

Employee Motivations In Protecting Workplace Harassment: Longitudinal Analysis Of Protection Motivation Theory From Fear Appeal Perspective

Ana Atta, Hadi Hassan Khan, Nadeem Uz Zaman, Samia Kousar, Sm Nabeel Ulhaq, Wahab Ahmed

Article Info	Abstract
<p>Article History</p> <p>Received: August 17, 2021</p> <p>Accepted: March 18, 2022</p> <hr/> <p>Keywords : Protection Motivation Theory, Fear Appeal, Workplace Harassment, Longitudinal Study</p> <p>DOI: 10.5281/zenodo.6370350</p>	<p><i>The use of fear appeals in persuasive messages has long been used to motivate people to act in adaptive ways. Nevertheless, workplace harassment leads to many unintended consequences. The question of identifying and systematically evaluating relevant research findings has never been explored in a comprehensive, interdisciplinary way despite the demonstrated interest from researchers across a range of disciplines. The study examines the effects of a fear appeal message regarding workplace harassment. While scholars and practitioners recognize that workplace harassment occurs in various forms in organizations, there is little knowledge regarding how these different forms of harassment influence employees' outcomes. In this study, the goal was to determine whether protection motivation theory (PMT) can be used to explain the intentions of employees to quit their jobs. A random sample of 290 participants was selected from different service sector organizations in Pakistan and studied over two different periods. A sample of respondents without fear appeal was obtained at time1, and a sample of respondents with fear message was collected at time2. By using composite confirmatory analysis (CCA) and partial least square structural equation modeling (PLS-SEM), we were able to determine the validity and reliability of each PMT construct. Higher perceived vulnerabilities, self-efficacy, and response efficacy were significantly correlated with higher quitting intentions, but intrinsic rewards were inversely related. A higher threat and coping appraisal were significantly associated with a higher quitting intention but was negatively associated with response cost. PMT has been found effective at predicting the quitting intentions of employees in Pakistani organizations. According to the study, it appears that the fear-inducing message can interact with the message to influence access to maladaptive behavior. The results are discussed concerning models of fear appeals.</i></p>

Introduction

The problem of workplace bullying, which is often referred to as "mobbing," is complicated. A variety of forms and hues are possible, as are a wide range of underlying causes on numerous levels, as well as differing perspectives on its very nature (Einarsen, 2000). Employees began to pay attention to workplace bullying in Scandinavia during the 1980s as a result of research being done on bullying in schools (Olweus, 1987). Many research projects were launched in Norway (Einarsen & Raknes, 1997; Einarsen et al., 1994; Kile, 1990; Matthiesen et al., 1989), Sweden (Leymann, 1990, 1996), and Finland (Björkqvist et al., 1994; Vartia, 1991, 1996), showing that this phenomenon exists and that such treatment and these experiences have had serious negative effects on both targets and observers (Einarsen et al., 2020).

Bullying, like any other workplace hazard, poses a serious risk to the health, safety, and well-being of employees (Marijnissen et al., 2020). Aside from the negative impact on employees, bullying also has financial and legal ramifications for employees. These include decreased productivity, low morale, an increase in absenteeism, and a decrease in profits due to staff turnover (Menard et al., 2017). In addition to the high legal fees, defending against bullying and harassment cases can be extremely expensive, and the publicity that often goes along with high-profile cases exposes organizations and individuals to unnecessary harm (Jenkins, 2013). Employees who work in an unorganized environment are more likely to be stressed and frustrated, which can lead to interpersonal conflicts, some of which spiral out of control and become bullying situations (D'Cruz et al., 2019).

This study examines how PMT, its dimensions, and the threat of retaliation affect the behavior of employees. The PMT model was developed to predict behavior change through persuasive communication that uses fear appeals (Maddux & Rogers, 1983). A sophisticated fear appeals scheme was developed, which identified key trigger variables to modulate behavior. The PMT links coping assessment and threat assessment to explain the

relationship between fear appeals and protective intentions (Ana et al., 2021; Hassandoust & Techatassanasoontorn, 2020).

PMT proposes that motivation for protection is based on a threat assessment and an evaluation of available options for dealing with particular threats and coping appraisal (Maddux & Rogers, 1983). Coping appraisal has three determinants: response efficacy, self-efficacy, and response costs. The severity of a behavior or habit will influence the outcome and vulnerability is the chance that something bad will happen as a result of your actions (Lin & Chang, 2021). The coping appraisal is determined by adding together the effectiveness and self-efficacy ratings for each response (Rogers, 1975).

The purpose of this study is to find out if fear-based threat messages have the ability to alter or prevent certain workplace behaviors. The study proposes that fear-arousing messages affect two attitudes: one toward the threat and the other toward the behavior that provokes the fear (Roskos-Ewoldsen et al., 2004). A person engages in two appraisal processes when confronted with the fear appeal: threat appraisal and perceived coping evaluation which is the PMT's two mentioned dimensions. Identifying and evaluating potential threats requires determining the threat's seriousness and the threat's vulnerability. Coping appraisal entails evaluating the efficacy of the response and one's own ability to cope. Longitudinal research will be used to conduct the investigation.

Literature Review

Protection Motivation Theory

PMT has a wider range of predictors for human behavior than the Theory of Planned Behavior (TPB) (TPB) by (Ajzen, 1991), the theory of Norm Activation Model (NAM) by (Schwartz & Davis, 1981), the Value-Belief-Norm Theory (VBNT) of environmentalism by (Stern et al., 1999) and can contribute to expanding our understanding of human motivations (Bockarjova & Steg, 2014; Keshavarz & Karami, 2016). To explain risk prevention behaviors, Rogers introduced the PMT in 1975 (Bockarjova & Steg, 2014). The PMT examines the cognitive decision-making process by combining individual and social constructs (Raineart & Christensen, 2017). According to (Janmaimool, 2017), "The PMT presumes that people engage in risk-reducing behaviors to protect themselves from the threat". A person will weigh the benefits and drawbacks of various behaviors before deciding which one is best for them (Westcott et al., 2017). Both "threat evaluation" and "coping evaluation" are used to make the comparison (Wang et al., 2019). According to PMT, two appraisal processes determine behavior most significantly: threat and coping (Webb et al., 2010).

Threat Appraisal

An evaluation of threat is based on the combination of perceived severity (perceptions of the degree of harm) and perceived vulnerability (perceptions of the likelihood of experiencing harm) with a situation, excluding the perceived rewards (positive aspects) of that situation. "Threat appraisal" is a mental process based on the perceived severity and vulnerability of a threat (Xiao et al., 2014a). "Perceived threat severity refers to how serious a person considers the potential harms to be, and "perceived vulnerability refers to how vulnerable a person believes they are in danger" (Janmaimool, 2017). Researchers use the "threat appraisal" process to weigh the advantages and disadvantages of their current behavior (Bockarjova & Steg, 2014).

Coping Appraisal

"Personal assessment of the individual's capacity for coping, also known as self-assessment" (Keshavarz & Karami, 2016) has an impact on the decision to engage in protective actions. "There are two components to the coping appraisal: self-efficacy and the ability to respond effectively, i.e. response efficacy. This belief in one's own ability to plan and direct actions necessary for dealing with future situations is known as self-efficacy (Taberner & Hernández, 2011), response efficacy is a measure of how effective the recommended risk-prevention behaviors are perceived to be" (Janmaimool, 2017). To determine whether the suggested protective behavior is worthwhile, people use a process known as "coping appraisal" (Bockarjova & Steg, 2014; Bubeck et al., 2018; Wang et al., 2019). If the recommended preventive behavior is too expensive for the individual, they may opt-out (Bubeck et al., 2018). According to the PMT, people are more likely to engage in protective behaviors if they have a high sense of "response efficacy" and "self-efficacy." (Bockarjova & Steg, 2014; Keshavarz & Karami, 2016; Raineart & Christensen, 2017; Wang et al., 2019; Westcott et al., 2017).

