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**How deep was the cyberbullying episode at workplace? The mediating effect of social vulnerability and the moderating role of self-regulation**  
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*Keywords:*

Perceived Cyberbullying Severity  
Social Vulnerability  
Self-regulation  
Employee Silence  
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*ABSTRACT*

The widespread access to modern technology devices have provided an alternative medium for bullies to target their victims. The present study tends to look upon this less attended subject of cyberbullying in the workplace. The joint impact of the mediating role of (a) social vulnerability between the perceived cyberbullying severity with employees' behavioral outcomes, and moderating role of (b) self-regulation in influencing the relationship between social vulnerability and behavioral outcomes. Using a field sample of 387 employees working in different organizations. Results were consistent with the hypothesized model, in that social vulnerability mediated the relationship of perceived cyberbullying severity with employee's silence and social withdrawal. However, self-regulation did not moderate the relationship between the links. The results further revealed that perceived cyberbullying severity has a negative indirect effect on employee's social withdrawal. This research offers suggest a need for supervisory training as well as clear corporate policies regarding workplace cyber securities.

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**BACKGROUND**

Technology continues to develop rapidly and is therefore changing our ways of functioning in society. With the passage of time, technology advancements like computers, internet and smart phones have become new venues for social interaction (Leung, 2020; Antonucci et. al, 2017). With technology, people have adopted new habits, as more people turn to the internet for social use, so do more people have turned to the internet to take out their aggression (Zhuravskaya, et. Al, 2020; Obeid et. Al, 2019; Wright, 2015). This behavior of internet aggression or electronic aggression, is known as cyber bullying, which has been defined as an aggressive act that is deliberately and repetitively carried out against a person who cannot easily defend him or herself through an electronic context e.g., instant messaging,

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emails, text messaging, social websites like Facebook, Twitter, Instagram (Maier, 2020; Camacho et al, 2018; Kowalski et. al, 2012). Cyber bullying has been related to the negative impact of technology-use on individuals' or organizations' well-being and has been referred to as 'the dark side technologies' (Kowalski et al, 2014). It has gained prominence due to several reported cases of suicides among adolescents and school going youngster (DeSmet et al 2018; Menesini et al, 2013). Although rates of cyber bullying are lower than traditional verbal and physical forms of bullying, cyber bullying remains a universal issue for today's social society (Lee, Son, & Kim, 2016). The characteristics of the medium used to bully are different from traditional bullying due to which cyber bullying has been hypothesized that its effects could be more severe than those of traditional bullying. The reasons for this may include anonymity of the bully, a wider audience, and the ability to reach the target at any time and in any place, even at target's home (Maier, 2020; Makhulo, 2019). Cyber bullies often feel exhilarated because of their anonymity and they believe that they are not detected. It has been suggested that this anonymity may increase the intensity of the attacks and further encourage them because they cannot see their targets or their immediate responses and continue for longer than they would otherwise do face-to-face (Zhuravskaya, et. Al, 2020; Barlett, & Gentile, 2012). While it is true that cyber bullying as compared to traditional bullying can only threaten physical violence rather than perpetrate it, research has shown that verbal and psychological bullying may have more negative long-term effects for the victims (Kowalski et al 2014; Pontzer, 2010). Research has suggested that, although cyber bullying and traditional bullying share certain features in common, they differ in important ways (Johansson & Englund, 2020; Katzer, Fetchenhauer, & Belschak, 2009; Kowalski et al, 2012).

In traditional bullying, the audience of a bullying episode is limited to the people physically present where the episode occurs like schools, workplace and hangouts. Here, it is worth noting that negative experiences through traditional bullying affects how victims feel about the place where the bullying occur variation in prevalence rates like at school or at workplace (Slonje et al, 2013). Whereas in cyber bullying, the material posted by the bully for instance anonymous abusive remarks or uploading embarrassing photos can be easily viewed and permanently accessed by a large online audience. Even though cyber bullying shares some features with traditional bullying, it has its own unique characteristics has resulted in increase its negative consequences for victims (Camacho et al, 2018).

