

**Research Article**

Does performance pressure enhance employee performance? The role of employee sleep, constant connectivity and rumination

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ABSTRACT

Sleep is a crucial component of human-life and the importance of good sleep cannot be denied in an individual's personal and professional life. Advent of new technology has blurred the boundaries between work and home and has further reduced sleep-time. Studies on antecedents and outcomes of insomnia, in particular, employee task-performance are scarce. Accordingly, this study is focused to identify the effect of performance pressure, negative work-rumination, and constant connectivity on insomnia symptoms and employee task-performance. Further, this study is measuring the mediating role of negative work-rumination and insomnia symptoms between performance pressure and employee task-performance. Current study is also measuring the moderating role of constant connectivity, as we have witnessed that during the pandemic of Covid-19 this constant connectivity, has further penetrated into our personal and professional lives. Data was collected from 215 employees of manufacturing sector, working in different organizations, through a 3-phase time-lag. Direct and indirect effects along with moderation and sequential mediation were measured through Smart PLS. Findings revealed that sequential mediation, along with all direct and indirect paths has significant relationships. Constant connectivity was found to strengthen the relationship between negative work-rumination and insomnia-symptoms. Limitations and implications of the study has also been discussed.

Keywords: *Performance Pressure; Negative Work-Rumination; Insomnia Symptoms; Constant Connectivity; Employee Task-Performance*

1. INTRODUCTION

We are living in the era of technology and innovation, where the environment is highly competitive and uncertain. To with-stand the cut-throat and uncertain environment, employees are expected to perform well so that the organizations are able to gain and sustain a competitive edge over their competitors (Sitkin et al., 2011). Such ambivalence in the environment usually forces organizations to re-structure, right-size, or in more harsh terms downsize. As a result, employees may strive hard to perform well, so that they do not fall victim to such flattening efforts (Mitchell et al., 2019). Employees feel that their better performance may result in promotions, job security, and other perks, and not meeting the expectations may lead to negative consequences like demotion or even termination. Linking performance to certain consequences may be a useful tool to engage and galvanize employees but it may also make employees feel stressed and experience an internal pressure. Such feeling is called performance pressure, it is an urgency to elevate

the level of performance because of its relationship with consequential outcomes (Mitchell et al., 2018).

Performance pressure is considered to be a salient source of work-related stress. Although a number of recent researches already found it to be an antecedent of negative outcomes (Gardner, 2012; Mitchell et al., 2018; Robertson & Rymon, 2001) but much less is known about the mechanism which makes performance pressure negatively affect work and non-work related outcomes. Current research intends to examine the association between performance pressure and employees' sleep. Employees can be productive if they enjoy good health. Fitness measures, healthy lifestyle, and diet are some of the factors which contribute towards human well-being (Blake et al., 2013). Workplace dynamics such as workplace incivility (Demsky et al., 2019), time pressure, schedules, work overload, stress, and co-worker mistreatment are the overlooked ringleaders of impaired sleep (Barnes et al., 2016). Healthy sleep being a significant component of human life is a major contributor to human well-being. Despite the positive association between organizational success and healthy employee sleep, it is still out of reach for many (Barnes & Watson, 2019).

The importance of good sleep cannot be denied. There are certain contemporary components of our routine and work-life which are useful and dangerous for us at the same time. One of such things include information and communication technology (ICT) or mobile work devices (MWD), prolonged exposure to such devices adversely affects the production of a hormone melatonin, which aids in falling and staying asleep (Barnes et al., 2020) but such devices have also equipped employees with the autonomy of choosing place and time of work (Wajcman & Rose, 2011). However, such constant connectivity, which is defined as continual connectedness to the workplace through MWD, has increased the obligation of being responsive to work demands 24/7 (Büchler et al., 2020).

Many organizations across the globe, pressurize their employees to raise performance in order to elevate the bottom-line to higher levels. As a result, employees experience stress to raise their performance or else they have to face substantial outcomes, therefore by nature performance pressure hampers the well-being of employees (Gutnick et al., 2012).

Recent researchers have started examining the role of sleep in employee well-being and performance (Litwiller et al., 2017). Current research intends to i) establish an association between performance pressure, insomnia symptoms, and employee performance ii) understand the mechanism which causes this association to take place iii) demonstrate that the use of MWD after hours is aggravating the association between performance pressure and insomnia symptoms.

Performance pressure has been described as a subjective feeling caused by single or multiple elements that elevate the vitality of performing well (Baumeister, 1984). It is an external force that highlights the importance of performing well as rewards and punishments are contingent on performance (Zhang et al., 2017). Performance pressure is distinct from other work stressors, like time pressure, work overload, or role ambiguity. It is an urgent need to boost performance in order to avoid undesirable outcomes (Mitchell et al., 2018).