Workplace Harassment

Many different names for the research on workplace harassment are used in the literature (e.g., bullying, interpersonal conflict, social undermining, and abuse) and in different disciplines (Aquino & Lamertz, 2004; Einarsen et al., 2020; Jagatic & Keashly, 2000). However, they all refer to the same thing (Aquino & Lamertz, 2004; Lapierre et al., 2005). Assault and homicide are examples of extreme harassment, but obscene gestures, dirty looks, threats, yelling, and giving the silent treatment are more common and less serious. Harassment of this type is not motivated by the victim's gender or race (Einarsen et al., 2010; Einarsen et al., 1994). A distinction is made between anti-organizational and anti-individual counterproductive work behavior (Robinson & Bennett, 1995).

Protection Motivation Theory and Workplace Harassment

Organizational researchers are becoming increasingly interested in workplace harassment, interpersonal behavior aimed at intentionally harming another employee. It has significant ramifications for both the harassed individual and the organization that employs them. (Bowling & Beehr, 2006) Protection motivation in employees is triggered by the combination of threat assessment and coping assessment mechanisms, resulting in the necessary adaptive responses (Ana et al., 2021). They worked in the context of workplace harassment and Protection motivation theory shows that harassment in the workplace can change the intentions and behaviors of employees.

Perceived Severity and Protection Motivation Intention

If employees believe there is a serious threat, they will take greater precautions (Rogers, 1975). Threat severity perception is a measure of how much an organization's staff believes the threat has the potential to harm them. Like the extent to which a threat can cause harmful effects (Vance et al., 2012). Because of this, the perception of vulnerability among employees as well as the seriousness of the threat may influence their decision to engage in protective behavior.

H1: Employees' perception of severity will positively influence their intent to adopt protective behaviors.

Perceived Vulnerability and Protection Motivation Intention

A vulnerability is the possibility of an undesired incident occurring in the absence of prevention measures. In the event of a threat, employees are more likely to follow the recommended safety measures (Rogers, 1975). According to the research, employees who believe they are vulnerable to threats are more likely to adopt protective behaviors (Dang-Pham & Pittayachawan, 2015).

H2: Employees' perceived vulnerability influences their intention to take protective measures.

Rewards and Cost with Protection Motivation Intention

Realizing the rewards (maladaptive rewards) of taking risks and failing, employees will be less likely to take protective measures (Dang-Pham & Pittayachawan, 2015). An employee may make the maladaptive decision not to follow recommended protective behavior if they incorrectly feel the rewards outweigh the perceived risks. The employee is less likely to take the coping response if he or she believes that not taking it is more rewarding than taking it. As a result, employees' perceptions of harmful rewards would worsen, and they would be less inclined to engage in protective behavior (Boss et al., 2015; Vance et al., 2012).

PMT is made up of six components: perceived severity, perceived vulnerability, rewards, response efficacy, self-efficacy, and response costs. When the perceived severity and vulnerability are high and the rewards are low, employees are more motivated to engage in certain health behaviors (such as quitting smoking intent). It's expected that response efficacy and self-efficacy will increase motivation, while response costs will decrease it (Lin & Chang, 2021). The six components of PMT: perceived severity, perceived vulnerability, maladaptive rewards, response efficacy, self-efficacy, and response costs. When the perceived severity and vulnerability are high and the rewards are low, people are more motivated to engage in certain behaviors (such as quitting intention). It's expected that response efficacy and self-efficacy will increase motivation, while response costs will decrease it (Bashirian et al., 2019; Brooks & Bubela, 2020; Malmir et al., 2018).

H3: Employees' maladaptive rewards will have a negative effect on their decision to adopt protective behavior.

H4: Employees' maladaptive response cost is negatively affecting their intention to adopt protective behaviors.

Self-Efficacy and Protection Motivation Behavior

According to PMT, employees conduct coping appraisals in parallel with threat assessments, which shapes their desire to engage in protective behaviors. Workers intend to adopt adaptive behavior if they believe that it is efficient and if they are confident in themselves to perform it (Boss et al., 2015; Rogers, 1975). Whether or not employees believe in their abilities affects how well they can perform protective duties. Previous studies found that information security professionals with high self-efficacy perform better (Ifinedo, 2012).

H5: Employees' self-efficacy has a positive influence on their intention to adopt protective behaviors.

Response Efficacy and Protection Motivation Behavior

People are hesitant to follow through with the suggested solutions if they believe they will require significant resources (such as time, effort, and money) to complete (Ifinedo, 2012; Milne et al., 2000). Thus, people who are confident in their ability to defend themselves against threats are more likely to plan to act. As such, employees who have confidence in their abilities, skills, and competencies will respond to security threats more effectively. It is more difficult to get people to engage in protection behaviors if they believe that protection responses are costly and time-consuming. Based on these findings, we hypothesize:

H6: Employees' response efficacy is positively correlated with their intention to adopt protective behaviors.

Mediation Role of Fear Appeal

Empirical studies have shown that inciting fear increases adherence to safety instructions, as demonstrated by PMT (Boss et al., 2015; Rogers, 1975). Using strong fear appeals is the most effective way to determine whether fear plays a role in perceptions of severity, perceptions of vulnerability, and protective intentions (Boss et al., 2015) Using conditioned fear responses to influence positive adaptive intentions and behaviors was a common theme in fear appeal studies (Boss et al., 2015; Burns et al., 2017; Johnston & Warkentin, 2010; Milne

et al., 2000). As a result, if an employee feels threatened, they are more likely to take protective measures to protect themselves. This leads us to hypothesize the following:

H7: Fear Appeal will mediate between perceived severity, vulnerability, and intention to adopt protective behaviors of Employees'.

Methodology

The research was quantitative in nature. Fear appeals were used in this study to see if they have any effect on whether employees comply with workplace harassment. As suggested by (Leventhal, 1970) For this experiment, researchers chose a design in which one group is subjected to fear appeals while the other group is not. Accordingly, the study was set up with a treatment group receiving fear appeal messages about harassment's prevalence and consequences, a questionnaire to gauge how much the messages influenced participants' threat and efficacy perceptions, and whether or not they complied with harassment. The fear-inspiring messages weren't shown to the group that was supposed to be the control.

In this study, the sample size is comprised of 290 employees of different service sector organizations in Pakistan out of 550 survey questionnaires (52.72%). The questionnaires were employed through partial least square structural equation modeling (PLS-SEM) through Smart PLS3. The questionnaires are formulated after closely consulting with employees as a pre-tested procedure to identify the error, vagueness, social desirability, complexity, and misconception of CSR and other questions. (Jupp, 2006).

Mediation Concept

The current study is applying the bootstrapping method. Preacher and Hayes (2004); (2008) introduced a non-parametric test as bootstrapping for testing mediation analysis. we also check the types of mediation; full and partial mediation as defined in five steps for testing mediation (Carrión et al., 2017; Nitzl et al., 2016) in PLS-SEM.