Previous studies (Johansson and Englund, 2020; Hinduja & Patchin, 2008) in cyber bullying have also analyzed whether participants have experienced any traditional bullying before being cyber bullied. In spite of their differences, involvement in the two types of bullying appears to be related (Kowalski et al. 2012; Skrzypiec et al., 2011; Tokunaga, 2010), with some researchers suggesting that cyber bullying is simply an extension of traditional bullying (Li, 2006; Spears et al, 2009). Hinduja and Patchin (2010), in their study found that 65% of victims of cyber bullying were also victims of traditional bullying before they were victimized, also 77% of perpetrators of cyber bullying reported perpetrating traditional bullying. Few other studies have found that traditional bullying and cyber bullying were related to one another for males, but not for females (Li, 2006; Kowalski et al. 2012). However, previous studies still lack to have given little attention to modeling the system of relationships among the perpetration and victimization of traditional and cyber bullying (Hinduja and Patchin, 2008; Pontzer, 2010; Tokunaga, 2010).

Furthermore, there is some evidence (DeSmet et al 2018; Madden and Jones, 2008) that come into contact with cyber victimization may be perceived as more upsetting than that of traditional forms of victimization. Up till now, cross-sectional studies of cyber bullying victimization have measured the impact in terms of emotional connections, the subjective perception of impact as well as the association with mental health do report increased emotional stress, compared with those not bullied (Bonanno and Hymel, 2013; Nixon, 2014; Ortega-Ruiz et al, 2012). A growing body of literature has attempted to identify potential predictors and outcomes of cyber bullying in the workplace. The Internet is seen as the primary communication medium among workers in many parts of the world (Kowalski et al., 2014; Lim & Teo, 2009; Menesini et al, 2013). Approximately 62% of these “wired workers”, many among them use the internet at work, and more than half have been reported doing at least some work from home through technology. Most workers agree that the internet has improved their ability to do their job and share ideas with coworkers and has added flexibility to their work schedules and locations (Power et al, 2013). Preliminary studies suggest that workplace cyber bullying is associated with negative work outcomes, such as reduced job satisfaction, increased absenteeism, and higher turnover intentions as well as it has been reported to be associated with a range of psychological adjustment problems like anxiety, depression, loneliness, social isolation (Giumetti, McKibben, Hatfield, Schroeder, & Kowalski,2012).There has been reported evidence of cyber bullying is also correlated with increased

suicidal ideation among victims, who are almost twice as likely as non-victims to have attempted suicide (Arntfield, 2015; Bonanno & Hymel, 2013; Hinduja & Patchin, 2010; Privitera & Campbell, 2009).

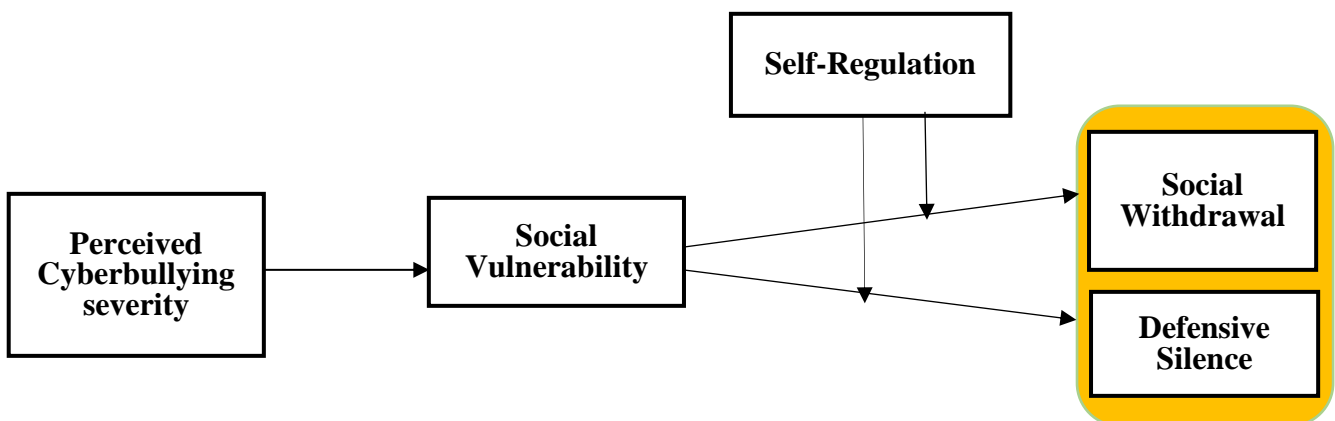
The purpose of the current review is to explore the impact of perceived cyber bullying severity on victimized employees at their workplace as well as later at homes. It is anticipated that this information can be used to increase the knowledge of social health care providers, educators, as well as scholars, and subsequently for better intervention efforts related to reducing perceived cyber bullying severity and social vulnerability which results in its associated social isolation. The first section of this paper reviews the impact of perceived cyber bullying severity on social withdrawal and employee defensive silence. The second section highlights mediating and moderating processes related to the impact of perceived cyber bullying severity on social withdrawal and employee defensive silence. The final section addresses efforts related to minimizing perceived cyber bullying severity and its subsequent effect on employee's emotions.

