Does Emotional Intelligence Dwindle the Stress Due to Time Pressure and Work Overload? A Case Study of Nurses in Public Hospitals

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Abstract
The objective behind this research paper was to observe the impact of emotional intelligence on stress which is triggered by time pressure and due to work overload. With no regard to public or private organization setup, time pressure and work overload are reported by employees in general. Nurses are face the issue on daily basis. Stressful conditions due to time pressure and workload often lead to many organizational concerns in terms of mental health, physical health, absentee’s turnover, emotional burnout etc. emotional intelligence is considered a best-coping strategy and it is studied with many organizational variables which positively related to positive variable and inversely related negative variable. Time pressure and workload werestudied with emotional intelligence it was observed that emotional intelligence was inversely related to time pressure and work overload. For this purpose, SmartPLS 3.0 was used to find the path coefficients and R-square, the output shows that the path coefficient for work overload (-0.55) and for time pressure (-0.38), the R-square (0.31) and (0.14) for work overload and time pressure with significance P-value (0.000) (0.000) and T-statistic value (14.9) (8.5) respectively. Nurses of the three main hospitals of Peshawar was the observing unit. And data was collected through self-administrated questionnaires, a stratified and systematic random sample was used to obtain the sample size of 359 out of approximately 2000 nurses including the adjusting nursing schools which works under these hospitals setting.

Keywords: Emotional Intelligence, Work Stress, Time Pressure, Work Overload.

1. Introduction
With no reference to a public or private organization when it comes to time pressure or work overload all the employees complain in general. Time pressure if it is because of so many tasks to be completed in little time or it’s because unskilled worker that could not cope with the speed of the work. In simple words when the stress that a person feels because of time constraints is time pressure and the work burden is the condition when one feel is doing more the one person. As cited by (Ali et al., 2014). The number of tasks and assignments which employees are bound to perform during their duty time is referred to as workload. It is mostly observed when human resources shortages are observed in organizations. As cited
by Baer and Oldham (2006). The degree to which an individual perceives that inadequate time is available to perform a related task or to perform a task much faster than that interval of time, is referred to as Time Pressure. Due to such conditions, one feels stressed. Cuceogl(1999) reflected stress to be both physiological & psychological and acknowledged stress as an individual’s fight beyond own physical and psychological boundaries because of uncomfortable conditions approaching from the environment. Schermerhorn,(1989) called stress the strain experienced by an individual when he/she meet uncommon demands, restrictions, or occasions. According to another definition, stress is a state concerning strain, and it depends on factors such as inhibition, Conflict, experiencing change, and exceptional personal elements. (Kalyoncu et.al., 2012; Rogers, 2007). It is well-identified universally as a leading contest to human’s conceptual and corporal health, and also organizational health (ILO 1986; Park, 2007). When it comes to stress or conditions caused by stress the best solution one can find is within the self. And the best soft skill one must have is emotional intelligence skills. An ability to be aware of self, able to manage own self and based on this ability controlling and understanding the emotions of others which will lead to a long-lasting relationship. Sunil, (2009) believed that Emotional Intelligence played a rescue role and appropriately respond to different stressors. Zeidner et al., (2006) observed the core aspects of Emotional Intelligence can be related to ‘resilience and adaptability in stressful situations. It also includes the ability to handle adaptively the changing circumstances.

2. Literature Review
Many types of research like Cuceoglu (1999) & Schermerhorn (1989) are carried out in different organizational settings to determine the potential Problems that affect different organizational goals and to explore the determinants and causes of Work Stress and Emotional Intelligence and finding remedies to the Work Stress problems. Work Stress and Emotional Intelligence are one of those problem-remedy relations, which are catching the attention of modern researchers, leaders, and mangers.