Measures

The study will be based on participant demographics and measuring initial characteristics of respondents. In part II of this study, we collected data related to protection motivation theory and its sources of antecedents, as well as employees' fear appeals. In addition to threat appraisals, coping appraisals and seven items for work-related harassment intention and behavior, PMT scales have been adapted from existing literature.

Perceived Vulnerability (PV) (Sinclair et al., 2002; Wright & Fitzgerald, 2007; Wurtele & Maddux, 1987), Perceived Severity (PS) (Hodgkins & Orbell, 1998; Milne et al., 2002), Response Efficacy (RE) (Marijnissen et al., 2020; Witte, 1996), and Self-Efficacy (SE) (Block & Keller, 1998; Johnston & Warkentin, 2010; Zhang et al., 2017). Items were tested for factor structure and composition (Hair et al., 2016; Ramayah et al., 2018).

The intention is measured by four items, which were adapted and modified (Gaston & Prapavessis, 2014; Graham et al., 2006; Lwin & Saw, 2007; Norman et al., 2005). Behavior is measured by three items, which were adapted and modified (Godin et al., 2008; Scholz et al., 2008; Xiao et al., 2014b). The intrinsic reward, response cost, and fear appeal scale were adopted from (Menard et al., 2017; Rhodes, 2017).

Results

The partial least square (PLS) is applied by using Smart-PLS path modeling. PLS-SEM is used with Smart PLS3 (Ringle et al., 2015) software for testing the conceptual model (REHMAN et al., 2020). For the preliminary data analysis, common method bias, and missing data (Hair et al., 2014; Podsakoff et al., 2012; Tabachnick et al., 2007), assessed before moving to the measurement and structural model. The PLS-SEM is a two-step approach process (Hair et al., 2016; Henseler et al., 2016) which follows as; Measurement model assessment and Structural model assessment (SARWAR et al., 2020).

Measurement Model Assessment

The assessment of outer model error through CFA is a widely used technique in structural equation modeling and emerging phenomena in social science. Recently Hair et al. (2020) purposed confirmatory composite analysis (CCA) as an alternative approach to assessing the measurement quality using partial least square. CCA has some advantages like; first, CCA extracts more variance from the exogenous variable which helps to predict endogenous variables in-depth (Hair, Risher, et al., 2019). Second, CCA helps researchers to confirm and validate measurement quality with a nomological network. Lastly, CCA is more useful for updated and adapted scales, and in this study, the scales were adapted.

Factor Loadings and Significance

Hair et al. (2016), the factor loadings of items are assessed through the outer loading. The value for the factor loadings is .708 (Hair et al., 2020; Hair et al., 2017) for every item and its significance can check with t-statistics and p-value at a 5% significance level (Hair, Black, et al., 2019). The factor loadings for all the retained factors are shown in Table 1.

Internal Consistency Reliability

In partial least square path modeling the assessment of reliability is preferable through composite reliability (CR) Hair et al. (2017), and generally through Cronbach's Alpha and both criteria have the same level of threshold .7 and above. Dijkstra and Henseler (2015) proposed RhoA (ρ_A) for measuring construct reliability.

For all latent variables, Cronbach's Alpha, composite reliability, and rho A can be found in Table 1. The study reports an adequate level of reliability.

Table 1 Construct Reliability and Validity

Constructs	Loadings	Alpha	RhoA	CR	AVE
<i>Intention/Behavior</i>		0.875	0.872	0.906	0.620
BEH1	0.608**				
BEH2	0.811***				
BEH3	0.857***				
BEH4	0.795***				
BEH5	0.823***				
BEH6	0.806***				
<i>Fear Appeal</i>		0.937	0.940	0.955	0.842
FA1	0.873***				
FA2	0.930***				
FA3	0.933***				
FA4	0.934***				
<i>Perceived Severity Harassment</i>		0.738	0.745	0.835	0.559
PSH1	0.706***				
PSH2	0.791***				
PSH3	0.743***				
PSH4	0.748***				
<i>Perceived Vulnerability Harassment</i>		0.807	0.806	0.874	0.636
PVH1	0.807***				
PVH2	0.797***				
PVH3	0.862***				
PVH4	0.717***				
<i>Response Cost</i>		0.717	0.812	0.815	0.528
RC1	0.747***				
RC2	0.628**				
RC3	0.659**				
RC4	0.852***				
<i>Response Efficacy Harassment</i>		0.836	0.850	0.901	0.753
REH1	0.832***				
REH3	0.907***				
REH4	0.864***				
<i>Reward</i>		0.764	0.808	0.861	0.675
RW1	0.838***				
RW2	0.755***				
RW3	0.867***				
<i>Self-Efficacy Harassment</i>		0.881	0.976	0.907	0.663
SEH1	0.729***				
SEH2	0.820***				
SEH3	0.864***				
SEH4	0.841***				
SEH5	0.811***				

Note: **p< 0.05, ***p<0.01, Loading = outer factor of each item, alpha = Cronbach's Alpha, CR = Construct Reliability and AVE = Average Variance Extract, and Rho A (as proposed by Disktra and Henseler) of latent construct.

Convergent Validity

Fornell and Larcker (1981) proposed the criteria for assessing the Convergent validity. They suggested that convergent validity can check out through average variance extracted (AVE) which value should be equal to 0.50 or above. Table 1 represents the AVE values indicates the minimum criteria of 0.5 is established.

Discriminant Validity

The proposed criteria in CCA for assessing the discriminant validity by (Hair et al., 2020) is the HTMT ratio. Henseler et al. (2015) defined the cutoff value for the HTMT ratio as 0.85 and 0.90. Table 2b shows the HTMT ratio for the latent construct and all values are less than .90.

