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Preface

SDM Research Center for Management Studies (RCMS), since inception, has endeavored to promote research in the field of management education, in various ways. In this direction, in order to promote applied research, the Research Center has taken a unique initiative to encourage the faculty members to carry out various projects in the areas of management.

After completion of the projects, based on the peer review, reports are published with an ISBN number, the Institute. The projects help the faculty members, and the students, who assist the faculty members for these projects, in various aspects, to gain practical knowledge, in the field of management.

The institute takes into account the time and resources required by the faculty members to carry out such projects, and, fully sponsors them to cover the various costs of the project work (for data collection, travel, etc).

From the academic viewpoint, these projects provide a unique opportunity to the faculty members and the students to get a first-hand experience, in investigating issues and concerns of targeted organizations or sectors, on a face to face basis, thereby, helping in knowledge creation and its transfer.

Mousumi Sengupta

Chairperson - SDM RCMS





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Executive summary

Stress is a feeling of strain or pressure, due to certain change in the environmental demands. In everyday life today, the demands are heavy and puts the individual under lot of stress and anxiety. The need to accomplish targets on time, every time, with very little tolerance for errors, are creating enormous stress on individuals in modern day life. Selye (1956) defined stress as the "rate of wear and tear on the body" and stressors as the "causative agents of stress". The proposed project seeks to investigate the issues related to causing and managing stress among the nursing staff, working in the private hospitals in India. In order to achieve the research objectives of the study, we have used causal research design. This is because, the study tries to establish a causal relation between the construct "Stress" and the factors related to the construct in the form of a model. Also, the study tries to observe the variation in the construct "Stress" in relation with the constructs related to the activities of nurses.

The population for the study was the nurses working in different private hospitals. Data was collected from Bangalore and Mysore (Karnataka), Kolkata (West Bengal), Chennai (Tamil Nadu), Hyderabad (Andhra Pradesh), and Mumbai and Pune (Maharashtra), Ahmedabad (Gujarat) and New Delhi. Data was collected by administering a questionnaire and personal interactions.

Taking into consideration the objectives of the study, based on the literature review and the experience of the researcher, a questionnaire has been designed. It consists of questions that draws the responses from the nurses on aspects related to their workload, working conditions, conflict at the work etc. The questions are framed based on the literature review on these aspects and the same are used to build a model in the later stages.

The present study supported the existing literature and the result revealed that, stress among nursing staff can be studied with the help of constructs, such as, manpower adequacy, administrative flexibility, conflict management, confrontation with patients and families, patients' conditions, management of negative emotions, and, work-life balance.

Among the latent constructs, Work - life balance has higher impact on stress, followed by management of negative emotions, patients' conditions conflict management, confrontation with patients and families, administrative flexibility, and, manpower adequacy.

The above clearly demonstrates that, the sheer nature of the job of the nursing staff, irrespective of their department or day-to-day work demand, cause unique stressful conditions. For example, work-life balance is the construct, where nursing staff face unique challenges. Their personal lives often get affected due to their mental and physical conditions resulting from the extreme pressure, tension, and time-bound challenges at work they face while saving patients.

The constructs, such as, confrontation with patients and families, and, patients' conditions are unique conditions which nursing staff must experience, unlike the employees in other sectors.

Similarly, management of negative emotions becomes more crucial for the nursing staff, as the lack of the same may affect the patients' conditions, in addition to affect their own mental and physical condition.

However, the administrative flexibility, and, manpower adequacy are the two constraints which employees working in all the sectors face.



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Introduction

Stress is a feeling of strain or pressure, due to certain change in the environmental demands. Hans Selye (2009) defined the term stress "as a non-specific response of the body to any demand for change". Howard (2008, p.105) has defined stress "as any condition in which there is a marked discrepancy between demands placed on worker's capacity or perceived capacity to respond" (Howard, 2008, p105). Bernstein et al. (2008) has explained that, any circumstance or event, which threatens to disrupt people's daily functioning and causes them to adjust, may act as a cause of stress. In everyday life today, the demands are heavy and puts the individual under lot of stress and anxiety. The need to accomplish targets on time, every time, with very little tolerance for errors, are creating enormous stress on individuals in modern day life. Selve (1956) defined stress as the "rate of wear and tear on the body" and stressors as the "causative agents of stress". The World Health Organization (WHO 1948) defined work stress as individuals' responses in work demands and pressures, that do not match their knowledge and abilities and challenge their ability to cope. Selve opined that the stressors may be physical, such as infection, injury, and pain, or may be psychological, such as fear, anger, and sadness. He identified what was termed as a general adaptation syndrome (GAS), wherein the body seeks to maintain homeostasis or balance. Originally, stress was conceived as the pressure from the environment, and, strain within the person. The generally accepted definition of stress today is as the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation. Therefore, some situation have more potential for causing stress, and, in more magnitude in some people than others (http://oem.bmj.com/content/59/ 1/67).

There are two types of stress: Eustress and distress. Eustress comes from the Greek word "eu", which means good. Eustress, the 'beneficial stress', encourages an individual to make a continuous effort to achieve a given performance target. Eustress is imperative in an individual's life, as everybody needs challenges, besides motivation and encouragement, to prove him/herself. Also, eustress often provides a sense of fulfilment, when a task is completed. Distress originates from the Latin word "dis", which means negative. Distress is experienced when an individual finds it difficult to cope with and, can lead to anxiety, depression, or, even physical symptoms, ranging from headache to heart disease. There are several causes, due to which one may feel distress, such as, excessive workload, conflicting and unrealistic expectations from others, conflict with friends/colleagues/family members, financial problems, fear of nonperformance, and so on.

