon request from the authors.

The psychometric properties of the measurement items are reported in Table 2, suggesting sufficient reliability and validity of the measures. Loadings and cross-loadings of the items were also tested, with no significant issue detected. Common method bias was tested using Harman’s single factor approach (Podsakoff et al. 2003), with no bias detected, either.

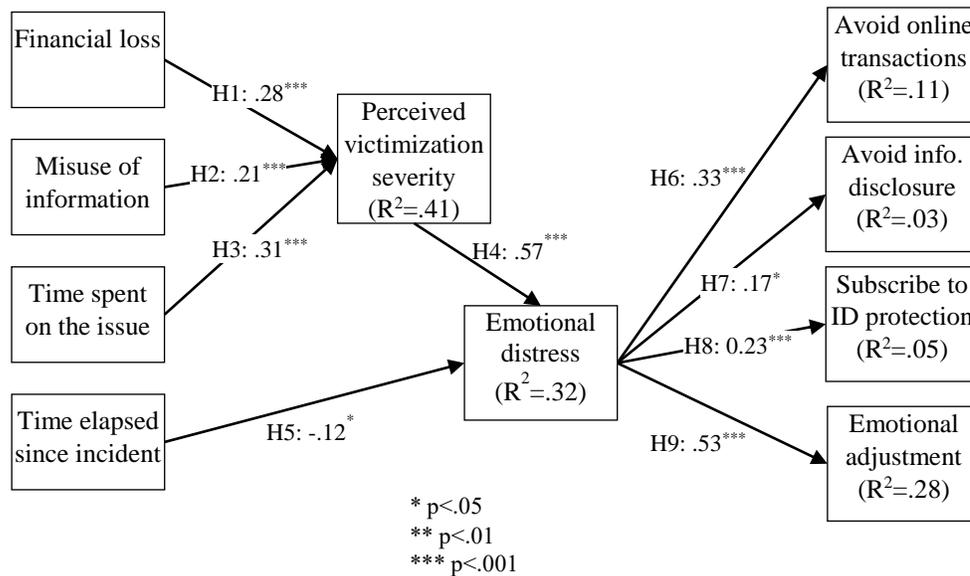
The hypotheses were tested using the Partial Least Squares method with SmartPLS 3.0 (Ringle et al. 2015). Bootstrapping procedure with 1,000 subsamples was employed to test the significance of the relationships. As shown in Figure 1, financial loss ( $\beta=0.28, p<.001$ ), misuse of information ( $\beta=0.21, p<.001$ ), and time spent addressing identity theft ( $\beta=0.31, p<.001$ ) all significantly impact perceived victimization severity, supporting H1-H3. Perceived victimization severity ( $\beta=0.57, p<.001$ ) and time elapsed since the last incident ( $\beta= -0.12, p<.05$ ) both have a significant impact on emotional distress, supporting H4 and H5. Emotional distress then has a significant impact on avoidance of online transactions ( $\beta=0.33, p<.001$ ), avoidance of information disclosure ( $\beta=0.17, p<.05$ ), intention to

subscribe to identity protection services ( $\beta=0.23, p<.001$ ), and emotional adjustment ( $\beta=0.53, p<.001$ ), supporting H6-H9.

	CA	CR	AVE	Correlations										
				1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	
1) Financial loss	-	-	-	-										
2) Misuse of information	-	-	-	0.40	-									
3) Time spent on issue	-	-	-	0.45	0.48	-								
4) Time elapsed	-	-	-	0.21	0.13	0.16	-							
5) Victimization severity	0.89	0.93	0.82	0.51	0.47	0.54	0.14	0.90						
6) Emotional distress	0.87	0.91	0.66	0.36	0.33	0.46	-0.04	0.55	0.81					
7) Emotional adjustment	0.71	0.84	0.63	0.17	0.13	0.28	-0.13	0.30	0.52	0.80				
8) Avoid transactions	0.88	0.92	0.74	0.17	0.15	0.16	0.05	0.25	0.33	0.33	0.86			
9) Avoid info disclosure	0.84	0.90	0.74	0.15	-0.02	0.12	0.17	0.15	0.17	0.15	0.41	0.86		
10) Subscription intention	0.94	0.96	0.89	-0.01	0.05	0.13	-0.11	0.17	0.23	0.14	0.19	0.21	0.94	

CA – Cronbach’s  $\alpha$ ; CR – Composite Reliability; AVE – Average Variance Extracted; values on the diagonal of the correlation matrix are the square roots of the corresponding AVEs.

**Table 2. Psychometric Properties of the Constructs**



**Figure 1. Hypotheses and results**

Figure 1 suggests a central role of emotional distress in mediating the impact of perceived victimization severity on behavioral responses. To verify the mediating effect, we conducted the popular Baron-Kenny (Baron and Kenny 1986) test. The test shows that without emotional distress, perceived victimization severity has a strong impact on avoidance of online transactions ( $\beta=.26, p<.001$ ), avoidance of information disclosure ( $\beta=.15, p<.1$ ), subscription to ID protection services ( $\beta=.17, p<.05$ ), and emotional adjustment ( $\beta=.30, p<.001$ ). With emotional distress, none of the impacts of perceived victimization severity on behavioral responses is significant. Thus, emotional distress fully mediates the impact of victimization severity on the responses.

## Discussion and Concluding Remarks

The criminology literature and the Routine Activity Theory/RAT suggest that victims who are unable or unwilling to stop engaging in risky activities will be more likely to be re-victimized (Turanovic and Pratt 2014). In this study, we examine identity theft victims’ intentions to change their online behaviors and the drivers of the changes. Via an empirical study on 197 self-reported victims, we find that financial loss,

misuse of information by others, time spent addressing victimization, and time elapsed since last incidents have an impact on perceived victimization and emotional distress, and emotional distress influences behavioral responses including avoidance of online shopping and information disclosure, intentions to subscribe to identity protection services, and engaging in emotional adjustment.

A theoretical contribution is the recognition of the central role of emotional distress in driving victimization responses. This suggests that in future research, the psychological impact on victims should be emphasized. Compared to other visible outcomes such as financial loss and missed time from work, the distress associated with identity theft can be long lasting and devastating (Schmitz 2008), and it influences a range of behavioral responses, both adaptive and maladaptive. Thus, further research is needed to gain deeper insight into emotional distress of the victims, and find ways to alleviate the distress.

For practitioners such as employers, the study means to provide employees support to recover from stressful feelings of identity thefts, such as the provision of counselling service and employer-sponsored identity protection services as a part of employee benefit plans (Deybach 2007). This may also help employers reduce productivity losses due to paid or un-paid leave of employees to address the issues (Golladay and Holtfreter 2017; Slosarik 2002).

In addition, identity theft victimization causes consumers and businesses to take costly precautions to prevent re-victimization, such as avoiding transactions that could have been taken, or spending resources to protect customer records (e.g., investing in fraud detection tools) (Anderson et al. 2008). By understanding victims' responses to identity theft, these precautions may be deployed more effectively.

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