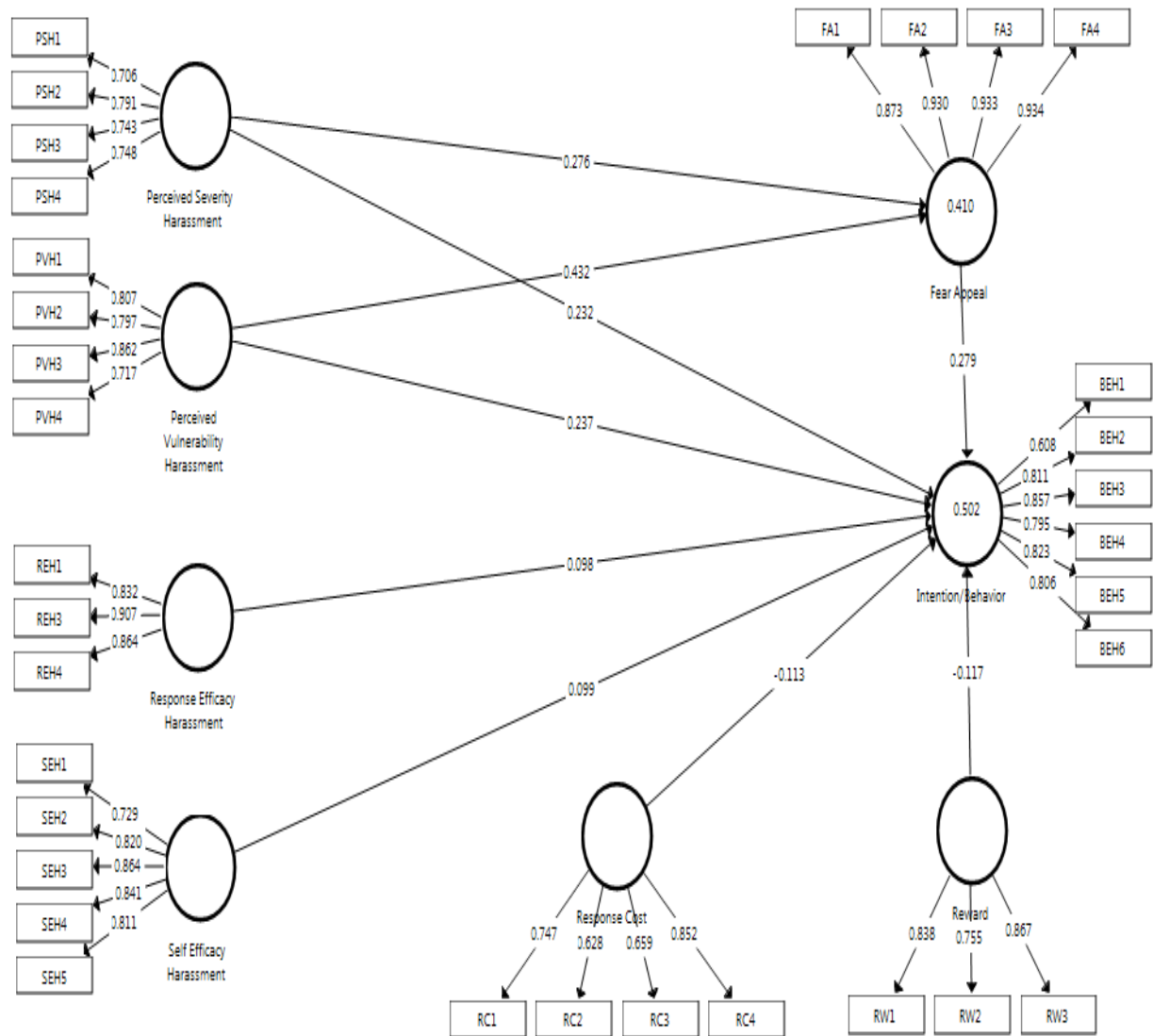
Table 2 Discriminant Validity

2a F&L	FA	Int/Beh	PSH	PVH	Res	REH	Rew	SEH
FA	<i>0.918</i>							
Int/Beh	0.592	<i>0.787</i>						
PSH	0.544	0.575	<i>0.748</i>					
PVH	0.603	0.595	0.622	<i>0.797</i>				
Res	0.093	0.045	0.095	0.071	<i>0.727</i>			
REH	0.332	0.341	0.328	0.303	0.121	<i>0.868</i>		
Rew	0.084	0.154	0.163	0.125	0.654	0.169	<i>0.821</i>	
SHE	0.127	0.160	0.037	0.092	0.050	0.032	0.032	<i>0.814</i>
2b HTMT	FA	Int/Beh	PSH	PVH	Res	REH	Rew	SEH
FA								
Int/Beh	0.645							
PSH	0.641	0.696						
PVH	0.689	0.687	0.790					
Res	0.113	0.057	0.124	0.114				
REH	0.368	0.390	0.410	0.366	0.151			
Rew	0.096	0.184	0.205	0.152	0.613	0.224		
SEH	0.114	0.164	0.077	0.101	0.083	0.066	0.088	

Note: HTMT ratio = Hetero-trait-Mono-trait ratio, in 2a bolded and italic values are the square root of AVE, and other values are correlated among the latent constructs (Fornell&Larcker criteria).

In Table 2a square root values of AVE and correlational values of latent construct, as proposed by Fornell and Larcker (1981) have been proved as well.

Figure 1 Measurement Model



Nomological Validity

The additional method proposed by Hair et al. (2020) assesses the validity of the construct. The process for assessing the nomological validity is to correlate the construct with other constructs either constructs in the model to test or with other constructs which are not included in the model. Table 3 shows the correlation values and their significance with the variable included in the model. The results show the same as suggested in the literature, the relationships are the same as predicted and significant with all variables. Overall results show that construct nomological validity is established.

Table 3 Correlation between Constructs

2a F&L	FA	Int/Beh	PSH	PVH	RC	REH	Rew	SHE
FA	-							
Int/Beh	0.592**	-						
PSH	0.544**	0.575**	-					
PVH	0.603**	0.595**	0.622**	-				
Res	-0.093*	-0.045*	-0.095*	-0.071*	-			
REH	0.332**	0.341**	0.328**	0.303**	-0.121**	-		
Rew	-0.084*	-0.154**	-0.163**	-0.125**	-0.654**	-0.169**	-	
SHE	0.127*	0.160**	0.037*	0.092*	-0.050**	0.032*	-0.032*	-

Note: *p<0.01, **p< 0.00, all other are related to customers.

Predictive Validity

According to Hair et al. (2020), the predictive validity can assess as concurrent validity and when one construct is related to another construct in later point-in-time or for the same point-in-time collected data and for a different point in time data collected construct measurement invariance assessment (MICOM) analysis (Sinkovics et al., 2016) can be applied (Hair et al., 2020). Secondly, predictive validity can also assess in structural analysis as significance, the consistent direction of the relationship in literature, and out-of-sample prediction.

Structural Model Assessment

It shows the relationships (paths analysis) between the constructs. PLS-SEM estimates coefficients through bootstrapping (resamples the responses) and generates the t-statistics, standard errors, p-value (one-tail, and two-tail distribution), and confidence intervals (Hair et al., 2017; Henseler et al., 2016; Henseler et al., 2009).

Collinearity Diagnostic

As discussed earlier process of CCA and assessment of structural model (Hair et al., 2020). The first step begins to check the issue of multicollinearity. The results show variance inflation factor (VIF) values are less than the 3 (Hair et al., 2017), VIF values range from 1.97 to 2.36 and results show no issue of multicollinearity.

Path Analysis and Significance

Table 4 shows the results of the relationship between PSH, PVH, REH, SHE, reward, and response cost on adoptive behavior. The results show that the PSH ($\beta = 0.232$, $t = 3.55$, $\rho < 0.000$) and PVH ($\beta = 0.237$, $t = 3.94$, $\rho < 0.000$) is positively and significantly affect the adoptive (See figure 2). The relationship between REH ($\beta = 0.098$, $t = 1.93$, $\rho < 0.027$) and SHE ($\beta = 0.099$, $t = 2.17$, $\rho < 0.015$) with adaptive behavior is a positive and significantly related. Therefore, it creates positive association between and hypothesized relationships. Finally, the controlled variable reward ($\beta = -0.113$, $t = 1.614$, $\rho < 0.053$) and cost ($\beta = -0.117$, $t = 1.79$, $\rho < 0.036$), shows slightly significant relationship with maladaptive behavior.

Table 4 Results of Hypothesis

Hypothesis	B	(STDEV)	T-Values	P-Values	Decision
PSH → Int/Beh	0.232	0.065	3.550	0.000	Supported
PVH → Int/Beh	0.237	0.060	3.939	0.000	Supported
Reward → Int/Beh	-0.113	0.070	1.614	0.053	Supported (Slightly)
REH → Int/Beh	0.098	0.051	1.927	0.027	Supported
RC → Int/Beh	-0.117	0.065	1.794	0.036	Supported
SEH → Int/Beh	0.099	0.046	2.170	0.015	Supported
PSH → Fear Appeal	0.276	0.063	4.411	0.000	-
PVH → Fear Appeal	0.432	0.066	6.558	0.000	-
PSH → Fear Appeal → Int/Beh	0.077	0.025	3.105	0.001	Supported
PSH → Fear Appeal → Int/Beh	0.120	0.030	4.009	0.000	Supported

Note: B = slope coefficient, STDEV = represent standard error for construct.