Stress has been considered as a potential occupational hazard when research began to pour in the mid-1950s (Kahn et al, 1964). It has also been cited as a major factor for health-related problem (Caplan et al, 1980; House, 1981; Pelletier, 1984). In 1960, Menzies was the first to assess work stress among nurses and he identified four factors as sources for anxiety among nurses, such as : patient care, decision-making, taking responsibility, and change. In addition, from the mid-1980s, increase stress among nurses in workplace have been attributed to such factors as the increasing use of technology, continuing rises in health care costs (Jennings, 1994), and turbulence within the work environment (Jennings, 2007).

While workplace stress is a normal phenomenon to experience, excessive stress can create problems for an individual's productivity and performance, can impact the individual's physical and emotional health, and can affect your relationships and home life. Since it is not possible to control each and every workplace factor, stress is unavoidable. However, people need to learn what are the factors which cause stress, relationship between stress and health, performance, and relationship, and so on to make a attempt to minimize the negative effect of stress. Since healthcare sector deals with health and life uncertainties and emergencies, physical and mental stress is perhaps more difficult to manage in daily lives of the healthcare



professionals.

Freudenberg in 1974 came up with a term called "burnout" to explain the reactions of workers affecting them at workplace due to over exhaustion resulting from chronic stress situations. It is described as a syndrome with typical characteristics like emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1982). However, since work life is intertwined closely with family lives of individuals, this may also cause the burnout syndrome as a combined effect resulting from varied responsibilities, such as marriage, children, and work that may have to be tackled (Haw, 1982; Muller, 1986; Woods, 1985).

The factors, which cause stress among the nurses, may be of two types: work-related causes (stressors) and organizational stressors. Work-related factors include long working hours, excessive work load, dealing with death and dying, inter-personal conflict with other staff, patient's expectation, and threat of malpractice litigation. Nurses face the organization stressors, as well, which are resultant from communication problems between workers and higher authorities, problems with team worker, role ambignity and administrative factor.

Stress may be indicated through changes in people's behavior. Responses to stress may be experience of feelings, such as, anxiety, depression, irritability, fatigue; behavior, such as, being withdrawn, aggressive, tearful, unmotivated; thinking, such as, difficulties of concentration and problem - solving; physical symptoms, such as, palpitations, nausea, headaches. Persistent stress may lead to changes in neuroendocrine, cardiovascular, autonomic and immunological functioning, resulting into mental and physical ill health (anxiety, depression, heart disease) [Cooper & Marshall, 1976, cited in http:// oem.bmj.com/content/59/1/67.]

It is globally accepted now that human beings are prone to fatigue and wear out, if exposed to long hours of work without rest. Health care professionals and particularly, nurses are susceptible to these typical stress patterns because of their long hours of duty, which is both physically and emotionally draining., leading to burnout and stress among them. Due to number of factors nurses are prone to stress. Such factors include, poor staffing, high workload, communication breakdown, death and sometimes pressures arising from medication errors, caring for dying patients and sometimes death itself, unplanned long hours, heavy paperwork, physical abuse from patients or their families, and so on.

Literature review

Causes of stress: Stressors

The cause of any stress is called as stressor. A stressor is an event, experience, or environmental stimulus that causes stress in an individual (Pastorino & Doyle-Portillo, 2009). Lazarus (1966) has opined that, individuals experience stress when they fail to sufficiently cope with the situational demands or perceive any threat to their well-being. Thus, workrelated stress may be caused by faulty organizational systems, policies, procedures, etc. Researchers (Leka et al. 2003; Stoica & Buicu 2010) have argued that work related stress could also be as a result of poor institutional management, poor work environment or working condition as well as lack of support from other members of the team.

Stressors may be classified into four categories: 1) crises/catastrophes, 2) major life events, 3) daily hassles/micro-stressors, and 4) ambient stressors (Pastorino & Doyle-Portillo, 2009). They are as follows:

Crises/catastrophes: This type of stressor is experienced in an unforeseen and unpredictable situation and, is completely out of the control of the individual. Situations, such as, natural disasters (e.g.; floods, earthquakes), are such stressors.

Major life events: Life events, such as, marriage, death of a loved one, birth of a child, may also create stressful situations, since they have potential to create a sense of uncertainty and fear, which will ultimately lead to stress. For instance, research has found the elevation of stress during the transition from high school to



university, with college freshmen being about two times more likely to be stressed than final year students (*Teo and Fam, 2018*).

Daily hassles / microstressors - this includes daily irritants and hassles, such as, making decisions, meeting deadlines at work or school, traffic jams, etc. Daily stressors are different for each individual, with different levels of stress effect. There are three major psychological types of conflicts that can cause daily stress. They are as follows (Pastorino & Doyle-Portillo, 2009):

- The approach-approach conflict A person experiences this type of stress while selecting between two equally attractive options (example: whether to go see a movie or to go see a concert).
- The avoidance-avoidance conflict It occurs where a person is to choose between two equally unattractive options (example: to take out a second loan with unappealing terms to pay off the mortgage or to face foreclosure on one's house).
- The approach-avoidance conflict It occurs when a person is to decide to participate in something that has both attractive and unattractive options (example: whether or not to attend an expensive college, meaning, taking out loans now, but also meaning a quality education and employment after graduation).

Travel-related stress results from three main categories: lost time, surprises (an unforeseen event such as lost or delayed baggage) and routine breakers (inability to maintain daily habits) [http:// www.ttgmice.com/2013/04/25/cwt-rolls-out-solutionto-tackle-cost-of-travel-stress/].

Ambient stressors: These are "chronic, negatively valued, non-urgent, physically perceptible, and intractable to the efforts of individuals to change them" (*Campbell, 2016*). Pollution, noise, crowding, and traffic, are such type of stressors. Unlike the other

three types of stressor, ambient stressors may cause stress in individuals, without generating conscious awareness and, thus, are low on "perceptual salience" (Campbell, 2016).