Cyber bullying episodes are situations that may be appraised as harmful or threatening (e.g., threat of physical injury; a harmed reputation). The appraisal of these episodes as stressful will negatively affect victims (e.g., negative emotions) and may lead them to employ coping mechanisms (e.g., ask someone for help) to counteract these stressful situations. Association of cyber bullying with victims' experiencing negative emotions correlates associated with cyber bullying includes victims' experiencing feelings of loneliness and depressive symptoms. Victims can also experience problems in diverse areas such as health, behavior, academic performance, and personal relations.

### **Transactional Theory of Stress and Coping as theoretical foundation**

Lazarus and Folkman (1984) proposed a transactional approach to the stress process. The authors defined psychological stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding her/his resources and endangering her/his well-being". This definition highlights the fact that although there are objective conditions that can be considered as stressors (e.g., natural disasters; having an argument with a spouse), individuals vary in the degree and type of reaction to these stressors. In order to understand the varying reactions of individuals when facing the same stressful situation, it is necessary to understand the cognitive processes that take place between

the stressor and the individual's reaction. The transactional theory of stress and coping proposes cognitive appraisal as this intervening process, which can be understood as "the process of categorizing an encounter, and its various facets, with respect to its significance for well-being". The theory includes two types of cognitive appraisal: a primary appraisal of the stressor and a secondary appraisal of the coping mechanisms available to reduce the effects of the stressor. In the primary appraisal phase, individuals determine if and how the situation is relevant to their goal attainment or well-being. There are three types of possible outcomes of this primary appraisal phase. The first one is when the stressor is deemed as irrelevant (i.e. there are no implications for an individual's well-being). The second type is when the stressor is deemed as benign-positive, where the outcome of the situation is seen as positive (e.g., it may enhance well-being). The third type is when the stressor is deemed as stressful, which occurs when the situation negatively affects goals and/or well-being (i.e. the situation is harmful or threatening). It is in this last type of outcome that individuals move to the secondary appraisal phase, where they evaluate potential coping mechanisms to deal with the stressful situation. Currently, there are four different approaches to meaning identifiable in the literature. The first two is well-established; the latter two are more recent and exploratory. Lazarus and Folkman (1984) describe meaning in terms of appraisal; they ask, for example, whether a demand is perceived as a harm/loss, threat, or challenge, and whether a demand is perceived as controllable or not. Individuals who believe that their work and family roles are interdependent report fewer role conflicts and feelings of failure as parents, spouses, and workers compared to those who believe that work and family roles are independent or unrelated. Others likely will develop, since there is little disagreement among researchers-in the field of mental health at least-that assessing meaning is crucial for further specifying which events and strains will have negative psychological impacts. The effects of identity-relevant stressors (Thoits 1994) has convinced me that detailed qualitative information about surrounding circumstances, beliefs, and personal values is crucial for understanding the meaning and emotional impacts of negative events in identity domains that are important to the individual. Minimally, such qualitative details help distinguish major from minor events. (Brown and Harris 1989).



## **Theoretical framework**

### **HYPOTHESIS DEVELOPMENT**

More recently, there has been an increased interest among researchers in understanding the possible negative consequences in form of cyber bullying that could arise when using digital technologies for communication purposes. Cyber bullying includes, but is not limited to, the following misuses of technology: harassing, teasing, intimidating, threatening, or terrorizing another person by sending or posting inappropriate and hurtful e-mail messages, instant messages, text messages, digital pictures or images, or Web site postings (including blogs). Often the author (sender or poster) of the inappropriate material is disguised (logged on) as someone else. Cyber bullying has been linked to numerous negative mental health outcomes, including anxiety, depression, substance abuse, stress, and sleep problems (Beran & Li, 2005; Mitchell, Ybarra, & Finkelhor, 2007; Perren, Dooley, Shaw, & Cross, 2010). A recent meta-analysis of 131 studies indicated that depression, anxiety, loneliness, emotional problems, and stress are all outcomes related to being cyber victimized. Among those negative outcomes, stress ( $r=0.34$ ) and suicidal ideation ( $r=0.27$ ) had the strongest associations with cyber victimization (Kowalski et al., 2014). Both traditional and cyber victimization have been linked with high stress (Fredstrom, Adams, & Gilman, 2011).