Mediating Relationship

Table 4 shows the result of the mediating effect of fear appeal. The results show that fear appeal mediates the relationship between PSH ($\beta = 0.077$, $t = 3.105$, $\rho < 0.001$) and PVH ($\beta = 0.120$, $t = 4.00$, $\rho < 0.000$) with adaptive behavior. Carrión et al. (2017) and Hair et al. (2017) provided the guidelines that how PLS-SEM is used for mediation analysis. The results in Table 4 show the significance and path coefficients of direct and indirect relationships. As results show in table 4 both indirect effect and total effect $[(a_1 \times b_1) + (a_2 \times b_2)]$ is significant and direct effect c' is also significant so it defines partial mediation (Carrión et al., 2017; Nitzl et al., 2016).

Coefficient of Determination

The explained variance by exogenous variable for the endogenous variable shows the proportion of variation (Elliott & Woodward, 2007). Value of R^2 .60 (60%), .33 (33%), and .19 (19%) considered as high, moderate, and weak respectively (Chin, 1998) and Henseler et al. (2009) defines R^2 for weak, moderate, and substantial as 0.25, 0.50, and 0.75 respectively. The variability in the fear appeal is 41%. The variability in adaptive behavior is 50.2% (see table 5).

Table 5 Predictive Relevance, Effect Size, and Explained Variance (in-sample)

	R^2	R^2 -Adj	f^2 (Int/Beh)	f^2 (FA)	Q^2
Fear Appeal	0.410	0.406	0.088		0.342
Intention/Behavior	0.502	0.490			0.280

Perceived Severity Harassment			0.060	0.079	
Perceived Vulnerability Harassment			0.057	0.194	
Response Cost			0.015		
Response Efficacy Harassment			0.016		
Reward			0.015		
Self-Efficacy Harassment			0.019		

Note: R square shows explained variance of all exogenous variables, adjusted r square shows explained variance after degree-of-freedom adjustment (N-K-1), f square shows in-sample variance after dropping specific variable, and Q square is primary in-sample prediction.

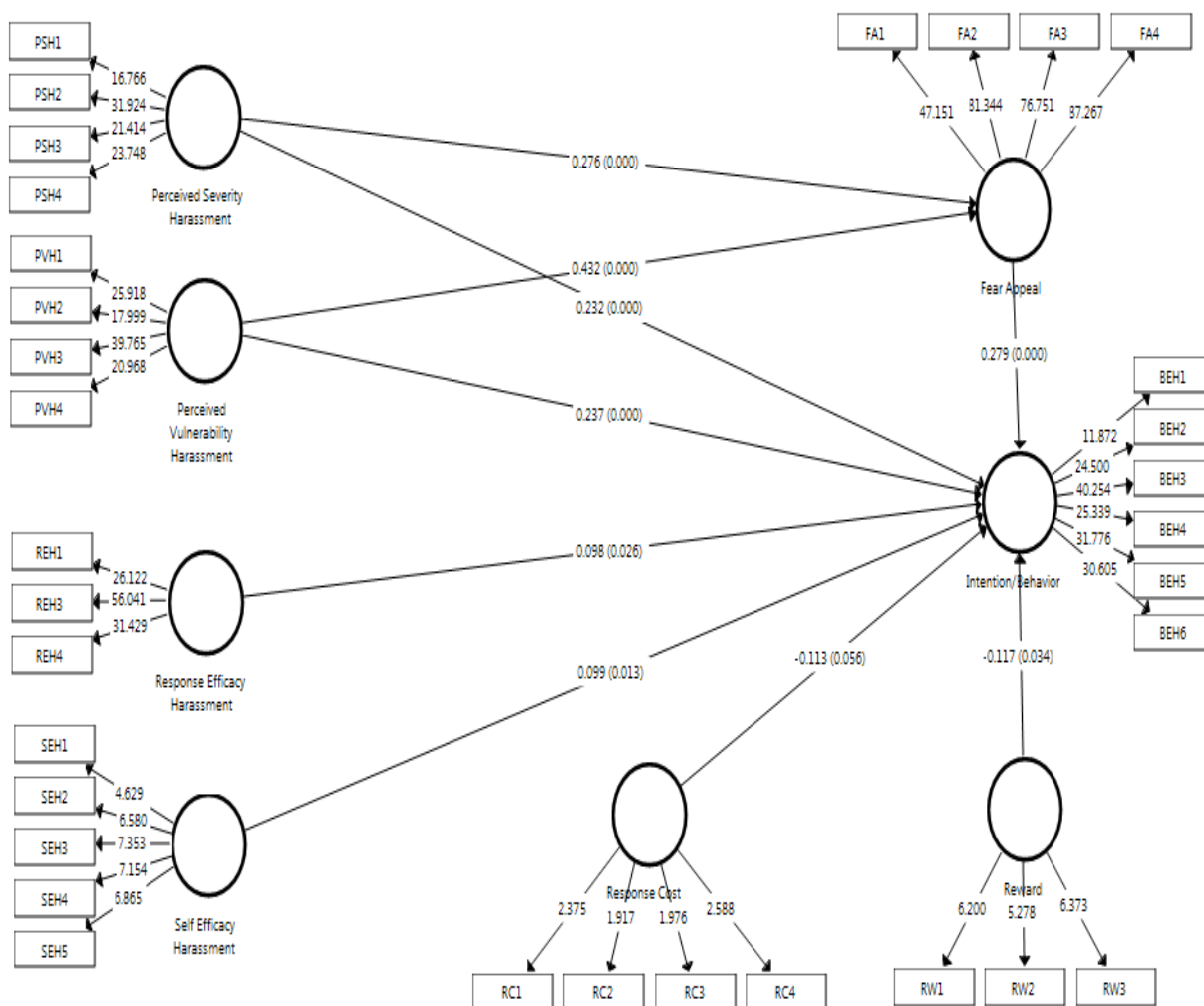
Predictive relevance

Hair et al. (2017) suggested that Q^2 estimates about the predictive relevance of the model in Smart-PLS. The cross-validated redundancy measure (Q^2) is recommended when GoF (goodness of fit index) is not suitable for the model (Hair et al., 2016; Henseler et al., 2016). The value of Q^2 greater than zero shows that model has predictive power. The Q^2 statistics in Table 5 are greater than zero so, it means the independent variable has predictive power for the dependent variable, and the model is constructed well.

Effect Size

In the structural model Effect size (f^2) shows the construct effect on endogenous construct after removal of a certain construct. Nitzl et al. (2016) show, the presence of construct in model and effect size as an explanation of partial and full mediation. Cohen (2013) defined the rule of thumb for describing effect size as weak, moderator, and substantial as values greater than 0.02, 0.15, and 0.35 respectively. Table 5 shows that perceived vulnerability harassment has more effect as compared to other constructs.

Figure 1 The Structural Model



PLS-predict (Out-of-Sample Prediction)

The explanation of R^2 , f^2 , and Q^2 as predictive power is not adequate and it shows only in-sample explanatory power (Dolce et al., 2017; Shmueli, 2010). For predictive validity, Shmueli et al. (2016) proposed out-of-sample prediction as making subgroups of the total sample (i.e. training). The assessment of predictive power is the root mean squared error (RMSE) and mean absolute error (MAE). According to Shmueli et al. (2019) if the majority and equal indicators of an endogenous construct in partial least square (PLS) yield low error as the compared linear model (LM) so the model has medium predictive power. The results show that the indicators have a positive difference value, and the estimated error of LM is greater than the PLS estimation. We conclude that the model predicts sufficiently well.