2.1. Time Pressure
The degree an individual perceives that inadequate time available to perform related task or to perform a task much faster than that interval of time, is referred as Time Pressure. Baer and Oldham (2006). While Kinicki and Vecchio (1994) views Time Pressure in terms of insufficient time to perform certain tasks. Time Pressure has been debated in numerous readings as a form of stress mainly in decision-making situations, auditing (Solomon & Brown 1992), marketing (Heroux, Laroch, & McGown, 1988) and business management (Bronner, 1982) (Khan, T. I, Saeed, I. Junaid, M., Jawad, 2018). Amongst the job stress components Parker and Decotiis (1983) revealed was feeling under Time Pressure at work, which was strongly connected to the number of hours worked per week. Same as them, Perlow (1999) an organizational psychologist finds that stress is connected to quantitative amount of working hours’ time demanded from their workers. Research also looking into work schedules i.e., work shifts as locally known, repeated work shifts, or long working shifts contribute into stress.
A thorough studies of time dairy over the past five decades proves that number of working hours relatively remain unchanged (e.g., Aguiar & Hurst, 2007). The ambiguity that there has been an actual change in working hours or not over perceived time stress raises the issue that something other than the working hours may have contributed to Time Pressure. Thus, some researchers investigated other aspects like individual differences might have the reasons like negative affectivity and many other factors influencing how people respond to Work Stressors (e.g., Brief, Burke, George, Robinson, & Webster, 1988; Moyle, 1995). One can say Time Pressure can be associated with individual differences that how people react to situations they encounter, while some can say that Time Pressure is associated with the
lack of sufficient time to carry out all the things they need to do. (Restegary & Landy, 1993). To agree with the arguments Robinson & Godbey (1997) pose that greater felling of Time Pressure is associated to high objectives of task to be done in available time. They imbedded their arguments with the concept that time scarcity is mostly perceptual and instances one.

The writings on experiential decision making (e.g., Gilovich, Griffin, & Kahneman, 2002) and opportunity costs (Hamermesh & Lee, 2007) both has observed that perceived time is connected to the economic value or worth of one’s time as King, Hicks, and Abdelkhalik (2009, p. 1459) noted, “attaching high value to an object produces biased perceptions of its scarcity.” In the successions of readings stated here, it can be observed that in fact one causal factor is the economic value of time that causes Time Pressure. as cited by (DeVoe & Pfeffer, 2011 & Tang & Chang, 2010)

2.2. Work Overload

Role overload describes states in which individual’s sense that there are so many tasks or activities expected of them in relation to the time available, their abilities, and other constraints (Yongkang, Weixi, Yalin, Yipeng, & Liu, 2014). “Role overload occurs when people find inconsistency between the time required to finish the task and the time available for them” (Yongkang et al., 2014). The number of tasks and assignments which employees are bond to perform during their duty time is referred to workload (Ali et al., 2014). The degree of stress felt by employee due to the believe that they having difficulty adjusting to the amount of work assigned to them refer to Work Overload (Idris, 2011). French and Caplan (1973) considered Work Overload can either be quantitative means too much must be done or qualitative which means something which is very difficult to complete. In theoretical explanation Work Overload refers to excessive demands.

Classification of workload can be observed in two forms 1. Role overload and 2. Role lower load. Role overload refers to over expectation from individuals with regards to the available time, resources and their capabilities which are directed from top management, immediate boss, colleagues, subordinates and even from local community (Ammar, 2006). Workload can be qualitative or quantitative in nature (Trayambak, Kumar, & Jha, 2012). Qualitative refers to ability of the individual to complete a task. quantitative workload refers to the no of tasks in relation to shortage of time (Conley & Woosley, 2000). (2) Role lower load refers to the condition when the levels of individual capabilities are higher than the role and duty assignments which lead to boredom or stress. In either case individual will experience job stress, one is due to the fear of not completing the task and expectations of the job and the other is due to the small duty assignments and less importance of the task assigned.

2.3. Emotional Intelligence and Work Stress as Problem/Causes

Landa and Lopez-Zafra, (2010) viewed some primary causes of nurses’ stress linked to the direct dealing with pain and death, the expectations of patients and their relatives to respond with emotions and empathies, long shifts, heavy load of responsibilities of the work environment and physical fatigue. Enjezab & Farnia (2001) declared that job stress or Work Stress is a universal problem, it is observed everywhere in the society at all professional and occupational levels, it is also considered very costly to the organization due to which employees overall performance reduces, and it increases the absenteees, increase medical cost and insurance and mental disabilities of the workers and funding for new recruitment. Sunil, (2009) found that high workload, high targets, pressure to perform, tight deadlines (Time Pressure), lack of job satisfaction type of work, long working hours, interpersonal conflicts at the workplace such as boss-subordinate relationship and relationship with peers are major sources of stress. The causes of Work Stress to Rothman (2008) can be “poor working conditions, high workload, involuntary overtime, inflexible working hours, excessive demands, very frequent changes or monotony”.