Organizational stressors : Some of the most potent stressors can be due to personal organizational problems at work . Stress due to bad organizational practices is often connected to "Toxic Leadership", both in companies and in governmental organizations (Whicker, 1996). Workplace situations which are unpredictable or uncontrollable, uncertain, ambiguous or unfamiliar, or involving conflict, cause stress.

How stress is caused

Two protective physiological mechanisms in human body are responsible for causing the various experience of stress: Alarm reaction and Adaptation.

"Alarm reaction" - When an individual confronts a threat, his/her first response is physiological arousal. Body muscles get tense and breathing and heart rate become more rapid. This makes the individual to choose between fight or flight the situation.

"Adaptation". This mechanism allows an individual to stop responding to the environmental stimuli. Here, the stimuli are not any more perceived as threats. If this process does not function, individuals will eventually collapse from physical wear and tear, and mental exhaustion.

Stress is experienced when either of these mechanisms are not functioning properly or when are individuals fail to switch appropriately from one to another. This forms the basis of individual approaches to stress management. The perception, or appraisal, of the situational stimuli, determine the causes of stress. This is the basis of the transactional model of stress (Iazarus & Folkman, 1984). This model advocates that the ability of a person for preventing or reducing stress is determined by that person's appraisal of (a) the threat within a situation (primary appraisal), and (b) the appraisal of his/her coping skills to deal with that threat (secondary appraisal). These appraisals are



dependent on the individuals' past experiences of confronting stress and, affect the potential behavior and appraisals, in future. Therefore, the process of appraisal, behavior, and stress is continuous, and managing stress can result from changing the way the situation is appraised (cognitive techniques) or responded to (behavioral or cognitive techniques) [source : http://cem.bmj.com/content/59/1/67]. This is explained in the following figure.



Managing stress

(source : http://oem.bmj.com/content/59/1/67)

Stress at work

Several studies have been made to investigate the causes for workplace stress among nurses. Williams et al (1998) have stated the follow g in this context:

- Long working hours causing work overload and pressures
- Effect on Personal life because of the above factors
- Inability to take part in decision-making process and lack of control on work itself
- Inadequate social support
- Ambiguous management styles and work roles.

Based on the above, (Karasek & Theorell, 1990) has suggested that with increase in job demands and lack of control over it, there is a higher risk of work-related strain and risk to health. Conversely, more decisionmaking ability and control on one's own work pattern can lead to higher levels of motivation to learn and increase the sense of accomplishment. Ability to make and influence decisions at work place is definitely an important factor than demand (Johnson et al 1996). This model has extended itself (after its introduction in 1979) to include social support as a predictor for workplace related job strain (Hall 1985).

Ambiguous work or conflicting roles and boundaries and being responsible for other people can act as stressors in the place of work. While job development can reduce stress levels, on the other hand, under promotion, lack of training, and job insecurity can have an opposite effect. Organizational culture and relationships at work can either act as a buffer against stress or have an opposite effect, too. Managers who have bullying styles, unsupportive and make critical demands can cause more stress in their subordinates than those who promote team work and positive social dimensions at the workplace and help in reducing stress levels.

Providing good amenities at work, along with a culture of involvement of people in decision-making at work, paid overtime goes a long way in managing organizational change better and reduces attrition rates and loss of talented people in organizations. On the contrary, mergers, relocation, restructuring or "downsizing", individual contracts, and redundancies within the organization can act as major stressors and lead to demotivation and increase levels of attrition in organizations.

Individual differences

There are individual differences in the way people experience stress and become vulnerable to it. Lack of material or physical sources at work (financial security), psychological resources (coping skills, adequate self-esteem) coupled with Type A behavioral factors (like being highly competitive and pressured to complete task on time, every time), can make individuals more vulnerable to stress.

A successful workplace strategy for reducing stress



would be to fit jobs with people rather than trying to fit people to jobs, since different people demonstrate different thresholds for responding to stress.

Interactions between work and home stress

The stressful nature of workplaces eventually starts affecting the quality of life at homes and social lives of employees. Long, uncertain or unsocial hours, working away from home, taking work home, high levels of responsibility, job insecurity, and job relocation are the major culprits which can adversely affect the work-life balance of individuals by disallowing them to have adequate leisure time and time for attending to their family's requirements. Conversely, domestic pressures, such as, childcare responsibilities, financial worries, bereavement, and housing problems may affect a person's ability to be stress-free and productive in their workplaces. Thus, a vicious cycle of stress may be created by stress which might lead to an individual's ability to cope with stress adequately and effectively.

Stress in Healthcare

Healthcare sector by its very nature is a stressful place. This environment not only affects their well-being, workplace behavior, but also their personal lives, adversely. Studies have, therefore, focused on ascertaining how work pressures, high levels of strain at work, low levels of work satisfaction and physically demanding tasks affect individuals adversely increasing their stress levels, significantly.

Highly demanding workplaces lead to great levels of tiredness and fatigue among healthcare professionals (Van de Tooren and De Jonge 2010 P75). Several sources of strain and stress identified regarding healthcare as a profession are: increased dissatisfaction with their work environment, lack of capacity to take care of themselves especially their health. This coupled with technological changes, introduction of new job roles and tasks, changes in leadership, lack of proper training and resources have been responsible for causing strain and stress among health care professionals. Keeping these factors in view, theoretical frameworks concerned with factoring of work engagement and change was incorporated in many studies of stress within healthcare profession (Afsaneh Nahavandi et al2015).

Studies have also shown that ineffective communication may lead to stress among physicians and nurses due to lack of job dissatisfaction, unexpressed feelings being bottled-up, emotional burnout and increased psychological distress (Fallowfield 1995). Communication barriers resulting from language and cultural differences leading to barriers can become sources of stress due to interference in maintaining harmonious interpersonal relations and effective teamwork (Bolderston et al. 2008) affecting health care quality and cost being provided (Koff & McGowan, 1999).