Till date most of the studies on performance pressure have examined the outcomes of performance pressure including work engagement (Kundi et al., 2021), team innovation (Ye et al., 2019), team performance (Gardner, 2012), supervisor rated creativity (Zhang et al., 2017), employee cheating behavior (Mitchell et al., 2018), task proficiency, citizenship and incivility (Mitchell et al., 2019). In short few researchers have found it to be antecedent of positive outcomes and some negative, yet few studies have found it to be associated with positive and negative outcomes. limited studies has been done to describe why performance pressure is linked with negative outcomes (Mitchell et al., 2018). From the viewpoint of both practitioners and researchers, it is important to diagnose the mechanism through which performance pressure affects human sleep quality and leads to negative outcomes. For this study, the negative outcome will be the inability to carry out the regular job requirements i.e., employee task-performance (Guo & Ling, 2020). Identification of such mechanisms may serve as possible spots for workplace interventions. Current research has focused on negative work-rumination (NWR) leading to insomnia symptoms as the mechanism which in turn will negatively affect employees' task-performance.

Rumination is defined as preoccupation of the mind with repetitive thoughts regarding any event, incident, or experience at work (Martin & Tesser, 1996). The focus of the current research is negative work-rumination, which is a preoccupation of the mind with negative events, incidents, or experiences at work, accompanied by the inability to stall thinking about the same, even at home (Frone, 2015). Negative work-rumination is antecedent of several behavioral issues such as taking unhealthy diet (Cropley et al., 2012), and also certain health-related problems such as disrupted sleep, bad mood, and heart diseases (Cropley & Zijlstra, 2011). Negative work-rumination has also been established as a mechanism describing the inter-link between stressors and strain reactions e.g., alcohol consumption (Frone, 2015), work-family conflict and health issues (K. D. Davis et al., 2017), imbalance between effort and reward, time pressure, and impaired sleep (Berset et al., 2011).

Negative work-rumination is about pre-occupation of mind with negative work experiences and the same continues at home, inability to switch off from such thoughts can lead to health-related issues including insomnia symptoms in employees (Demskey et al., 2019). The use of ICT and MWD, which have become an inseparable component of contemporary work and personal life can aggravate the issue further. A number of researchers have already warned that constant connectivity can harm employee well-being (Büchler et al., 2020; Ďuranová & Ohly, 2016; Schlachter et al., 2018). Impaired well-being can have detrimental outcomes at both individual and organizational level, but this study will consider the detrimental effects of constant connectivity at individual level, by examining its moderating role between NWR and insomnia symptoms.

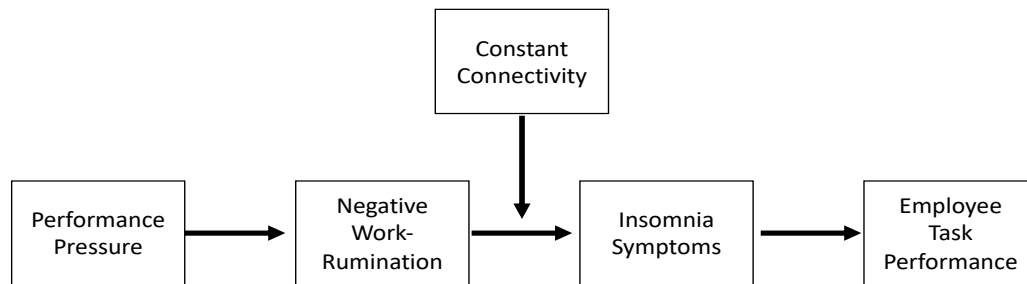


Fig. 1. Hypothesized theoretical model

1.1. THEORETICAL BACKGROUND

1.1.1. Preservative Cognition Model of Stress (PCMS)

Preservative Cognition (PC) refers to the degree to which a person continuously thinks about a past experience, event, or incident (Brosschot et al., 2005) such as when an employee thinks about the performance pressure. PCMS proposes that preservative cognitions can be a mechanism through which stress is linked to somatic complaints and eventually to health issues. Preservative cognitions can be measured through rumination, in which a person may experience the inability to stop thinking about past circumstances or even future events (Brosschot et al., 2006), in this study performance pressure at work.