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2.4. Emotional Intelligence and Work Stress as Results

Work Stress is inversely related to Emotional Intelligence. The study conducted by Ioannis & Ioannis (2002) put forward the concept that people with high Emotional Intelligence suffered less stress in the working environment. Gardner (2005) believed that training programs used to enhance Emotional Intelligence decrease ‘feeling of stress and strain’. Oginska-Bulik (2005) studied the effect of EI on Work Stress which showed a negative relationship between the two in the workplace. Petrides & Furnham (2006) in their studies ascertained that employee with high Emotional Intelligence traits was associated with lower levels of stress. Studies conducted by Adeyemo & Ogunyemi (2006) significantly showed the negative relationship between Emotional Intelligence and occupational stress amongst the academic staff of Nigerian universities with a sample size of 300. The studies also revealed that Emotional Intelligence makes a significant contribution to predicting Work Stress. The study governed, Singh and Singh (2008) also revealed a ‘negative relationship’ between Emotional Intelligence & ‘organizational role stress’ amongst medical professionals. A study conducted by Brink (2007) showed that individuals who have a lower level of emotional management and emotional control are likely to report higher levels of Work Stress.

2.5. Emotional Intelligence and Work Stress as Solutions

Numerous studies have advocated that people with high ‘Emotional Intelligence’ are more proficient in ‘understanding and managing’ their ‘emotions’, which permit them to adjust to their environments and become more accepting to challenging circumstances, including stress (Bar-On, 1997; Goleman, 2005; Matthews et al., 2006). The concept of stress is perceived, and Emotional Intelligence plays a significant role in determining the sources of stress and mental process. Ucar, (2004). Likewise, it has been observed in the nursing profession and positive effects of Emotional Intelligence of nurses in relation to job satisfaction and the ability to cope with stress. (Akerjordet and Severinson, 2008; Montes-Berges and Augusto, 2007). A study conducted by Kaut and Kaur, (2013) demonstrates the important role of Emotional Intelligence in reducing stress amongst teachers. Matthews et al., (2006) conducted a study on banking employees about which he believed that other studies indicated that Emotional Intelligence does not moderate stress. Cole, (2009) proposed that ‘higher EI can be used to manage stagnation related stress’. Zeidner et al., (2006) observed the core aspects of Emotional Intelligence can be related to ‘resilience and adaptability in stressful situations. It also includes the ability to handle adaptively the changing circumstances. Jordan et al., (2002) believed that if someone understands emotions their reaction to demands. They are more likely to adapt to every situation & will be able to use effective coping strategies.

H1. Emotional intelligence is inversely related to work overload and time pressure.

2.6. Theoretical and Conceptual Model

Self-efficacy theory given by Bandura’s (1977) suggests that if an individual partakes high level of self-efficacy (i.e., credence to his/her capability in achieving a task) this will not beseech his/her unwanted cognitive opinions. Application of this theory in a job-related stress model displays that if a being has high self-efficacy (i.e., faith to his/her aptitude to maintain emotions) this will meritoriously decline his/her occupation stressors and upsurge his/her emotional wellbeing and lower the level of psychosomatic stress. A contemporary sentiment grounded theory that is EI theory, in general, elucidates those entities who have adequate interactive and intrapersonal proficiencies can correctly control their emotions and other underlying emotions to handle environmental challenges (Salovey & Mayer, 1990, 1997; Bar-On, 1997; Goleman, 1998, 2004).
3. Methods
The purpose of the study was empirical in nature, and it is considered the first study under this head in the hospitals in Peshawar district. The type of investigation of this study was casual in nature, the study observed the Role of Emotional Intelligence on Work Stress (Time pressure and work overload) in a non-contrived setting, a field study of quantitative survey method following positivism research philosophy, to carry out the analysis on the Work Stress of nurses and medical staff in three major public hospitals (lady reading, Khyber Teaching and Complex Hospital) of district Peshawar. Paul Mohapel (2015) scale of emotional intelligence was adapted and for time pressure and work overload Powell, et.al. (2012) Remondet,J,h., and Hansson,r,o (1991) scales were taken for this study. The reliability and validity were achieved for the scales.