According to Fielden & Peckar (1999) the number of hours worked is directly related to experience of stress; i.e., longer the hours worked, more is the stress experienced. This is because when more energy is used in long hours of work, more wear and tear of the tissues occur and raising the stress levels, consequently. Stress has also linked up with factors such as age, and experience of people and their working environment. For example, Fielden & Peckar (1999) have found that junior doctors are more likely to use social support (more within the hospital environment) than senior doctors to counter stress. However, in the same studies, it was also found that junior doctors were more susceptible to stress than senior doctors who were more aged and experienced.

Researchers and **experts** have opined that stress is a major occupational hazard. In 1960, Menzies came up with four factors which he considered as important causing stress in nursing profession, namely: "patient care, decision – making, taking responsibility, and change." Despite this awareness, the nursing profession continues to be stressful and people in this professional are facing increased levels of stress even



in the present times. American Holisitic Nurses' Association believes that stress levels in this profession is higher than what is found in most other professions. Among the stressors which impact this profession heavily are: "patient care, decision, making, taking responsibility, and change" (https://www.ausmed.com /articles/stress-in-nursing/).

The Physical Demands of Nursing Cause Stress

Nursing as a profession on a daily basis is characterized by potential stressors like frequent lifting and bending, changing shifts or rosters, noisy work environments, and long hours. Nurses working nightshift may also suffer from sleep deprivation and disruption to their natural circadian rhythms, which in turn, can lead them towards illness. Anxiety of contacting disease, and aging among nurses makes them vulnerable to stress and strain in their workplace.

Emotional Stress in Nursing

Caring for others on a long-term basis can be a physically and emotionally a draining experience. This is in conjunction with issues like dealing with patients and their families, relationships with colleagues, facing tragic situations (like death of patients), caring for and communicating with a person who is dying, dealing with violent and aggressive patients can cause immense amount of stress and strain among nurses on an on-going basis. Balancing family issues like child care, finances and quality of life can also add to stress among nurses.

Nurses Feel Disempowered

A feeling of disempowerment is another cause for stress in the nursing profession. The nurses feel disempowered due to lack of decision-making power, and their expertise being compromised due to poor leadership and role confusion in general. Coupled with this, factors such as, staff shortage, budgetary constrains and inadequate resources make their work tough by requiring them to emphasize on billing and adherence to regulations, causing high levels of stress among nurses.

Employer Solutions to Workplace Stress

In order to counter stress at work effectively, it is imperative for the nursing professionals to stay abreast with the movements which could lead to their empowerment in their workplaces and develop effective coping strategies and mechanisms to counter stress. In this direction, The American Holistic Nurses' Association has come up with the following solutions which employers could introduce to reduce stress among nurses,, namely:

- Making stress management programs available for staff members.
- Conducting staff meetings at regular intervals.
- Offering flexible staffing arrangements.
- Providing regular in-service/education programs enabling staff to stay abreast with changes occurring in the healthcare sector.
- Ensuring adequate staffing is available in hospitals

Tips for Relieving Stress Individually

The following steps can help in helping nursing professionals to become more relaxed and reduce their stress levels:

- Managing tasks by breaking tasks into smaller tasks on a day-to-day basis, thus, reducing psychological confrontations of managing huge tasks which may look unmanageable and daunting.
- Spending more time with nature can help in reducing blood pressure, enhancing feelings of connection, and relieving stress. Other outdoor activities such as walking, or bicycling can also help in reducing stress levels.
- Taking mental breaks and identifying stressors by learning to meditate, or keeping a journal to reflect on own's day, practicing yoga or joining



a spiritual community can be helpful for nurses to view challenges and goals from a fresh and renewed perspective, giving them better selfcontrol and control over their life-stressors.

Surrounding oneself with pleasant odors (since nurses are often exposed to a number of unpleasant odors

throughout the day) can have therapeutic effects by use of such devices as diffusers filled with aromatic and essential oils or use of massaging and skin care oils (such as rose, sandalwood, citrus and lavender oils) containing stress relieving properties can intensely help in de-stressing.

Following are some	of the	major	findings	(Odigie,	2016):
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Result authors	Aim	Design/ sample	Result	Implication	Comments
Van Den & De Jonge (2008) managing job stress in nursing what kind of resources do we need? Journal of Advanced Nursing	To discover the different kinds of job resources and their functions for managing job stress in Nursing.	According to the DISC model 74 questionnaires of the survey were returned	In comparing adverse effect of the result, the high physical jobs demand had more effect the physical complaint and the emotional exhaustion.	For human service employees like Nursing, the physical and the emotional resources are stress lifter.	Match between demands, resources and outcome, relate to the degree of valid moderating effects theoretically.
Stacciarini ,JR &Troccoli, B.T. (2004) Occupational stress and Constructive thinking, Health and job satisfaction, Journal of Advanced Nursing management.	To show the details of occupational stress job satisfaction and state of health in Brazilian Nurses	Out of the total Nurses at work, 46 Nurses were selected from in different grade and shifts.	Occupational stress, state of health and job satisfaction was found distributed normally .	The need to value personal ability to cope with work environment was highlighted with occupational stress and physical ill health.	The global constructive thinking and job satisfaction, is directly associated to state of health and occupational
Joseph B. Lyons and Tamera. R. Schneider (2009). The effects of leadership on stress out-comes.	To evaluate the effect of leader-ship style on stress outcome	The number of who responded and were assessed for psychological emotional and motivational and also viewed video instruction we	There is a direct effect of leadership style on task performance	Task performance is associated with transformational leadership style	Ineffective leadership style in an organization, may lead to stress out- comes
Maria Tims, Arnold.B. Bakker and Despona Xanthopoulou (2011).Do transformations lead- ers enhance their followers daily work engagement? The leadership Quarterly.	To look into how transformational leaders enhance their daily works engagement	Questionnaires were administer to 42 workers and a diary sur-vey over five consecutive work days	Employees work engagement were related to positively by trans-formational leadership	Transactional leadership style is less accepted to transformational leader-ship style.	Transformational leadership style can enhance employees work engagement.
Nielsen et al (2008). The importance of transformational leader-ship style for the well being of employees working with older people; Journal of Advanced Nursing	To know the relationship between trans-formational leadership, anticipated work-ing conditions and employees well being job satisfaction	Sample of 447 staff caring for old people	Followers anticipated workers condition is closely related to transformational leader-ship style	There is a link between leader-ship behavior and employees well being	Influence meaningful- ness, involvement and work redesign intervention focused on influence is beneficial
Quiao Hu, Willmar. B. Schaufeli ; (2011). The job demands Resources model; An analysis of additive and joint effects of demand and resources	To investigate the effects of job demands and job re- sources on well being and organizational outcome	Sample collect-ed from Chi-nese,625 blue collar workers and 761 health professional	Both samples shows that there is synergistic effect of job resources on burnout and engagement	Job resources lead to positive organizational outcome, while job demands lead to negative outcome	Job resources and job demand should be at equilibrium