Past research suggests the worry and rumination (forms of preservative cognition) can explain the association between stressors and strain outcomes. In particular, stressors lead to increased levels of preservative cognitions, which are linked to elevated strain outcomes (Brosschot et al., 2006). Brosschot and colleagues (2010) reviewed a number of researches and found that worry and rumination can result in health issues. Rumination can also result in impaired sleep (Brosschot et al., 2006, 2007; Demsky et al., 2019). In line with PCMS and its supporting research, this research identifies NWR as one such mechanism describing the association between performance pressure and insomnia symptoms in employees.

1.1.2. Boundary Theory

According to Nippert-Eng (1996) people deliberately form boundaries around different domains of their life. Some people create boundaries around their personal and professional life to make sure that these domains stay separate from one another or more specifically segmented while others create boundaries, that are not much stronger and the domains are interlinked or integrated. Nippert-Eng (1996) suggested that segmentation and integration of different domains of life depend on different factors including, type of profession, coworkers, nature of the individual, and family members.

The advent of MWDs and ICT has evolved the era of constant connectivity in the workplace which has already dimmed the boundaries between personal and professional realms (Büchler et al., 2020), which may affect employee well-being (Sonnetag, 2018). The consequences of constant connectivity can be understood through boundary theory (Ashforth et al., 2000), which provides a framework for understanding the spillover effects between various spheres of life. Boundary theory suggests that people raise psychological fences called 'boundaries' to manage segmentation-integration preferences, however, the

nature of these fences vary from person to person (Kreiner, 2006). The employees who have segmentation preferences may be affected more by constant connectivity because such people prefer to keep home and work separate (Büchler et al., 2020). Through the implications of boundary theory, this research suggests that a person having NWR due to performance pressure may want to stay disconnected from workplace or in other words want to segment from work, when at home, but this constant connectivity will be adding fuel to fire and cause somatic issues in such workers. Such somatic complaints will further hamper the performance of the employees.

2. LITERATURE REVIEW

2.1. PERFORMANCE PRESSURE AND EMPLOYEE TASK-PERFORMANCE

Employee task-performance refers to the competence and expertise with which an employee executes the basic engrossments of the job, which are more specifically mentioned in job description (Motowidlo & Van Scotter, 1994). Basically task-performance comprises of actions and behaviors, that directly or indirectly contribute towards accomplishment of organizational goals (Harari et al., 2016). Individual job-performance is the basic contributor to the organizational functioning, that is why it is considered to be the one of the most vital constructs in Human Resource Management and Industrial, work and organizational Psychology (Campbell & Wiernik, 2015). According to Hickman and Metz (2015), when the consequences of an activity are crucial, employees usually experience psychological pressure which may adversely impact their performance. This condition can prevail in different circumstances of life faced by human beings like in a job interview, achieving a target, preparing for examinations or while standing in front of soccer net and 1 goal to win. When the consequences are linked to substantial outcomes, it creates a great deal of pressure i.e., performance pressure (Mitchell et al., 2018), possibly heading towards under-performance (Hickman & Metz, 2015). Performance pressure may hinder the performance of competent people (Gimmig et al., 2006). Psychological stress leads employees towards higher risk-taking (Buckert et al., 2014), and deters strategic thinking (Leder et al., 2013). Performance pressure can make employees feel depressed and obstruct their concentration on the task at hand and can negatively impact their performance (Yunita & Saputra, 2019). Work-related stressors have negative impact on employee performance (Ramli, 2019). Based on the above literature review and stress theories this research suggests,

Hypothesis 1: Performance pressure is negatively associated to employee task-performance.

2.2. PERFORMANCE PRESSURE, NEGATIVE WORK-RUMINATION, AND INSOMNIA SYMPTOMS

Findings of performance pressure research have revealed that although sometimes performance pressure is an antecedent of functional behavior (Kundi et al., 2021; Mitchell et al., 2019) simultaneously it is a significant source of work-related stress and an

antecedent of unethical behavior (Jensen et al., 2019; Mitchell et al., 2018). Based on the meta-analytic review of previous researches Sonnentag (2018) has divided stressors into three categories: i) high job-demands, (e.g., time-pressure, work-overload), ii) hindrance stressors (which hinderers accomplishment of tasks at hand like role-ambiguity and role-conflict), and iii) factors in the social environment e.g., incivility at work (Demsky et al., 2019), supervisor's bottom-line mentality (Babalola et al., 2020). Performance pressure being a high job demand stressor may also be called as a challenge stressor. This research argues that although performance pressure is a challenge stressor but it may result in NWR due to its link to substantial consequences. Based on the implications of PCMS, this research suggests that performance pressure is a job stressor that may trigger prolonged or repetitive thoughts about the workplace i.e., NWR, when the employee is at home.

Hypothesis 2: Performance pressure is positively associated with increased Negative work-rumination.