In fact, research suggests that approximately 32% of youth (Schenk & Fremouw, 2012) cyber victims have experienced at least one symptom of stress as a result of cyber victimization, whereas another study found that 41% of college student cyber victims reported frequently feeling stressed as a result of being a victim of cyberbullying (Schenk & Fremouw, 2012). Even after controlling for traditional victimization, cyber victimization continues to be linked with negative mental health outcomes, including depression and anxiety (Fredstrom et al., 2011; Olenik-Shemesh, Heiman, & Eden, 2012). For example, Perren et al. (2010) found that cyber victimization was a significant predictor of depressive symptoms over and above that of being traditionally bullied. Social withdrawal is defined as a state lack of contact between an individual and society. It differs from loneliness, which reflects a temporary lack

of contact with other humans (Tokunaga, 2010). Most research has focused on the relationship between bullying, well-being and health (Leymann & Gustafsson, 1996; Zapf, Knorz, & Kulla, 1996). Bullying has been related to the damage to employees' social interactions as well as communications (Matthiesen & Einarsen, 2001; Zapf & Einarsen, 2001). Psychological effects among targets include: self-reported stress-symptoms (Mikkelsen & Einarsen, 2001), irritability and anxiety (Leymann, 1990; Niedl, 1996), depression (Bjorkqvist et al., 1994a), desperation and helplessness (Leymann, 1990), psycho-somatic complaints (Niedl, 1996), post-traumatic stress disorder (Bjorkqvist et al., 1994a; Groeblichhoff & Becker, 1996; Leymann and Gustafsson, 1996) and suicide (Hoel et al., 1999). Psychological ill-health among targets has also been related to damage to targets' social skills and social and family relationships (Adams, 1992; Bennett, 1997; Leymann, 1990).

H1. Perceived cyber-bullying severity is positively related to employee social withdrawal

Research on the relationship between bullying and health has mainly conceptualized workplace bullying as an objective and measurable phenomenon. However, there is no one agreed definition of workplace bullying (Hoel et al., 1999; Quine, 1999; Rayner, 1999; Rayner & Hoel, 1997) and the labeling of behavior as bullying is arbitrary and varies between countries and researchers (Zapf & Einarsen, 2001). Attempts to measure bullying using objectively identified variables, for example in incidence studies, have also met with limited success and may have failed to capture the complexity and diversity of experiences in the workplace (Rayner, Sheehan, & Barker, 1999). Rather than constructing workplace bullying as an either-or experience, it may be better conceptualized as subtle and gradually evolving processes, with different terms needed to distinguish between uses and contexts (Einarsen, 1999; Leymann, 1996; Rayner et al., 1999). For example, some definitions of bullying exclude some employees' accounts and marginalize their experiences (Liefoghe & Mackenzie Davey, 2001). Employee silence is very common as employees feels bad or uncomfortable while conveying information about any problem (Liefoghe & Olafsson, 1999; Morrison, Milliken & Hewlin, 2003). It is the withholding of information with the intention to protect oneself. The concepts of quiescent as well as the defensive silence have been observed as the intentional silence behavior to protect one's self from outside threads (Knoll et al, 2013).

H2: Perceived cyber-bullying severity is positively related to employee quiescent and defensive silence.

First, cyberbullying can occur at any place and at any time, preventing victims from feeling safe when they remove themselves from the bullying location (like they can in the case of traditional bullying). Second, in cyberbullying, the aggressors are able to remove themselves from the impact of their actions. Cyberbullies can be anonymous, which gives them the possibility to create new identities or impersonate a victim's friends. Anonymity leaves cyberbullies with little fear of repercussion or punishment, and encourages them to continue behaviors they would not perform in face-to-face interactions. Furthermore, cyberbullies do not see their victims' reactions, something that in traditional bullying makes bullies realize the harm they are causing to the victim and may inhibit them from further bullying actions. The third distinguishing characteristic of cyberbullying is the bully's ability to reach easily a large audience. Social vulnerability refers to the inability of an individual to withstand unfavorable impacts from stressors to which they are exposed. These impacts are due in part to characteristics inherent in social interactions, institutions, and systems of cultural values. Nonetheless, the mere occurrence of events (e.g., being tagged in an embarrassing photo) does not indicate that those events have negative consequences for those exposed to them (i.e. victims). The EU Kids Online network (Ortega-Ruiz et. Al, 2012) conducted a qualitative study finding that perceptions and consequences of cyberbullying vary among victims. For example, they found that the same act (e.g., receiving sexual content) may provoke a different reaction (e.g., laughter or fear), depending on the victim; in the same vein, a written comment (e.g., name calling) may be perceived as a joke if coming from a friend, but as hurtful if coming from a stranger.