Heponieine,T.Bovanm o; et al (2008). The role of fair-ness in decision making and management Journal of community psychology.	To evaluate whether the negative effect of high job de-mand and low job control can be stop by organizational fairness	Administering questionnaires of postal survey involving 713 women in nursing positions	Low job con-trol, high job demand and unfair decision making is associated with levels of work interference with family	Organizational believes ,fairness in a way stand in between job control and work family interference	Employees general and mental health can be affected by job control. Job demand are strongly a predictor of combining career and family
Van Den Tooren and De Jonge (2010). The role of match-ing job re-sources in different de-manding situations at work. A vignette study, Journal of Occupational Psychology.	To carefully look at the underlying relationship be-tween job de-mand ,job re- sources and job related out-comes	Dutch employees of human service and Quasi Experimental survey study of 217	Various styles between availability, relevance and use of matching and non matching job resources in physically de-manding job situation	Matching and non matching job resources are been taking advantage of by workers who are facing this particular type of job	Cognitive, emotional and physical dimension are comprised of job demand, job resources and job related out-comes.
W.B. Schaufeli and A.B.Bakker (2004), journal of Organizational Behavior	Burnt and engagement and their relation-ship with job demand and job resources	Questionnaires was used to carry out an experimental survey for employees of four Dutch companies	The use of matching and non matching recourses in physical de-manded job situation is the outcome of job minimization	There should be increase in job resources to counter the role of job demand in the process that lead to related outcomes	Job resources and job demand are negatively close to each other
Fiabane E Giorgi I, Sguazzin. C, Argentero P. (2013). The role of organizational and personal factions	To identify role of organization-al and personal factors in predicting work engagement in healthcare workers and compare work engagement and occupational Stress perceptions of healthcare professional categories	A Cross-sectional survey using self- report questionnaires. to a sample of 198 hospital staff (registered nurses, nurse aides, physicians and physiotherapists	The most significant predictors of energy were work-loads mental health and Job Satisfaction physiotherapist had the highest levels of occupational Stress and disengagement from their work	Both organizational and personal factors were found to be Significantly associated with work engagement.	Interventions aimed at improving clinical practice and psychological health of nurses and hospital and hospital Staff should focus on workload, worker's personal expectations and Job satisfaction.
Brendal Happell,et al (2013). Nurses and stress; recognizing causes and seeking solution. Journal of nursing management	To identify, from the perspectives of nurses, occupational Stressors and ways in which they may be reduced.	Six focus groups were conducted with 38 registered nurses using a qualitative exploratory approach	High work-loads, unavailability of doc- tors, unsupportive management hu-man resources issues interpersonal issues, patients' relatives, shift work, Car parking hand-over procedures, no common area for nurses, not progressing at work and were found to be sources of occupational Stress.	Healthcare environments can be enhanced through local understanding of the occupational stressors and productively engaging nurses in developing Stress reduction initiatives.	There is need to under-stand local perspectives and the importance of involving healthcare professionals in identifying initiatives to reduce occupational Stress.
Opie T. Dol-lard.M., et al (2010) .Levels of occupational stress in re-mote area nursing work force. Australian Journal of Rural health.	To identify key work place de-mands and re-sources for nurses working in very remote Australia and measure levels of occupational Stress in this Population.	Cross-sectional design, utilizing a structured questionnaire	Higher levels of occupation-al Stress and emotional exhaustion is experienced by nurses in the remote area compared with other professional population	This might sub- sequently de-crease remote area nursing workforce turnover.	There is need to reduce Job demands and in-crease Job resources in order to Poster long-term work engagement and reduced emotional exhaustion.



Shu-Fen,e t al (2009); T Nurses perception of S environ-mental v pressures in relation c to their occupational T stress. Journal of Clinical Nursing	To explore nurses Stress experiences of working under the current care System in Tai-wan	Grounded Theory Data collect-ed from a Sample of 28 Critical care nurses from 7 hospitals in Taiwan.	The hospital organizational changes and people's own belief of the nurse roles were recognized as environmental pressures which increase critical care nurses' occupational Stress.	Critical care nurses perceived that their hospitals were under huge demands due to changes in health Policies	There should be appropriate Stress management skills available to the critical care nurses
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Some studies have also pointed out that about how verbal abuse (Rowe & Sherlock, 2005) and generational differences (Santos et al, 2003) operate in the stress equation. Other studies are also pointing out the need for more empirical research on the role of factors such as role of personality, family-work conflict, and other features of stress which can cause strain and stress in the nursing profession (Santos et al, 2003). Similarly, the effects of shift length on stress is one of the dynamics which is not yet understood fully, requires further investigation (Hoffman & Scott, 2003; Iskra-Golec et al, 1996).