Performance pressure may not only cause NWR but may also directly affect the quality of employees' sleep. To date, the association between performance pressure and insomnia symptoms has not been studied. In a recent research by Mitchell and colleagues (2019), the researchers have argued that performance pressure is a double-edged sword and can have both favorable and unfavorable outcomes, depending on how it is appraised. If performance pressure is taken as a challenge, it will have favorable outcomes and if considered as a threat it may have unfavorable outcomes. When taken as a challenge, performance pressure diverts the attention towards the opportunities for growth and as a result motivates the employees towards positive behavior, whereas when the same performance pressure is taken as a threat it may divert the focus on the negative consequences that may occur in case of failing to do the rightful (Jensen et al., 2019). Such feeling may be a source of stress and causes insomnia symptoms in employees. In a review by Barnes and Watson (2019), the researchers have mentioned certain antecedents and outcomes of the impaired sleep. According to the review, the antecedents include certain workplace characteristics like work demands and stress which are considered to be overlooked instigators of poor sleep quality. Current research has examined insomnia symptoms as an index of impaired sleep quality. Insomnia symptoms consist of facing trouble falling asleep, facing trouble maintaining sleep and include waking up again and again at night and lacking the fresh feeling in the morning (Jenkins et al., 1988).

Hypothesis 3: Performance pressure is positively associated with insomnia symptoms

Negative work-rumination is the lack of ability to forget about workplace events and experiences, when away from work or at home, such an attitude may hamper sleep quality at night (Demsky et al., 2019). Applicable to the present study, work-related negative thoughts have been found to be linked with impaired sleep quality consisting of somatic issues and taking longer time falling asleep (Querstret & Cropley, 2012; Vahle-Hinz et al., 2014). Again relevant to the present study, past research has already established an association between both stressor and trait-specific rumination and somatic issues (Zoccola et al., 2009). According to PCMS, negative work-rumination may work as a system through which work-related stressors caused insomnia symptoms in employees (Demsky

et al., 2019). In the current study, repetitive negative thoughts or continuous cognitive activation about the workplace may inhibit a person from getting good sleep. Based on the implications of PCMS this study hypothesizes,

Hypothesis 4: Negative work-rumination is positively associated with insomnia symptoms.

The PCMS suggests that repetitive thoughts about any event or experience acts as a links between stressors and strain reactions, researchers have started gathering support for this model (Besten et al., 2020; Clancy et al., 2016, 2020; Demsky et al., 2019; May et al., 2020). According to Van Laethem and colleagues (2018), preservative cognition acts as a mediator between work-related stress (for this study its performance pressure) and the quality of sleep. Worry (which is a similar construct to preservative cognition) has also been found to act as a mediator between bullying at workplace and deteriorated sleep quality 1/22/2022 9:12:00 AM . In short, this research suggests that since performance pressure is a stressor, which may activate preservative cognition in employees, which in turn may affect their sleep quality. In light of PCMS and the literature review mentioned above this research hypothesizes,

Hypothesis 5: Negative work-rumination mediates the relationship between performance pressure and insomnia symptoms.

2.3. INSOMNIA SYMPTOMS, AND EMPLOYEE TASK-PERFORMANCE

Employee performance is considered to be a multi-dimensional construct and it can be measured in multiple ways, for example, supervisor rated performance , self-rated performance , peer-rated or objective performance (Khalid, 2020). There are two sub-components of employee performance which are task-performance and contextual performance (Kluemper et al., 2013). Employee task-performance is about the formal tasks and behaviors which are part of his job description and also include the actions which are directed towards achieving organizational goals, whereas contextual performance is about extra-role behaviors, which are not part of employees' job description and formal reward system (Guo & Ling, 2020). In organizational context, employee task-performance is considered to be more crucial for survival of an organization in comparison to contextual performance (Smith et al., 2018). A good quality of sleep is determinant of being good at work, as reduced sleep causes cognitive deficit, which likely impacts employee task-performance (Litwiller et al., 2017). Even one day sleep deprivation has been found to be associated with reduced scored in accuracy and speed related to simple and complicated attention, short-term and working memory, pace of processing information and analysing (Lim & Dinges, 2010). According to job analysts, insufficient sleep affect cognitive capabilities of people in a negative manner, which further effect their work (Peterson et al., 1999). Philibert (2005) also conducted an empirical study to support association between sleep and performance, in which she found that sleep loss heightened the chances of error in medical residents. A poor quality of sleep impairs cognitive capabilities and therefore negatively impacts employee task-performance (Litwiller et al., 2017). In the light of above-mentioned literature review this study hypothesizes,

Hypothesis 6: There is negative association between insomnia symptoms and employee task-performance.