H3: Perceived Cyberbullying Severity is positively related to employee Social Vulnerability

Despite scholars' clear definitions of bullying and the many forms it takes, Sharp, Thompson and Arora (2000) state that many students' perceptions of what bullying can be is different from and

Lesser in scope than the definitions used by researchers and it is difficult to achieve agreement. Along with the prevalence of cyberbullying, researchers have explored its correlates. There is evidence to associate cyberbullying with victims' experiencing negative emotions such as anger and anxiety. Other psychological correlates associated with cyberbullying include victims' experiencing feelings of loneliness and depressive symptoms. Victims can also experience problems in diverse areas such as health, behavior, academic performance, and personal relations. Finally, cyberbullying is also correlated



with increased suicidal ideation among victims, who are almost twice as likely as non-victims to have attempted suicide.

H4(a). Social vulnerability mediates the relationship between perceived cyber-bullying Severity and social withdrawal.

Despite the findings on different correlates of cyberbullying, researchers have also found that some victims report not being affected by this phenomenon with percentages as high as 43%. The reason behind the variations in the type of impacts associated with cyberbullying is unclear. However, it is important to note that the perceptions of a victim and whether a specific episode has an impact on her/him have been shown to be more salient themes in qualitative studies characterizing cyberbullying than the episode's occurrence or the characteristics coming from traditional bullying (e.g., intentionality, repetition). This may indicate that existing self-report measures pointing solely at the occurrence of cyberbullying episodes may fall short at addressing the important issues of impact and victim's perceptions.

H4(b). Social vulnerability mediates the relationship between perceived cyber-bullying Severity and quiescent and defensive silence.

Moreover, researchers have identified possible personal and contextual factors that may contribute to cyberbullying and cybervictimization, as well as exacerbate mental health outcomes among victimized youth (see Kowalski et al., 2014). Although previous research has demonstrated that cybervictimization is associated with a range of psychological adjustment problems (e.g., anxiety, depression, loneliness), few studies have explored the broader range of negative outcomes, such as academic adjustment problems. Additionally, few studies have examined the role that contextual factors play in the risk for cybervictimization and negative mental health outcomes among adolescents (Kowalski et al., 2014).  
Adjustment outcomes related to cyberbullying

H6. Employee social vulnerability is positively related to employee social withdrawal

This has been shown where students were asked to self-report which specific emotion they had experienced when cyberbullied. In an Australian study of 548 cyberbullying victims, it was reported that students said they felt sad, annoyed, embarrassed and afraid (Price and Dalgleish 2010). This reflects what is known about the emotions associated with the earliest studies of traditional bullying. Anxiety,

feeling bad about oneself and not trusting people have also been reported by cyber victims (Raskauskas 2010). More severe cyberbullying, however, was correlated with a profile of emotions labeled ‘alone, defenseless and depressed’ (Ortega et al.2009).

H7. Employee social vulnerability is positively related to employee quiescent and defensive silence.

Self- Regulation involves controlling one's behavior, emotions, and thoughts in the pursuit of long-term goals. More specifically, emotional self-regulation refers to the ability to manage disruptive emotions and impulses. Evaluating the perception of the level of severity of a cyber-bullying episode may be useful in explaining the diverse correlates found in cyberbullying victims, and in particular, how those episodes may affect victims’ experience. Victims of cyberbullying episodes show signs of stress triggered by these episodes, and as such, the episodes can be considered as stressful situations that will activate the appraisal and coping mechanisms described by transactional theory of stress.

H8(a): Employee Self-Regulation moderates the relationship between employee Social Vulnerability and employee social withdrawal such that the relationship will be stronger in case of high self-regulation and weaker in case of low self-regulation.