Robustness of Structural Model

PLS-SEM has become a standard tool to analyze the different aspects with complex modeling as interrelationships of observed and unobserved (latent construct). Sarstedt et al. (2019) discussed the fundamental concern related to PLS-SEM structural model estimation. They discussed three fundamental concerns related to structural i.e., nonlinear effect, endogeneity, and unobserved heterogeneity.

The nonlinear effect is when researchers assume that the slope of the model is linear but Ahrholdt et al. (2019) denied the assumption on linearity in all the models and provided evidence that it is not always true. Hair et al. (2017) also discussed the effect of nonlinearity between two constructs. For checking nonlinear effect, the mostly researchers use, the regression equation specification error test (RESET) which was introduced by Ramsey (1969). Ramsey's RESET test for nonlinearity results is estimated as proposed by (Sarstedt et al., 2019). The results show the insignificant coefficients of Ramsey's reset regressions. So, we conclude that the linearity effect in the structural model is robust.

The second robustness we consider was to estimate the endogeneity in the model because it is a key issue in the regression analysis method (Hult et al., 2018). The application approach of endogeneity through Gaussian copula is used which is introduced by (Park & Gupta, 2012). Followed by Hult et al. (2018) and Sarstedt and Mooi (2014) we applied the Kolmogorov-Smirnov test with Lilliefors correction for testing non-normally distribution and estimation of the score for latent constructs for further endogeneity test. All three latent construct is normally distributed, and insignificant results shows that the model is robust. The final robustness for structural model is not assessed in this study because the scope of the study in not defined by subgroups. Unobserved heterogeneity exist when the data exist in subgroups and every subgroups estimates different model results (Sarstedt, 2008; Sarstedt et al., 2019).

Discussion

Furthering our current understanding of workplace harassment threats, this study investigates fear-based threats to employees' well-being and investigates how these threats affect employees' perceptions of perceived seriousness as well as their willingness to take action to protect themselves. Because of our findings, all the PMT dimensions except rewards and cost have a positive impact on protective behavior (maladaptive). In understanding what governs individual behavioral change, the PMT serves as a useful theoretical framework (Bockarjova & Steg, 2014). Because it looks at the impact of harassment and PMT as well as all its components, this research helps us better understand employee behavior.

The results of this study show that harassment causes people to feel threatened, and that fear shapes their protective intentions and behaviors. Previous research (Marett et al., 2011) a single sample model may confuse the results by failing to distinguish between the effectiveness of threat and coping assessments. Rather than compare the differences in underlying cognitive processes, this study used two samples. Several factors were found to influence whether an employee intends to protect themselves. To conclude, we can conclude that workplace threats must be severe and vulnerable to the appeal of shock and fear. According to the findings of this study, fear-based threat messages have a significant impact on workplace behavior. The suggestion is consistent with the finding (Boss et al., 2015) that PMT is largely based on manipulation of fear threat messages.

Implications

The main contribution of our work is providing insights toward explaining consistent results obtained when PMT is applied to workplace harassment. Our findings indicate that motivation significantly influences behavior. Until recently, motivation has not been found to be a construct in research using PMT as the foundational model. In workplace contexts, the motivation of an individual to perform the recommended response is also obvious and may also be influenced by additional factors. By incorporating statements that emphasize autonomy, competence, and relatedness as attributes of fear appeal. According to our analysis, these statements enhance not only the independent variables that they are intended for but also the factors associated with PMT. When an employee's relatedness is made stronger, they are more likely to view the threat as relevant. It is important to reinforce an employee's competence in the workplace by showing him that he can implement the recommended action. By increasing an employee's autonomy, they can have a greater sense of confidence in the efficacy of their responses, whereas their perception of costs is lower.

References

- Ahrholdt, D. C., Gudergan, S. P., & Ringle, C. M. (2019). Enhancing loyalty: When improving consumer satisfaction and delight matters. *Journal of Business Research*, *94*, 18-27.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.
- Ana, A., ZAMAN, N. U., & KHAN, H. H. (2021). Battling the Threat of Workplace Harassment: An Appraisal Based on Protection Motivation Theory. *The Journal of Asian Finance, Economics and Business*, *8*(6), 491-504.
- Aquino, K., & Lamertz, K. (2004). A relational model of workplace victimization: social roles and patterns of victimization in dyadic relationships. *Journal of Applied Psychology*, *89*(6), 1023.
- Bashirian, S., Barati, M., Mohammadi, Y., Moaddabshoar, L., & Dogonchi, M. (2019). An application of the protection motivation theory to predict breast self-examination behavior among female healthcare workers. *European journal of breast health*, *15*(2), 90.
- Björkqvist, K., Österman, K., & Hjelt-Bäck, M. (1994). Aggression among university employees. *Aggressive behavior*, *20*(3), 173-184.
- Block, L. G., & Keller, P. A. (1998). Beyond protection motivation: An integrative theory of health appeals. *Journal of applied social psychology*, *28*(17), 1584-1608.
- Bockarjova, M., & Steg, L. (2014). Can Protection Motivation Theory predict pro-environmental behavior? Explaining the adoption of electric vehicles in the Netherlands. *Global environmental change*, *28*, 276-288.
- Boss, S. R., Galletta, D. F., Lowry, P. B., Moody, G. D., & Polak, P. (2015). What do systems users have to fear? Using fear appeals to engender threats and fear that motivate protective security behaviors. *MIS quarterly*, *39*(4), 837-864.
- Bowling, N. A., & Beehr, T. A. (2006). Workplace harassment from the victim's perspective: a theoretical model and meta-analysis. *Journal of Applied Psychology*, *91*(5), 998.
- Brooks, S. P., & Bubela, T. (2020). Application of protection motivation theory to clinical trial enrolment for pediatric chronic conditions. *BMC pediatrics*, *20*(1), 1-14.
- Bubeck, P., Wouter Botzen, W., Laudan, J., Aerts, J. C., & Thieken, A. H. (2018). Insights into flood-coping appraisals of protection motivation theory: Empirical evidence from Germany and France. *Risk Analysis*, *38*(6), 1239-1257.
- Burns, A., Posey, C., Roberts, T. L., & Lowry, P. B. (2017). Examining the relationship of organizational insiders' psychological capital with information security threat and coping appraisals. *Computers in Human Behavior*, *68*, 190-209.
- Carrión, G. C., Nitzl, C., & Roldán, J. L. (2017). Mediation analyses in partial least squares structural equation modeling: Guidelines and empirical examples. In *Partial least squares path modeling* (pp. 173-195). Springer.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, *295*(2), 295-336.
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Academic press.
- D'Cruz, P., Noronha, E., Baillien, E., Catley, B., Harlos, K., Hogh, A., & Mikkelsen, E. G. (2019). *Pathways of job-related negative behaviour*. Springer.
- Dang-Pham, D., & Pittayachawan, S. (2015). Comparing intention to avoid malware across contexts in a BYOD-enabled Australian university: A Protection Motivation Theory approach. *Computers & Security*, *48*, 281-297.
- Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS quarterly*, *39*(2).
- Dolce, P., Vinzi, V. E., & Lauro, C. (2017). Predictive path modeling through PLS and other component-based approaches: Methodological issues and performance evaluation. In *Partial Least Squares Path Modeling* (pp. 153-172). Springer.
- Einarsen, S. (2000). Harassment and bullying at work: A review of the Scandinavian approach. *Aggression and violent behavior*, *5*(4), 379-401.
- Einarsen, S., Hoel, H., Zapf, D., & Cooper, C. (2010). *Bullying and harassment in the workplace: Developments in theory, research, and practice*. CRC press.
- Einarsen, S., & Raknes, B. I. (1997). Harassment in the workplace and the victimization of men. *Violence and victims*, *12*(3), 247-263.
- Einarsen, S., Raknes, B. r. I., & Matthiesen, S. B. (1994). Bullying and harassment at work and their relationships to work environment quality: An exploratory study. *European journal of work and organizational psychology*, *4*(4), 381-401.
- Einarsen, S. V., Hoel, H., Zapf, D., & Cooper, C. L. (2020). The concept of bullying and harassment at work: The European tradition. In *Bullying and harassment in the workplace* (pp. 3-53). CRC press.