2.4. SEQUENTIAL MEDIATION

Organizations usually pressurize their employees to boost their performance, because performance is linked to substantial outcomes like termination, bonuses or promotion (Gutnick et al., 2012). Because of its daunting, taxing and threatening nature, performance pressure intimidates employees' well-being (Mitchell et al., 2018) and negatively effects performance (Hickman & Metz, 2015). According to PCMS, when an employee experiences any stress, they start having negative thoughts about it, which leads to somatic complaints. Since performance pressure has been declared as a stressor because of its threatening nature, it may give rise to NWR and NWR in return may lead to somatization. Insomnia has been found to be an antecedent of poor performance (Litwiller et al., 2017). Based on the implications of PCMS, this research hypothesizes,

H7 Negative work rumination and, insomnia symptoms sequentially mediate the relationship between performance pressure and employee task-performance

2.5. MODERATING ROLE OF CONSTANT CONNECTIVITY

Constant connectivity refers to 24/7 work-related connectedness to the organization through MWDs and ICT, including both working and non-working hours e.g., weekends and evenings (Büchler et al., 2020). MWD and ICT has become an intrinsic component of contemporary work environment (Wajcman & Rose, 2011). Such technology has enabled employees to be constantly available to co-workers and clients (Perlow, 2012). Constant connectivity can both help and hinder task accomplishment (Sonnentag et al., 2018). It is like an "electronic leash", which has increased the expectations of responsiveness and availability. This increased expectations of availability bounds employees to respond and reply to work related texts or emails in free time as well (Davis, 2002). Thus many ICT users develop the habit of chronic checking and commitment escalation, which in long-run is a source of stress (Mazmanian et al., 2013). Burgeoning research on constant connectivity is highlighting the negative aftermaths of such connectivity on employee well-being (Schlachter et al., 2018).

According to some researchers, ICT has made improvement in a feeling of control over work but it has also blurred the boundaries between work and home, such permeable boundaries may lead to work family conflict (Yang et al., 2019). Work-related ICT has been established by the researchers to be a source of stress, which negatively effects evening recovery, therefore the boundaries between work and home should be less permeable (Derks et al., 2014; Ďuranová & Ohly, 2016). Meijman and Mulder's effort-recovery model (1998) suggests employees need to take a break from work, when at home, to replenish the drained resources, use of work-related ICT in non-work time would hinder such recovery (Derks & Bakker, 2014; Ďuranová & Ohly, 2016), and would worsen the negative work related thoughts further causing an escalation in insomnia symptoms (Demskey et al., 2019).

Contemporary studies has already found a positive relationship between use of ICT and impaired sleep (Arlinghaus & Nachreiner, 2013; Barber & Jenkins, 2014). Exposure to ICT which are likely light-emitting devices, increases the time of falling asleep, disturbs circadian rhythm, reduces melatonin, and reduces efficiency in the next day (Chang et al., 2015). Lanaj and colleagues (2014) has also suggested that the use of smartphones after 9 pm results in reduction in sleep duration, escalates morning depletion and negatively effects work-engagement. Such detrimental outcomes makes ICT a stressor (Ďuranová & Ohly, 2016). Technostress researchers have also found negative relationship between ICT and well-being (Ayyagari et al., 2011; Yin et al., 2014). The ICT user sometimes gets overloaded with information, especially when the receiver does not possess the authority to control it, such overloaded information is also a source of stress (Derks & Bakker, 2014).

Boundary theory by Ashforth and colleagues (2000) proposes that some people have integration preferences and yet some have segmentation preferences, these preferences are usually shaped by single or multiple factors including: nature of work, individual preferences, family, or coworkers. This research suggests that a worker who has negative thoughts about work at home, such person would not like to respond to work related issues through ICT after working hours, in other words he may have segmentation preferences. More specifically a person having NWR would be irritated by constant connectivity and such constant connectivity may further inflate the relationship between NWR and insomnia symptoms. So, this study hypothesizes,

Hypothesis 8: Constant connectivity moderates the association between negative work rumination and insomnia symptoms, such that the positive relationship is stronger, when constant connectivity is high versus low.