Though there are contradictory views on the role of social support and empowerment with regard to mitigating stress ((Hatcher & Laschinger, 1996; Laschinger & Havens, 1997; Laschinger et al, 2001; Johnson et al, 1995; Muncer et al, 2001) arising out of methodological differences certain findings suggest that managerial behaviors were linked to stress and burnout. Managerial support (Weinberg & Creed, 2000) and participative management (Leveck & Jones , 1996) helped to reduce stress. Similarly, burnout and work stress were reduced when administrators created work environments that provided staff with access to opportunity, information, resources, and supportthe features of empowerment (Laschinger et al, 2001; 1999).

These findings are important for administers to notice and can no longer be ignored, given the fact that there is shortage of staff in nursing profession and health care in general, couple with the proven fact that nursing profession and environments can be potentially stressful workplaces. Administrators, therefore, need to squarely look at their financial standing, and need to assess how environmental stress is affecting patients and staff and take appropriate measures to alter unhealthy and stressful work place situations.

Management Styles

It is important to understand the relationship between staff nurses and nurse managers when studying stress and burnout with regard to this profession ((Decker, 1997; Fletcher, 2001; Laschinger et al, 1999). Numeric ratings from a survey of 1,780 RNs indicated that supervisor support and quality of supervision were lowest for nurse managers (Fletcher, 2001). Handwritten comments from 509 (28.6 percent) of the RNs clarified these ratings by noting the following problems such as: insufficient unit leadership coupled with frequent turnover of nurse managers; scanty physical presence of supervisors in the units; inadequacies in dealing with problems such as, ignoring the staff nurses, and lack of proper awareness about number of staffing related issues and so on.

These findings also match with a study of 537 RNs from Canada (Laschinger et al, 1999), which was done by employing structural equation modelling where the researchers showed the importance of manager behavior on employee experiences. Likewise, a qualitative study of 50 nurses conducted in England, pointed out that managers were a direct cause of stress.89 . Similarly, responses from 611 RNs on 50 inpatient nursing units in four southeastern U.S. hospitals showed higher group cohesion, and lower job stress in situations where nurse managers employed more participative management style (Leveck & Jones, 1996).

Along with demonstrating the connection between nurse managers and staff nurse stressors, the studies also highlighted the demanding nature of nurse managers' role in the profession, currently, requiring



them to be responsible for multiple patient care areas. There seems to be only two studies which have been conducted in this connection between 1995 and 2005 where assessment was done regarding burnout among nurse managers and nurse administrators, i.e., one study in the United States (Lee & Henderson, 1996) and the other study in Canada (Laschinger et al, 2004). the studies showed the following :

The Canadian study examined burnout in a random sample of nurses in first-line (n = 202) and middlemanagement (n = 84) positions (Laschinger et al, 2004) Nurses in both groups reported high levels of emotional exhaustion and average job satisfaction. In the U.S. study, the researchers investigated burnout among nurses (N = 78) from rural and urban hospitals in a south eastern State who held positions in middlemanagement and higher ((Lee & Henderson, 1996). Nearly half of the respondents (49%) reported high levels of emotional exhaustion.

Personal Characteristics and Work Relationships

The specific features of personality that affect the perception of stress or burnout are yet to be understood fully. However, certain studies conducted in this regard point out the following:

Neuroticism has been found to have associations with exhaustion as seen in some studies (Allen & Mellor, 2002). Interestingly. External locus of control has been found to have a positive relationship with both findings related to burnout as well as stress (French, 2005).

Investigations on associations between interpersonal relationships and burnout and stress showed the following: Problematic relationships among team members were shown to increase burnout (Demir et al 2003). Verbal abuse from physicians was noted to be stressful for staff nurses (Manderino, 1997). A study among 260 RN found conflict with physicians were psychologically more damaging than conflict with nursing professionals (Hillhouse & Adler, 1997).

Unique stress in the Health Care Professions

Several studies have been conducted with regard to work stress in health care personnel across various countries. Researches have highlighted on the work stress among medical technicians (Blau et al, 2003). In an exploration of relationship between personal stress and clinical care, 225 physicians reported 76 incidents in which they believed patient care was adversely affected by their stress (Firth-Cozens &Greenhalgh, 1997).

Findings also showed differences in work stress based on shift length and generational cohort. In an exploration of 413 RNs in a single cohort investigations on generational differences showed that baby boomers (43 percent) and Generation Xers (41 percent) had different perceptions of work stress (Santos & Cox, 2000). It was also found that the baby boomers also had significantly less social support.

With regard to shift length (8 hour versus 12-hour), it was found that in a random sample of Michigan nurses, RNs working 12-hour shifts (n = 105) reported significantly higher levels of stress than RNs working 8-hour shifts (n = 99) [Hoffman & Scott, 2003].

Gender and Family Obligations

The complex nature of work stress was also demonstrated in two studies in relation to gender effects. Presence of burnout was studied on a convenience sample of hospital-based neonatologists (n = 86) and office-based paediatricians (n = 97)[Marshall et al, 1998]. though burnout was found predominantly among speciality groups, it was found to be more prevalent in female physicians (79 percent) than male physicians (62 percent). female physicians (79 percent) than male physicians (62 percent), burnout was seen unrelated to number of hours worked per se (Carr et al, 2003). On the contrary, it was found that burnout was lower, if female physicians worked the number of hours they preferred (r = 0.22), P = 0.03). These studies may be particularly relevant to nursing profession, since, nursing profession is predominately dominated by female population.



A direct relationship was found between Work interfering with family leading to work exhaustion in a 4-year study of medical technologists, with 80% among them being women (Blau et al, 2003). Studies have not been done on family interfering with work. Another study among101 female nurses revealed that work interfered with family more than family interfered with work (Gottlieb et al, 1996). The researchers found that most of the nurses, who were in their mid-40s, were between the demands of child care and elder care.