As stated in transactional theory of stress and coping, “people and groups differ in their sensitivity and vulnerability to certain types of events, as well as in their interpretations and reactions”. This highlights the importance of the appraisal process (i.e. evaluating the severity of the episode) when cyberbullying episodes occur. The degree of variability of the impact of a specific episode on an individual is consistent with the primary appraisal involved in transactional theory of stress and coping whereby individuals evaluate whether the cyberbullying episode is relevant to their goals and/or well-being. In this study, Perceived Cyberbullying Severity (PCS) is thus a construct utilized to measure a victim’s primary appraisal of a cyberbullying episode. Assessing the perceived severity of a cyberbullying episode is relevant, as the perspective of a victim is critical to understanding the impacts of the episode on her/his psychosocial functioning. Moreover, and due to the diverse forms of cyberbullying (e.g., different behaviors, different ICTs used), it is important to have a tool that allows for assessing the severity of cyberbullying situations from the victim’s perspective. However, researchers have not paid enough attention to studying the degree to which different cyberbullying episodes are perceived as being harmful by victims. Some studies have explored perceptions of the severity of cyberbullying, by (i) varying the severity of hypothetical cyberbullying scenarios presented to participants and determining if participants

would be willing to help the victims in those scenarios or which coping mechanisms participants would recommend to the victims of those scenarios and (ii) comparing participants' perceptions (victims and non-victims) of cyberbullying and traditional bullying and determining which one was perceived as being worse. In addition, only the study conducted by Na et al. [64] is known to have utilized a scale to measure victims' cognitive appraisal (i.e. severity of anticipated harm or loss) of cyberbullying and its role in victims' psychological adjustment. Considering the very limited research in this area, it is worth exploring how perceived cyberbullying severity is associated with the impacts of cyberbullying on victims. From the perspective of a victim's well-being, it is expected that PCS may lead individuals to appraise the cyberbullying episode as threatening to different extents. Appraisals of threats such as social exclusion and physical harm are accompanied by anxiety.

H8(b): Employee Self-Regulation moderates the relationship between employee social vulnerability and employee silences such that the relationship will be stronger in case of high self-regulation and weaker in case of low self-regulation.

## **METHODOLOGY**

Ethical approvals would be secured prior to any data collection. The study shall focus to eliminate the ethical issues that would arise if data is to be collected with victims' currently experiencing cyberbullying as the study, to avoid any heighten current victim's negative feelings. Data was collected at 3 points in time using an anonymous online survey. The anonymous nature of the survey may help participants feel safe and increase their willingness to share their experiences, given the sensitive nature of the data collected. Side by side, 100 hundred questionnaires were also distributed to employees of service sector organizations as well incase online surveys are not filled as per expected responses. A reporting time frame of 3 weeks has been proposed by other researcher to collect data about cyberbullying situations that shall allow assessing a period that is "recent enough to allow for accurate recall, but broad enough to capture experiences throughout various times of the year. Furthermore, considering that negative events are more available in individuals' memory than positive ones (Earles, 2016), it is expected that participants in this study would be able to clearly recall a stressful situation such as a cyber-bullying episode. As English is the official language of Pakistan and the majority of the people can easily read and speak English, the questionnaire was given in the English language. Past

researchers did not face any language related issues while collecting the data (Fatima et al, 2018; Naseer et al., 2016).

## **Measures**

The use of a Perceived Cyberbullying Severity Scale (PCSS), 8-items measure was used from Camacho et al, 2018 and Schenk et al, 2012), to capture how victims assess a particular cyberbullying situation. A seven-point Likert-type scale, ranging from one 1= Strongly Disagree to 7= Strongly Agree was used. Social Vulnerability Scale (SVS) was measured from Stone and Sofronoff (2006) by 9-item to respond to how often employee engages in everyday behavior that involve social judgments and indicate social vulnerability. Self-regulation Scale (SRS) scale was adopted from Diehl et al, (2006), 10-items referring to post-intentional self-regulation when individuals are in the phase of goal-pursuit and face difficulties in maintaining their action. In such a maintenance situation it is required to focus attention on the task at hand and to keep a favorable emotional balance. Social Withdrawal Scale was adapted from Carleton et al, 92006) with 13-item measures that were generated to specifically and quantitatively measure social withdrawal and this scale was psychometrically evaluated. Defensive Silence Scale has been adapted from Van Dyne et al, (2003) by using of 5-item in addition 5 items quiescent silence measures from LePine (2002) multidimensional constructs to measure employee silence (intentionally withholding ideas, information, and opinions with relevance to improvements in work and work organizations