3. METHODOLOGY

3.1. SAMPLE AND PROCEDURES

Data was collected from workers and their immediate supervisors from various manufacturing organizations located in Islamabad, Rawalpindi and surrounding regions like Chakwal, Haripur, in industries manufacturing, construction material, consumer goods, food and beverages, pharmaceuticals, health care products and electrical and electronic manufacturing organizations. We administered the survey through internet as well as approaching the respondents personally. As this is a time lagged study, coding scheme was used to keep the track of respondents i.e., write last four-digits of cell-number. Data was collected in 3-phases. In time-1 employees were ask to respond about the performance pressure, and demographics. After one-month, at time-2, the respondents were contacted through email/cell numbers (those who willingly provided) or directly to respond to negative work-rumination and constant connectivity related survey. At time-3, employee responded to insomnia symptoms related survey and supervisors rated their performance. Supervisors were contacted personally by the researcher. At time1, time-2, and time-3 employees were presented with a gift worth Rs 100, and supervisor with a gift worth Rs 200 at time-3. This one-month time lag is consistent with previous empirical studies (Christoforou & Ashforth, 2015; Mitchell et al., 2018). 600 questionnaires were distributed at

time-1. Four hundred and five completed the survey. At time-2, i.e., one-month later again those 405 respondents were contacted out of those, 298 people completed the survey. At time-3, 250 employees completed the survey, the supervisors of those two 250 were contacted to rate the respective employee, out of those 250 supervisors, 215 completed the survey. 69% of the employees were between the age of 25-40 years, 10% were above 41 years (employees only). 67 % of respondents were male. 41% employees have been working with their organizations for 1-3 years, 43 % for 3-6 years or more and the rest less than 1 year, and 78% of them were at managerial positions.

3.2. MEASURES

3.2.1. Performance Pressure

Performance pressure was recorded through a 4-item scale developed by Mitchell and colleagues (2018). Participants responded to items based on a 5-point scale of 1= strongly disagree to 5= strongly agree. An example item includes: "I feel tremendous pressure to produce results" ($\alpha = 0.711$).

3.2.2. Negative Work-Rumination

Negative work-rumination was recorded through a 4-item scale developed by Frone (2015). A sample item includes, "How often do I keep thinking about the negative things that happened?" ($\alpha = 0.820$). Respondents were asked to think about negative experiences at work, and then rate how often do they think or recall such negative experiences. They were asked to respond through options ranging from Never = 1 to Always = 5.

3.2.3. Insomnia Symptoms

Insomnia symptoms was recorded through a 4-item scale developed by Jenkins and colleagues (1988). A sample item includes, "How often in past one-month wake up feeling tired?" ($\alpha = 0.852$). Respondents were asked to respond through options ranging from less than once per month= 1 to everyday=5.

3.2.4. Employee Task-Performance

Employee task-performance was recorded through a scale developed by Schaubroeck and colleagues (2007). An example item includes "this employee is very competent" ($\alpha = 0.810$). The concerned supervisors, who were contacted personally, were asked to rate their focal subordinate performance.

3.2.5. Constant Connectivity

Constant connectivity was recorded through a 5-item scale developed by Büchler and colleagues (2020). An example item includes "Through the use of my mobile work device, I stay connected to work during non-work hours" ($\alpha = 0.801$). The respondents could answer 1=strongly disagree to 5 strongly agree.

4. DATA ANALYSIS AND RESULTS

This research has used SmartPLS3 developed by Ringle et al. (2015). SmartPLS 3 has certain characteristics that make it more useful as compared to co-variance based structural equation modelling (CB-SEM) like its ability to handle a non-normal data and smaller data sets. This study used two-steps approach for data analysis i.e., Structural model and measurement model (Anderson & Gerbing, 1988).

4.1. MEASUREMENT MODEL

4.1.1. Reliability, validity and descriptive statistics

The reliability of the variables was tested through Cronbach's alpha and composite reliability (CR). Not a single item had the factor loading below 0.6 so we did not remove any of the item for this research. All the Cronbach's alphas are between 0.7 and 0.9. All the composite reliabilities are above 0.7 and all AVEs are between 0.5 and 0.7. All the values met the threshold criteria recommended by Hair and colleagues (2017). This means all the constructs possessed sufficient convergent validity. The results are mentioned in table 1.

Cross loadings were used to check discriminant validity and it was found that all cross loadings are lesser than the factor loadings. Discriminant Validity was also checked through Fornell & Larcker and Heterotrait-Monotrait Method (HTMT) (Henseler et al., 2015). The results are mentioned in table 2 and the values are below 0.85 (Henseler et al., 2015).