- Elliott, A. C., & Woodward, W. A. (2007). *Statistical analysis quick reference guidebook: With SPSS examples*. Sage.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Gaston, A., & Prapavessis, H. (2014). Using a combined protection motivation theory and health action process approach intervention to promote exercise during pregnancy. *Journal of behavioral medicine*, 37(2), 173-184.
- Godin, G., Sheeran, P., Conner, M., & Germain, M. (2008). Asking questions changes behavior: mere measurement effects on frequency of blood donation. *Health Psychology*, 27(2), 179.
- Graham, S. P., Prapavessis, H., & Cameron, L. D. (2006). Colon cancer information as a source of exercise motivation. *Psychology and Health*, 21(6), 739-755.
- Hair, Black, W., Babin, B., & Anderson, R. (2019). *Multivariate data analysis*. Cengage Learning.
- Hair, Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101-110.
- Hair, Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*.
- Hair, Sarstedt, M., Hopkins, L., & Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European business review*.
- Hair, Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*. saGe publications.
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Hassandoust, F., & Techatassanasoontorn, A. A. (2020). Understanding users' information security awareness and intentions: A full nomology of protection motivation theory. In *Cyber Influence and Cognitive Threats* (pp. 129-143). Elsevier.
- Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. *Industrial management & data systems*.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing*. Emerald Group Publishing Limited.
- Hodgkins, S., & Orbell, S. (1998). Can protection motivation theory predict behaviour? A longitudinal test exploring the role of previous behaviour. *Psychology and Health*, 13(2), 237-250.
- Hult, G. T. M., Hair Jr, J. F., Proksch, D., Sarstedt, M., Pinkwart, A., & Ringle, C. M. (2018). Addressing endogeneity in international marketing applications of partial least squares structural equation modeling. *Journal of International Marketing*, 26(3), 1-21.
- Ifinedo, P. (2012). Understanding information systems security policy compliance: An integration of the theory of planned behavior and the protection motivation theory. *Computers & Security*, 31(1), 83-95.
- Jagatic, K., & Keashly, L. (2000). Negative interactions with faculty: Graduate student experiences. *Conflict Management in Higher Education Report*, 1(3), 1-6.
- Janmaimool, P. (2017). Application of protection motivation theory to investigate sustainable waste management behaviors. *Sustainability*, 9(7), 1079.
- Jenkins, M. (2013). Preventing and managing workplace bullying and harassment: A risk management approach. *Preventing and Managing Workplace Bullying and Harassment: A Risk Management Approach*, xv.
- Johnston, A. C., & Warkentin, M. (2010). Fear appeals and information security behaviors: An empirical study. *MIS quarterly*, 549-566.
- Jupp, V. (2006). *The Sage dictionary of social research methods*. Sage.
- Keshavarz, M., & Karami, E. (2016). Farmers' pro-environmental behavior under drought: Application of protection motivation theory. *Journal of Arid Environments*, 127, 128-136.
- Kile, S. (1990). Helsefarleg leiarskap: ein eksplorerande studie [Health-endangering leadership-An exploratory study]. *Bergen, Norway: Institutt for Samfunnspsykologi, Universitetet i Bergen*.
- Lapierre, L. M., Spector, P. E., & Leck, J. D. (2005). Sexual versus nonsexual workplace aggression and victims' overall job satisfaction: a meta-analysis. *Journal of Occupational Health Psychology*, 10(2), 155.
- Leventhal, H. (1970). Findings and theory in the study of fear communications. *Advances in experimental social psychology*, 5, 119-186.
- Leymann, H. (1990). Mobbing and psychological terror at workplaces. *Violence and victims*, 5(2), 119-126.

- Leymann, H. (1996). The content and development of mobbing at work. *European journal of work and organizational psychology*, 5(2), 165-184.
- Lin, H.-x., & Chang, C. (2021). Factors associated with the quitting intention among Chinese adults: Application of protection motivation theory. *Current Psychology*, 1-9.
- Lwin, M. O., & Saw, S.-M. (2007). Protecting children from myopia: A PMT perspective for improving health marketing communications. *Journal of health communication*, 12(3), 251-268.
- Maddux, J. E., & Rogers, R. W. (1983). Protection motivation and self-efficacy: A revised theory of fear appeals and attitude change. *Journal of experimental social psychology*, 19(5), 469-479.
- Malmir, S., Barati, M., Jeyhooni, A. K., Bashirian, S., & Hazavehei, S. M. M. (2018). Effect of an educational intervention based on protection motivation theory on preventing cervical cancer among marginalized women in west Iran. *Asian Pacific journal of cancer prevention: APJCP*, 19(3), 755.
- Marett, K., McNab, A. L., & Harris, R. B. (2011). Social networking websites and posting personal information: An evaluation of protection motivation theory. *AIS Transactions on Human-Computer Interaction*, 3(3), 170-188.
- Marijnissen, D., Kolthoff, E., & Huberts, L. (2020). Coping with threats and harassment in politics. *Public Integrity*, 22(5), 485-506.
- Matthiesen, S. B., Raknes, B. I., & Røkkum, O. (1989). Mobbing på arbeidsplassen. *Tidsskrift for Norsk Psykologforening*.
- Menard, P., Bott, G. J., & Crossler, R. E. (2017). User motivations in protecting information security: Protection motivation theory versus self-determination theory. *Journal of Management Information Systems*, 34(4), 1203-1230.
- Milne, S., Orbell, S., & Sheeran, P. (2002). Combining motivational and volitional interventions to promote exercise participation: Protection motivation theory and implementation intentions. *British journal of health psychology*, 7(2), 163-184.
- Milne, S., Sheeran, P., & Orbell, S. (2000). Prediction and intervention in health-related behavior: A meta-analytic review of protection motivation theory. *Journal of applied social psychology*, 30(1), 106-143.
- Nitzl, C., Roldan, J. L., & Cepeda, G. (2016). Mediation analysis in partial least squares path modeling. *Industrial management & data systems*.
- Norman, P., Boer, H., & Seydel, E. R. (2005). Protection motivation theory. *Predicting health behaviour*, 81, 126.
- Olweus, D. (1987). Bully/victim problems among schoolchildren in Scandinavia.
- Park, S., & Gupta, S. (2012). Handling endogenous regressors by joint estimation using copulas. *Marketing Science*, 31(4), 567-586.
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual review of psychology*, 63, 539-569.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, 36(4), 717-731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, 40(3), 879-891.
- Rainear, A. M., & Christensen, J. L. (2017). Protection motivation theory as an explanatory framework for proenvironmental behavioral intentions. *Communication Research Reports*, 34(3), 239-248.
- Ramayah, T., Cheah, J., Chuah, F., Ting, H., & Memon, M. A. (2018). Partial least squares structural equation modeling (PLS-SEM) using smartPLS 3.0. In: Kuala Lumpur: Pearson.
- Ramsey, J. B. (1969). Tests for specification errors in classical linear least-squares regression analysis. *Journal of the Royal Statistical Society: Series B (Methodological)*, 31(2), 350-371.
- REHMAN, K., KHAN, H. H., SARWAR, B., MUHAMMAD, N., AHMED, W., & REHMAN, Z. U. (2020). A multi-group analysis of risk management practices of public and private commercial banks. *The Journal of Asian Finance, Economics, and Business*, 7(11), 893-904.
- Rhodes, N. (2017). Fear-appeal messages: Message processing and affective attitudes. *Communication research*, 44(7), 952-975.
- Ringle, C., Wende, S., & Becker, J. (2015). SmartPLS 3.2. 7. *SmartPLS GmbH: Bönningstedt, Germany*.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of management journal*, 38(2), 555-572.
- Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change 1. *The journal of psychology*, 91(1), 93-114.
- Roskos-Ewoldsen, D. R., Yu, J. H., & Rhodes, N. (2004). Fear appeal messages affect accessibility of attitudes toward the threat and adaptive behaviors. *Communication Monographs*, 71(1), 49-69.
- Sarstedt, M. (2008). A review of recent approaches for capturing heterogeneity in partial least squares path modelling. *Journal of modelling in Management*.