3.1. Population, Sample and Procedure
Three Major hospitals in district Peshawar was targeted to be the population of the study and sample size was drawn using the Stratified sampling technique. Different strata of medical staff and nurses were chosen from different sections (wards) of the hospital. Among 480 questionnaires 359 questionnaires were received of which 108 were from the lady reading hospital and 49 from the lady reading nursing school. A total of 157 questionnaires from lady readying and lady reading nursing school were received out of 220 questionnaires with a responding rate of 71%. 75 questionnaires were received from KTH and 50 questionnaires from KTH nursing school which in total 125 questionnaires were received out of 140 with a responding rate of 89%. From HMC total of 54 questionnaires were received of which 29 were from the hospital and 25 were from nursing school Out of 120 questionnaires with the responding rate of 45%. The response rate varies but it should be between 30 to 60%. Beutell, Nicolas. (2017). A total sample size of 359 was tested for this study at a 95% confidence level which was 18% of the total population according to the Creative Research Systems survey software sample calculator, (Sample Size Calculator.2019), with population of 2000 with 95% confidence level and confidence level and at ±5confidence interval it has to be 321. With 359 samples size shows that this current study has overreached the minimum requirement of sample size for the study.
Table 1: Population Break Down

<table>
<thead>
<tr>
<th>S.No</th>
<th>Population Size</th>
<th>Hospitals Name</th>
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<tbody>
<tr>
<td>1</td>
<td>up to 1000 nurses and medical staff including student nurses and internees</td>
<td>Lady Reading Hospital</td>
</tr>
<tr>
<td>2</td>
<td>650 staff and including student nurses and internees</td>
<td>Khyber Teaching Hospital (KTH)</td>
</tr>
<tr>
<td>3</td>
<td>350 staff including HMC kidney centre and burn centre.</td>
<td>Hayatabad medical complex (HMC) and kidney centre</td>
</tr>
</tbody>
</table>

Total population up to 2000

Table 2: Sample Size Distribution

<table>
<thead>
<tr>
<th>Sample size taken</th>
<th>Hospitals Name (distributed)</th>
<th>Received questionnaires</th>
<th>% Age Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>Lady Reading Hospital Total 220</td>
<td>108 from lady reading hospital and 49 from lady reading nursing school, Total of 157</td>
<td>71%</td>
</tr>
<tr>
<td>650</td>
<td>Khyber Teaching Hospital (KTH) Total 140</td>
<td>75 from KTH and 50 from KTH nursing school which in total 125</td>
<td>89%</td>
</tr>
<tr>
<td>350</td>
<td>Hayatabad medical complex (HMC) and kidney centre Total 120</td>
<td>which 29 from hospital and 25 from nursing school total 54 questionnaires were received</td>
<td>45%</td>
</tr>
<tr>
<td>Total population up to 2000</td>
<td>Total 480</td>
<td>Total received 359</td>
<td>74%</td>
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3.2. Data Analysis Techniques

This research used Smartpls 3.0 for data analysis. Structural Equation Modeling, Path Analysis and Bootstrapping were used to find the Path Coefficients, R-Square, P-Value, T Statistics, the model significance of the variables understudies study used Emotional Intelligence as the independent variable and Time Pressure and Work overload as the dependent variable. Emotional Intelligence is divided into four dimensions, ‘Self-Awareness’ (10 items), ‘Self-Management’ (10 items), ‘Social Awareness’ (10 items), and ‘Relationship Management’ (10 items) Goleman 1997, Paul Mohapel (2015). Developed a model for “Emotional Intelligence Self-Assessment questionnaire adapted for the San Diego City College MESA Program” term “emotional” is replaced with “Self” (i.e., emotional awareness with self-awareness and vice versa) as originally termed by Goleman (1995). 10 items of each dimension of Emotional Intelligence contribute to one composite index of Emotional Intelligence (i.e., every 40 items of 4 dimensions tap some part of Emotional Intelligence) same as for Work Overload and Time Pressure. To develop the structural model for this complex model in SmartPLS 3.0, 2nd order factors method was used which includes the repeated indicator approach to produce LVS (latent variable score) and then copying the LVS to excel sheet and run as a new project for a path model. To produce the latent variable score of formative variables, the researcher run a PLS algorithm, instead of a consistent PLS algorithm as the researcher was interested to produce factors than path at first order, before running the test, the researcher copy the items of all Emotional Intelligence and Work Stressors into two new latent variables than was connected as required. A new model based on the latent variable score for path analysis was
produced to achieve the results of path coefficient, $R^2$ Square, and model significance, to test the significance level of these results bootstrapping procedure was carried out $R^2$ values, P-Value and T Statistic. The method was used and approved by Gaskin et al., (2018). Ringle et al., (2015). Henseler et al., (2015).

4. Results
This study used emotional intelligence as an independent variable and time pressure and work overload as (stressors) dependent variables, to observe the effect of emotional intelligence on these two variables. The researcher proposed the relationship will be inverse in nature based on literature and previous finding. To get the results smart pls 3.0 were used for data analysis.