Table 1. Measurement Model

			Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Performance Pressure	PP1	0.745	0.711	0.820	0.534
	PP2	0.717			
	PP3	0.782			
	PP4	0.674			
Negative Work-Rumination	NWR1	0.841	0.820	0.881	0.642
	NWR2	0.847			
	NWR3	0.741			
	NWR4	0.789			
Insomnia Symptoms	IS1	0.834	0.852	0.900	0.692
	IS2	0.818			
	IS3	0.843			
	IS4	0.833			
Employee Task-Performance	ETP1	0.831	0.810	0.886	0.722
	ETP2	0.891			
	ETP3	0.825			
Constant Connectivity	CC1	0.628	0.801	0.861	0.577
	CC2	0.839			
	CC3	0.789			
	CC4	0.777			
	CC5	0.679			

Table 2. Discriminant Validity

Fornell-Larcker criterion		1	2	3	4	5
1	Performance Pressure	0.707				
2	Negative Work-Rumination	0.249	0.806			
3	Insomnia Symptoms	0.208	0.377	0.832		
4	Employee Task-Performance	-0.206	-0.204	-0.440	0.850	
5	Constant Connectivity	0.266	0.434	0.550	-0.128	0.746

Note: Values in bold represent the square root of the AVE while the values under diagonal are correlations.

HTMT Criterion		1	2	3	4	5
1	Performance Pressure					
2	Negative Work-Rumination	0.331				
3	Insomnia Symptoms	0.26	0.442			
4	Employee Task-Performance	0.267	0.243	0.517		
5	Constant-Connectivity	0.366	0.543	0.642	0.141	

4.2. STRUCTURAL MODEL

This research followed assessment procedure of structural model suggested by Hair and colleagues (2017). Multicollinearity issues was checked through variance inflation factor (VIF) and the values of all the endogenous variables (negative work-rumination, insomnia symptoms and employee task-performance) were lower than the threshold value of 5. Hence no issue of collinearity. Model fitness was assessed through standardized root mean square residual (SRMR) (Henseler et al., 2016) SRMR value for this model was 0.077 which is less than the threshold value of 0.08, therefore, we can conclude that the model is fit.

Path co-efficient were assessed through bootstrapping technique with 5000 re-samples as suggested by Hair and colleagues (2017). In structural model, we tested the hypothesized paths, including both direct and indirect paths and the results are summarized in table 3. Hypotheses 1,2,3,4, and 6 were about direct links. In H1, this study hypothesized negative association between performance pressure and employee task-performance ($b = -0.271$, $t = 3.050$ and $p = 0.002$), H2 was about positive association between performance pressure and negative work-rumination ($b = 0.240$, $t = 03.861$ and $p = 0.000$), H3 was about positive association between Performance pressure and insomnia symptoms ($b = 0.122$, $t = 02.052$ and $p = 0.040$), H4 was about positive association between negative work-rumination and insomnia symptoms ($b = 0.345$, $t = 5.229$ and $p = 0.000$), H6 was about the negative association between Negative work-rumination and insomnia symptoms ($b = -0.479$, $t = 6.071$ and $p = 0.000$). All of direct paths hypothesized in this research showed significant relationships. H5 was about mediating role of negative work-rumination between performance pressure and insomnia symptoms ($b = 0.086$, $t = 02.932$ and $p = 0.003$) and H7 was about sequential mediation ($b = -0.036$, $t = 02.446$ and $p = 0.015$) so both hypothesized mediation hypotheses were accepted. H8 was about moderating role of constant connectivity between negative work-rumination and insomnia symptoms ($b = -0.141$, $t = 2.018$ and $p = 0.044$). The results were in the favor of this hypothesis as well (see Fig. 2). The effect size (f^2) is also mentioned in table 3 and is depicted as 0.02 = small, 0.15 = medium and 0.35 = large.

Table 3. Structural Model

	Path	Beta	St error	t-value	p-value	Decision	f ²
H1	PP--> ETP	-0.211	0.069	3.05	0.002	Accepted	0.047
H2	PP--> NWR	0.249	0.065	3.861	0.000	Accepted	0.066
H3	PP--> IS	0.122	0.059	2.052	0.040	Accepted	0.02
H4	NWR--> IS	0.345	0.066	5.229	0.000	Accepted	0.132
H6	IS-->ETP	-0.419	0.069	6.071	0.000	Accepted	0.213