- Sarstedt, M., & Mooi, E. (2014). A concise guide to market research. *The Process, Data, and, 12*.
- Sarstedt, M., Ringle, C. M., Cheah, J.-H., Ting, H., Moisescu, O. I., & Radomir, L. (2019). Structural model robustness checks in PLS-SEM. *Tourism Economics*, 1354816618823921.
- SARWAR, D., SARWAR, B., RAZ, M. A., KHAN, H. H., MUHAMMAD, N., AZHAR, U., & KASI, M. K. (2020). Relationship of the Big Five Personality Traits and Risk Aversion with Investment Intention of Individual Investors. *The Journal of Asian Finance, Economics, and Business*, 7(12), 819-829.
- Scholz, U., Schüz, B., Ziegelmann, J. P., Lippke, S., & Schwarzer, R. (2008). Beyond behavioural intentions: Planning mediates between intentions and physical activity. *British journal of health psychology*, 13(3), 479-494.
- Schwartz, H., & Davis, S. M. (1981). Matching corporate culture and business strategy. *Organizational dynamics*, 10(1), 30-48.
- Shmueli, G. (2010). To explain or to predict? *Statistical science*, 25(3), 289-310.
- Shmueli, G., Ray, S., Estrada, J. M. V., & Chatla, S. B. (2016). The elephant in the room: Predictive performance of PLS models. *Journal of Business Research*, 69(10), 4552-4564.
- Shmueli, G., Sarstedt, M., Hair, J. F., Cheah, J.-H., Ting, H., Vaithilingam, S., & Ringle, C. M. (2019). Predictive model assessment in PLS-SEM: guidelines for using PLSpredict. *European Journal of Marketing*.
- Sinclair, R. R., Martin, J. E., & Croll, L. W. (2002). A threat-appraisal perspective on employees' fears about antisocial workplace behavior. *Journal of Occupational Health Psychology*, 7(1), 37.
- Sinkovics, R. R., Henseler, J., Ringle, C. M., & Sarstedt, M. (2016). Testing measurement invariance of composites using partial least squares. *International marketing review*.
- Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A., & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human ecology review*, 81-97.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5). Pearson Boston, MA.
- Taberero, C., & Hernández, B. (2011). Self-efficacy and intrinsic motivation guiding environmental behavior. *Environment and Behavior*, 43(5), 658-675.
- Vance, A., Siponen, M., & Pahlila, S. (2012). Motivating IS security compliance: Insights from habit and protection motivation theory. *Information & Management*, 49(3-4), 190-198.
- Vartia, M. (1991). Bullying at workplaces. Towards the 21st Century. Work in the 1990s. Proceedings of an International Symposium on Future Trends in the Changing Working Life,
- Vartia, M. (1996). The sources of bullying—psychological work environment and organizational climate. *European journal of work and organizational psychology*, 5(2), 203-214.
- Wang, J., Liu-Lastres, B., Ritchie, B. W., & Mills, D. J. (2019). Travellers' self-protections against health risks: An application of the full Protection Motivation Theory. *Annals of Tourism Research*, 78, 102743.
- Webb, T. L., Sniehotta, F. F., & Michie, S. (2010). Using theories of behaviour change to inform interventions for addictive behaviours. *Addiction*, 105(11), 1879-1892.
- Westcott, R., Ronan, K., Bambrick, H., & Taylor, M. (2017). Expanding protection motivation theory: investigating an application to animal owners and emergency responders in bushfire emergencies. *BMC psychology*, 5(1), 1-14.
- Witte, K. (1996). Predicting risk behaviors: Development and validation of a diagnostic scale. *Journal of health communication*, 1(4), 317-342.
- Wright, C. V., & Fitzgerald, L. F. (2007). Angry and afraid: Women's appraisal of sexual harassment during litigation. *Psychology of Women Quarterly*, 31(1), 73-84.
- Wurtele, S. K., & Maddux, J. E. (1987). Relative contributions of protection motivation theory components in predicting exercise intentions and behavior. *Health Psychology*, 6(5), 453.
- Xiao, H., Li, S., Chen, X., Yu, B., Gao, M., Yan, H., & Okafor, C. N. (2014a). Protection motivation theory in predicting intention to engage in protective behaviors against schistosomiasis among middle school students in rural China. *PLoS neglected tropical diseases*, 8(10), e3246.
- Xiao, H., Li, S., Chen, X., Yu, B., Gao, M., Yan, H., & Okafor, C. N. (2014b). Protection motivation theory in predicting intention to engage in protective behaviors against schistosomiasis among middle school students in rural China. *PLoS Negl Trop Dis*, 8(10), e3246.
- Zhang, X., Han, X., Dang, Y., Meng, F., Guo, X., & Lin, J. (2017). User acceptance of mobile health services from users' perspectives: The role of self-efficacy and response-efficacy in technology acceptance. *Informatics for Health and Social Care*, 42(2), 194-206.

Author Information

Ana Atta

Ph.D. Scholar, Department of Management Sciences,
Faculty of Management Sciences
Balochistan University of Information Technology
Engineering & Management Sciences, Quetta,
Balochistan, Pakistan

Nadeem Uz Zaman

Department of Management Sciences, Faculty of
Management Sciences
Balochistan University of Information Technology
Engineering & Management Sciences, Quetta,
Balochistan, Pakistan

Sm Nabeel Ulhaq

Assistant Professor, Department of Economics,
Faculty of Management Sciences Balochistan
University of Information Technology Engineering
& Management Sciences, Pakistan.

Hadi Hassan Khan

Associate Professor, Department of Management
Sciences, Faculty of Management Sciences
Balochistan University of Information Technology
Engineering & Management Sciences, Quetta,
Balochistan, Pakistan.

Samia Kousar

Associate Professor, Department of Management
Sciences, Faculty of Management Sciences
Balochistan University of Information Technology
Engineering & Management Sciences, Quetta,
Balochistan, Pakistan.

Wahab Ahmed

Lecturer, Department of Management Sciences,
Muslimbagh Campus, Balochistan University of
Information Technology Engineering & Management
Sciences, Quetta, Balochistan, Pakistan.