## **DISCUSSIONS**

Demographic variables including age, gender, organization type, designation, qualification and area of specialization were controlled variables for the reason that past literature proposed that these variables might have impact on the individual perception of cyberbullying (Barlinska, et. al, 2013). A series of confirmatory analysis to examine the discriminate validity of variables; perceived cyberbullying severity, social vulnerability, self-regulation, employee silence (defensive and quasi) and social withdrawal outcomes with testing of hypothesis. The hypothesized factor model fit the data satisfactorily ( $\chi^2 = 1004$ , CFI=.80, GFI=.80,  $\chi^2/df=2.71$ ). All factor loading was statistically significant ( $p < .001$ ). On average standardized factor loading for all the variables outcomes were above 0.5. Thus, findings signify that measures of our study confine unique constructs. One-way analysis of variance (ANOVA) was examined to identify controls for the dependent variables. It was found significant differences in the dependent variables due to age, gender, and qualification, and therefore included these as controls in all

following analyses. Dummy variables were created for organization type (public) and then used it to control for the effect of organization. Correlation is conducted to study the relationship between the variables. It ranges for +1 to -1. 0 correlations mean that there is no relationship between the variables. +1 one shows highly positive correlation and -1 shows highly negative correlation between the variables. In this study the correlation results show that correlation for mostly variables is significant at 99% confidence interval. While one variable SR have no relation with any of other variable, PCBS has strong positive correlation with employee silence and social withdrawal, which is significant at 99% level of confidence interval. PCBS is positively associated with social withdrawal significant at 99% level of confidence interval. However, all other significant relationships have value less than 0.8, hence all are considered separate construct.

Table 1: Regression Results: Direct and Indirect Effects: Mediation of social vulnerability between perceived cyberbullying severity and defensive and quiescent Silence Relationship

Direct and Total Effects					
	B	SE	P	LLCI	ULCI
H3:PCBS→SV					
MED regressed on IV	.35	.05	.00	.25	.45
H4:SV →ADS					
DV regressed on MED	.09	.06	.10	-.02	.20
H6: PSEB→ADS (in the presence of mediator)					
H1: PCBS→ADS (in the absence of mediator)					
DV regressed on IV	.23	.06	.00	.12	.34
Bootstrap Results for Indirect Effect of IV on DV through MV (Bias Corrected Confidence Interval)					
	Effect	Boot SE	LL95% CI	UL 95% CI	
SV	.14	.03	.09	.21	
Sobel Test for Indirect Effect using normal distribution					
	Effect	SE	Z	P	
	.1403	.0295	4.7569	.0000	

Note. n = 287. Un standardized regression coefficients are reported. Bootstrap sample size =5,000. LL = Lower Limit; CI = Confidence Interval; UL = Upper Limit.

Table 1 depicts for Hypothesis 1, 2 and 3 which was supported. The above table show the result of regression analysis and partial mediation effect of SV between PCBS and ADS. Indirect effect of x on y is ab, which is equal to 0.1718. While total effect of X and M both on Y is 0.2887, which is significant at 99% level of confidence interval. Which is greater than direct effect (b=0.1436) and indirect effect (b=0.1718). Hypothesis 6 was not supported as the result of analysis shows that regression of PCBS with ADS ignoring the SV was not significant. B= 0.23 and p value was more than 0.01. Mediator showed that the mediator (SV), controlling for ADS was significant, b = 0.90, p< 0.01, thus proving the H4 (a). The result of mediation analysis revealed that, controlling for the mediator (SV), PCBS was significant predictor of SV, b = 0.35 p <0.1. As the result is significant at 99% level of confidence interval, verifying the H5. A Sobel test was conducted and found mediation exist in the model (z = 7.411, p = .000). So, it was found that SV partially mediates the relationship between PCBS and ADV.