Research Implications

Research Implications: from the standpoint of understanding this phenomenon, studies already conducted show that the following may have to be investigated more thoroughly for better understanding. Some of the suggestions can be listed as follows:

- Better conceptualization is needed to derive a better understanding of stress and burnout in the workplace
- Empirical studies need to be carried out to investigate these very complex relationships, prospectively, over time
- Studies focussing on interventions can be initiated to assess the most useful ways to mitigate work stress
- Reduction in stressful nature of the nurse administrator's work, can lead to more job satisfaction among them which, in turn, could lead to enhancing those managerial behaviors that improve the work environment for staff nurses
- It can also lead to become the nursing administrative jobs be viewed in more positive light and appealing to younger and budding population leading to rise in more applicants for these types of jobs. (Jennings, 2004).

Individual stress management

To manage workplace stress effectively a combination of individual and organizational strategies needs to be employed. Individual approaches include training and one-to-one psychology services-clinical, occupational, health or counselling. The objective should be to change individual skills and resources and helping individuals in changing their situation.

Training helps prevent stress through:

- awareness building in oneself about signs of stress
- realization of the fact that more stress builds up the more difficult it gets to handle
- analyzing situations and developing active plans to reduce the stressors
- creating a buffer against stress through appropriate learning skills of coping and relaxation, and developing a suitable lifestyle to counter stress
- practising anti-stress initiatives in low stress situations first to maximize chances of early success and boost self-confidence and motivation for further continuance of the same.

Organizational stress management

Organizations need to appreciate the fact that stress builds up in the work settings and that it needs to be countered. A number of organizational interventions can help in reducing stress among employees ranging from structural (for example, staffing levels, work schedules, physical environment) to psychological (for example, social support, control over work, participation).

In Scandinavia, there are specific methods which are used by organizations to reduce employee stress in their urge to create healthy and safe working environments (stress (https://œm.bmj.com/content/ 59/1/67)



- Employees are allowed to create their own work processes and work designs that are likely to affect their work
- Technology, work organization, and job content are designed so that the employee remains unexposed from physical or mental strains which can cause illness or accidents
- Different types of remuneration and distribution of work hours are factored into work schedules to avoid stress in jobs and work environments
- Opportunities are provided for social contact and cooperation to neutralize build-up of stress by hamessing social support structures
- Working conditions with an opportunity for personal and vocational development, as well as for self-determination and professional responsibility must be provided
- Controlled and restricted work environments must be limited or if possible be removed for employees to experience greater autonomy and freedom in the workplaces

Assessing the risk of stress within the workplace must factor the following:

- The likelihood of stress or ill-health to occur because of any hazard
- The extent of exposure an individual may be subjected to because of the hazard
- How many employees are exposed to such hazards

Any analysis of workplace stress should consider all aspects of its design and management, and its social and organizational context. Prevention being the ultimate goal, protective measures can also be taken as interim measures to control the risk and reduce the effects of a given hazard. The way such assessment and reduction of risks associated with exposure to stressful hazard can be carnidout are outlined below
((https://oem.bmj.com/content/59/1/67):

- Hazard identification: Identifying the stressors reliably, about work and work conditions, for specific groups of employees, and making an assessment of the degree of exposure
- Assessment of harm: Collection of evidence for understanding the extent of exposure to such stressors as a causal factor for impaired health in the group being assessed or of the wider organization. This should include a variety of health-related outcomes, which may include symptoms of general malaise and specific disorders, and of organizational and healthrelated behaviors like smoking, drinking, and absence due to sickness.
- Identification of likely risk factors: Finding out the connections between exposure to stressors and measures of harm to identify likely risk factors at the group level, and to arrive at estimation of some kind regarding their size and/or significance.
- Description of underlying mechanisms: Comprehend and elucidate the possible mechanisms by which exposure to the stressors is associated with damage to the health of the assessment group or to the organization.
- Audit existing management control and employee support systems: Identify and assess all existing management systems both about the control of stressors and the experience of work stress, and in relation to the provision of support for employees experiencing such problems.
- Recommendations on residual risk: Taking into account the prevalent management control and employee support systems into consideration, and making recommendations on the residual risk associated with the likely risk factors related to work stress.



Increasingly it has now becoming a legal requirement to make assessments about employees' health and safety, including their mental health, and address them appropriately (for example, the European Commission's framework directive on the introduction of measures to encourage improvements in the safety and health of workers at work). Creating safe and healthy workplaces requires organizations to target equipment, materials, the environment and people (for example, ensuring sufficient skills for the tasks). Monitoring and review process must exist to assess the extent to which prevention and control strategies are effective (Cox & Griffiths, 1995).

Some of the studies which have found support for successful organizational strategies to combat stress have pointed towards the following (for example, Heany et al, 1995; Kagan et al, 1995)

- Those individuals who have been imparted training and skills to combat stress have been found to be better at coping with stress and are at better at team functioning and adjusting with organizational climate and reported experiencing reduced depression.
- During change management, those staff who were imparted with stress management training faired better in handling stressful situations and showed a decrease of stress hormone levels.
- Staff who were given training in verbal and nonverbal communication and those imparted with empathy training were found to resign less or take less sickness leave
- Those undergoing physical exercise or aerobic training reported reduction in complaints of muscle pain, and reported increased job satisfaction
- Employees undergoing one of seven training programmes showed reductions in depression, anxiety, psychological strain, and emotional exhaustion immediately after the programme. Moreover, there was a further reduction in

psychological strain and emotional exhaustion at 9-16 months' follow up.

Organizational culture which is stress-sensitive and inclusive of a leadership capable of being sensitive to such issues pave the way for managing organizational stress better. Such organizations are also prone to create polices for reduction of employee stress and promote a healthy and relative stress-free working environment for its employees, by taking proactive measures of early detection of stressors and taking necessary actions to address them, adequately. Such policies need to be adequately be discussed with trade unions and health and safety committees (https:// oem.bmj.com/content/59/1/67).