Table 1.0 Path Coefficient

<table>
<thead>
<tr>
<th>Mean, STDEV, T-Values, P-Values</th>
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<tr>
<td><strong>Original Sample (O)</strong></td>
</tr>
<tr>
<td>Emotional Intelligence -&gt; Time pressure</td>
</tr>
<tr>
<td>Emotional Intelligence -&gt; work overload</td>
</tr>
</tbody>
</table>

Table 1 and figure 1 illustrates the Path Coefficients and $R^2$ Square results of path analysis of emotional intelligence and time pressure and work overload. The Path Coefficients results shows the inverse
relationship between emotional intelligence and Time Pressure and Work Overload) the results show that (-0.38, -0.55) respectively the minus signs show the negative relations which means when one increase the other decrease in strength and R. square (0.14, 0.31) respectively, Which means that one unit increase in emotional intelligence will bring 38 % unit change in Time Pressure and 55 % in Work Overload. (T-value >2.0) and (P-Value <0.000) shows significant results. The R Square means that the independent variable (emotional intelligence) 14 %and 31 % variances explained in dependent variables (TP, WOL) respectively. The T statistics and P-values in relationship with TP and WOL show significance. When a person is high on emotional intelligence scale, he will be able to understand himself and these skills will help to manage themselves better in stressful situations especially when it comes to time pressure and work overload. So, the results and finding shows that the nurses of three prominent hospitals of dist. Peshawar show inverse relationship between emotional intelligence and time pressure and Work overload, which repeat the results of previous studies. The higher the level of Self-Management the lower the chances of Work Stress. King & Gardner’s (2006), Dehshiri, (2004), Bar-On,(1997) Goleman, (1998)(Salovey & Mayer, 1990, 1997).

5. Discussions and Conclusions
It’s a proven fact, based on establish literature that Work Stress negatively impacts all the positive organizational variables (performance, satisfaction, growth) and positively affect all the negative organizational variables (employee’s health, turnover, absenteeism). Individuals recognize a condition which normally happens when they face a strain which are more than their endurance regards as stress. Various Studies have been carried out to explore the determinants, causes, and finding remedies to the problems. Work Stress and Emotional Intelligence are one of those problem-remedy relations, which are catching the attention of modern researchers, leaders, and managers. The role of Emotional Intelligence has proven its significance with many organizational important variables (performance, decision making etc.) The term Emotional Intelligence was clearly defined and conceptualized by Salovey and Mayer (1990) as “The ability to monitor one’s own feelings and emotions, to discriminate among them, and to use this information to guide one’s thinking and action” (p.189). Profound research has been conducted on Work Stress and Emotional Intelligence, it is observed that Emotional Intelligence is inversely related to job stress, the higher the level of Emotional Intelligence in individuals the lesser the work-related stress found in the individuals. Goleman,1998) describe that EI play a vital role in the time of stress for the people to motivate themselves and to control the behaviors which can be result due to stressors which is also cited by (Bryant & Malone, 2015). Numerous studies have advocated that people with high ‘Emotional Intelligence’ are more proficient of ‘understanding and managing’ their ‘emotions’, which permits them to adjust to their environments and become more accepting to challenging circumstances, including stress (Bar-On, 1997; Goleman, 2005; Matthews et al., 2006).

The present study was conducted in Peshawar, KP, and Pakistan. Nurses of main hospitals were the units of analysis and observation unit. The main objective behind choosing this sector was that nurses and medical staff is considered the first line of defense in any emergency or dealing with a patient’s family anger, panic, and disturbance while the doctor has not arrived yet. The importance of this study highlighted the fact that it is the first study in his own style, taking emotional intelligence with time pressure and work overload.

For this study, a sample of 361 nurses were selected from three hospitals and adjutant nursing schools during their working hours from three shifts from all the major’s wards of the hospitals. The results of the
study proved that emotional intelligence is inversely related to time pressure and work overload which means when one understands and control his emotions, he will be less affected by these stressors which ultimately will reduce the stress caused by these stressors. Work stress is a multi-dimensions phenomenon and multi stressors can contribute to work stress, therefore, it is recommended that different work stressors can be added to assess the effect and different sectors which are not yet explored or partially explored shall be the focus of future research. Other significant sectors which deal in life and death situations like firefighters, rescue services, doctors, bomb disposal squads etc. shall be viewed in future research.

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