Table 2: Regression Results: Direct and Indirect Effects: Mediation of social vulnerability between perceived cyberbullying severity and social withdrawal Relationship

Direct and Total Effects					
	B	SE	P	LLCI	ULCI
H3:PCBS→SV	.35	.05	.00	.25	.45
MED regressed on IV					
H4:SV→SW					
DV regressed on MED	.30	.09	.00	.13	.48
H6: PCBS→SW (in the presence of mediator)					
H1: PCBS→SW (in the absence of mediator)	.49	.08	.00	.33	.64
DV regressed on IV					
Bootstrap Results for Indirect Effect of IV on DV through MV (Bias Corrected Confidence Interval)					
	Effect	Boot SE	LL95% CI	UL 95% CI	
SV	.11	.03	.05	.18	

Sobel Test for Indirect Effect using normal distribution

Effect	SE	Z	P
.11	.03	3.06	.0022

Note. n = 287. Unstandardized regression coefficients are reported. Bootstrap sample size =5,000. LL = Lower Limit; CI = Confidence Interval; UL = Upper Limit.

Table 4 shows for Hypothesis 4 (b) which was supported. The above table shows the result of regression analysis and partial mediation effect of SV between PCBS and SW. Indirect effect of x on y is ab, which is equal to 0.17. While total effect of X and M both on Y is 0.29, which is significant at 99% level of confidence interval. Which is greater than direct effect (b=0.14) and indirect effect (b=0.1718). Further, the result of analysis shows that regression of PCBS with SW ignoring the SV was significant. B= 0.1436 and p< 0.01. Hypothesis 6 was supported, the regression of PCBS on SW was also significant b=0.20 and p< 0.01. Mediator showed that the mediator (SW), controlling for SPV was significant, b = 0.85, p< 0.01. The result of mediation analysis revealed that, controlling for the mediator (SV), PCBS was significant predictor of SW, b = 0.29 p <0.1 as the result is significant at 99% level of confidence interval. A Sobel test was conducted and found mediation exist in the model (z = 7.411, p = .000). So, it was found that SIA partially mediates the relationship between PBED and SPV. However, the moderation results were not significant; self-regulation did not moderate the positive relationship between social vulnerability and employee's behavioral outcomes thus rejecting the hypothesis H8 (a) and H8 (b).

## **CONCLUSION, LIMITATIONS AND FUTURE DIRECTIONS**

Overall, it appears, research on cyber bullying is still in its infancy and more relationships among variables need to be studied. The majority of academic contributions focus on understanding the phenomenon, risk factors, and threats with the prospect of suggesting possible protection strategies. But to become aware of cyber bullying when it occurs and identifying predators as well as their victims, remains an open issue to be solved. Failing to protect employees from being cyber bullied or harassed potentially could expose the organizations. It is essential that organizations implement and enforce policies protecting employees from all forms of bullying and harassment. Foremost, the increased security as well observations on the online element in the workplace, not only limit employer liability and protect employees, it will reach the real goal of creating a productive as well as safe work environment. Up till now, the measurement of cyberbullying has been approached inconsistently

throughout the research literature (Dredge et. al, 2013). Subsequently, it could not be verified that every respondent was at equal risk of exposure to cyber bullying or whether cyber bullying by telephone was on a fixed-line telephone or a mobile telephone. Additionally, only those participated who have had any kind of cyber bullying episode, which also limits these results. It is also possible that individuals who had experienced negative acts in the workplace may have been more motivated to respond and were subsequently overrepresented. Cyber-bullying deserves further study. It remains for future research to undertake further study with a different population. Another limitation could be that some negative acts are easier to imagine happening face-to-face than by technology. We feel, there is a need to examine incidence and types of negative behavior change over time, as well as the short-term and long-term impacts within organizations, using longer time frames than in the present study. Further analysis could use modeling approaches to explore the reciprocal relationships between the antecedents and consequences of the cyber bullying severity.

### Practical Implications

Authors suggested few implications on the basis of their finding. Firstly, the best way for an employer to ensure that the workplace protects employees by having effective policies in place to respond promptly and effectively to any complaints of cyber bullying. Employers should prepare clear policies that specifically address workplace violence incorporating provisions relating to cyber bullying into the general workplace bullying and harassment policy. Secondly, organizations should consider developing policies which reserve their right to monitor communications over company servers, and which inform employees of their policies on internet, e-mail and telephone use, particularly if employees are subject to random or continuous surveillance. Thirdly, employers can take is to have social networking policies in place and outline expectations for acceptable use of social networking sites in the workplace and should set out penalty of misuse. Lastly, effective programs are fully enforced and endorsed by all levels of management and maintain such program to implement the various policies in order to ensure that employees are truly protected. Clearly, there is room for improvement in organizational practice to manage this costly workplace problem.

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