Table 4. Mediation Analysis

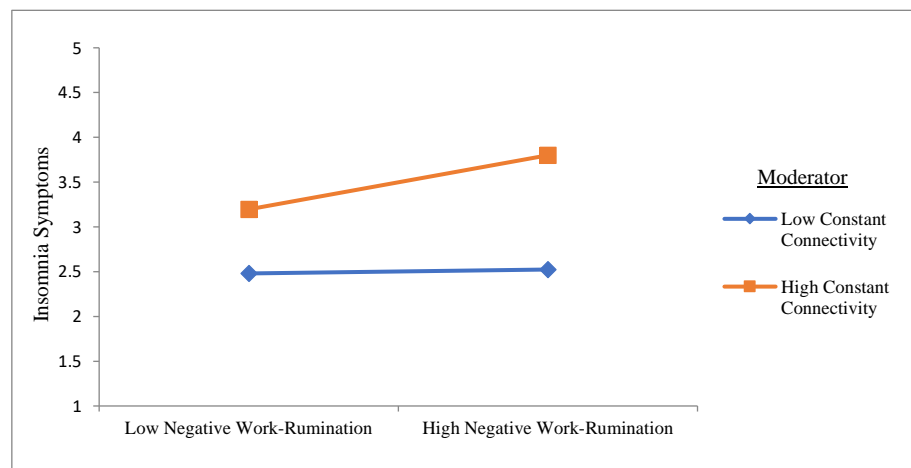
	Path	beta	St error	t-value	p-value	Decision
H5	PP-->NWR-->IS	0.086	0.029	2.932	0.003	Accepted
H7	PP-->NWR-->IS-->ETP	-0.036	0.015	2.446	0.015	Accepted

Table 5. Moderation Analysis

	Path	Moderator	beta	St error	t-value	p-value	Decision
H8	NWR--> IS	CC	0.140	0.069	2.039	0.042	Accepted

Note: PP, Performance-Pressure; ETP, Employee Task-Performance; NWR, Negative Work-Rumination; IS, Insomnia-Symptoms; CC, Constant Connectivity

Co-efficient of determination (R²) was used to find the significance of path coefficients for exogenous variables. The model was able to explain 20.8 % variance in employee task-performance, 32.8 % variance in insomnia symptoms and 6.2 % variance in negative work-rumination. Blindfolding procedure was also performed (with omission distance of 7) to get Stone-Geisser's Q² value. According to Hair et al. (2017) the value of Q² should be above 0, and for this research the value of Q² for endogenous variables : employee task-performance , insomnia symptoms, and negative work-rumination is 0.138, 0.215, and 0.037 respectively, which is greater than 0. Therefore, this model was considered to have predictive relevance.

**Fig. 2. Moderating Role of Constant Connectivity**

5. DISCUSSION AND CONCLUSION

The current research examined the both direct indirect effect of performance-pressure on insomnia symptoms and employee task-performance. Current research also examined sequential mediation of negative work-rumination and insomnia symptoms between performance-pressure and employee task-performance along with moderating role of

constant connectivity between negative work-rumination and insomnia symptoms. This study suggested that performance pressure leads to repetitive negative thoughts about work because of its link to substantial outcomes, such negative thoughts are termed as negative work-rumination, these thoughts further lead to sleeping disorder in form of insomnia symptoms which in turn hampers employee task-performance. All the hypotheses about mediation and direct paths along with sequential mediation were accepted. Current research also hypothesized the moderating role of constant connectivity between negative work-rumination and insomnia symptoms. The results revealed that constant connectivity strengthen the association between negative work-rumination and somatization. Blue wave-light emitted by MWDs in particular cell phones withholds the production of melatonin, which is a hormone that handles our circadian rhythm and sleep (Figueiro & Overington, 2016), lack of melatonin in our body can reduce daytime alertness (Ostrin, 2019). Therefore, the use of ICT at night, or constant connectivity through MWDs can lead to insomnia symptoms the reason could be suppression of melatonin.

In short, this research has suggested that performance pressure negatively affects employee task-performance through negative work-rumination and insomnia symptoms, and constant connectivity strengthened the link between negative work-rumination and insomnia symptoms.

5.1. LIMITATIONS, FUTURE DIRECTIONS AND IMPLICATIONS

As far as theoretical contribution is concerned, this research examined the association between performance pressure and negative work-rumination, along with the sequential mediation of negative work-rumination and insomnia symptoms between performance pressure and insomnia symptoms. Moderating role of constant connectivity was also examined. These links were not studied earlier in past researches. The findings of the study suggests that performance pressure may hamper employee performance because of its threatening nature and the managers should fix some time to contact employees, when they are at home, so that they can get psychologically detached from work and enter the office with a fresh mind the next morning because of having a good night sleep.

As already mentioned, that the data was collected in peak covid time, if the data is collected when things get back to normal, the results might be different. The data was collected from employees of manufacturing sector working in Islamabad and Rawalpindi region, another study can be conducted by specifying the industry or taking a single national organization. Future research should consider the positive aspects of performance pressure and examine the role of moderators like psychological detachment from work and self-efficacy in mitigating the link between performance pressure and negative work-rumination.

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