Lastly the effectiveness of stress-related interventions instituted need to be evaluated by analyzing the response rate, using valid and reliable measures, and a control group. Two measures which have been successfully used in this regard are: Job Content Questionnaire, which includes measures of the predictors of job strain described earlier (Karasek et al, 1988) and the Occupational Stress Indicator.

Objectives and Research Methodology

The proposed project seeks to investigate the issues related to causing and managing stress among the nursing staff, working in the private hospitals in India.

Research Design

In order to achieve the research objectives of the study, we have used causal research design. This is because, the study tries to establish a causal relation between the construct "Stress" and the factors related to the construct in the form of a model. Also, the study tries to observe the variation in the construct "Stress" in relation with the constructs related to the activities of nurses.

Terminology used in the study

We use the term "variable" for the questions considered to measure the opinion of the nurses on various aspects related to their functioning in hospitals. The term "construct" is used to indicate a



latent construct that is measured using the variables.

Population

The population for the study was the nurses working in different private hospitals. Data was collected from Bangalore and Mysore (Karnataka), Kolkata (West Bengal), Chennai (Tamil Nadu), Hyderabad (Andhra Pradesh), and Mumbai and Pune (Maharashtra), Ahmedabad (Gujarat) and New Delhi. Data was collected by administering a questionnaire and personal interactions.

Sampling design

The sample data required to address the objectives of the study is drawn using a non-probability sampling technique. Nurses are approached and asked to be a part of the study and whoever has co-operated and accepted, are included in the study. The questionnaire designed for meeting the purpose of the study were then circulated to them and responses were collected from the nurses. (has to be elaborated with respect to places)

Questionnaire and Scaling of the variables

Taking into consideration the objectives of the study, based on the literature review and the experience of the researcher, a questionnaire has been designed. It consists of questions that draws the responses from the nurses on aspects related to their workload, working conditions, conflict at the work etc. The questions are framed based on the literature review on these aspects and the same are used to build a model in the later stages. The initial questionnaire has been subjected to analysis and changes have been made appropriately to meet the objectives of the study. The revised questionnaire has been tested for validity and reliability, and, then used for the final survey. The final questionnaire has two sections. The first section includes the demographic factors of the nurses and the second section includes the questions related to working of nurses in the hospitals.

The opinions on the questions are measured using a 5-point Likert scale, where 5 is the weight assigned

to strongly agree, 4 for agree, 3 for undecided, 2 for disagree, and, 1 for strongly agree. Demographic factors are measured using categorical scale (nominal or ordinal).

Description of the sample

Before presenting the model building, we present the details of the sample respondents based on demographic factors. Also describe the responses using the summary statistics (mean, standard deviation etc.), and, tabular and graphical analysis.

Test for normality assumptions

Before proceeding to select a statistical method, we test the normality assumption using Kolmogorov-Smirnov test for normality. This will help one to decide upon either selecting a parametric method or a nonparametric method.

Testing the Reliability of the questionnaire

To test the reliability of the questionnaire, we use Cronbach alpha. We do this in two stages. In the first stage, we test the overall reliability of the questionnaire in measuring the latent construct "Stress". In the second stage, we test the reliability or consistency of the set of variables proposed to measure the latent constructs related to stress.

The following table 1 gives the cut-off points of alpha.

Table 1- Cut-off points for Cronbach alpha

Cronbach alpha	Internal consistency
0.9 = α	Excellent
0.8 = α < 0.9	Good
0.7 = α < 0.8	Acceptable
0.6 = α < 0.7	Questionable
0.5 = α < 0.6	Poor
α < 0.5	Unacceptable

Source: extracted from paper of Cronbach (1951)

A value of alpha more than are equal to 0.700 is desirable. The second stage reliability is tested based on the levels of composite reliability.

Sample size determination

The sample size required to meet the objectives of



the study is determined based on the requirements of the partial least squares structural equation modelling (PLS-SEM) procedure. According to Barclay, Higgins, and, Thompson (1995) one has to choose the sample size equal to 10 times the largest number of structural paths directed at a particular construct in the structural model. In other words, it means the sample size should be equal to 10 times the maximum number of arrowheads pointing at a latent variable anywhere in the PLS path model. In the current study, we have 6 paths as the maximum number of paths pointing at a latent variable. Hence, we choose 60 as the minimum sample size required to build the model. The data has been collected from the nurses working at various hospitals and we have ended-up collecting 161 records as the pilot data. This is more than two times the minimum sample size required for building the model. The following figure gives the proposed model to measure the latent construct stress. Hair et.al (2014) gives the details of the sample size required for a PLS-SEM study. We choose 5% as the level of significance throughout the study.

Model Proposed for the study-Outer model and the Inner model

The main objective of the study is to build a model and in this section we present the details of the model proposed. The following figure 1 gives the proposed model.

Figure 1 - Proposed Initial Model



Source: Constructed by the researcher based on literature review

We now present the explanation to the latent constructs in the model and also the codes used in the model. The following table 2 gives the details of the same. Note that, each latent construct has set of variables associated with them and finally all the latent constructs are used to measure the construct "Stress". The arrows indicate the regression paths between the variables and the constructs, and, between the constructs.

S.No.	Question/Variable	Code for variable	Code for Construct
1	I do not have adequate number of nursing staff in my department.	AW1	AW
2	I have too many patients to take care.	AW2	
3	I have administrative workload, in addition to my nursing job.	AW3	
4	Duty hours, allocated to me, is demanding.	AW4	
5	Workload fluctuates heavily in my profession.	AW5	
6	The office rules and regulations are inflexible.	AW6	
7	I often face conflict with the duty doctors.	MWC1	MWC
8	I often face conflict with my supervisor.	MWC2	
9	I often face conflict with the management.	MWC3	
10	I often face conflict with my colleagues.	MWC4	
11	I often face conflict with my patients.	MPS1	MPS
12	I often face conflict with my patients' families.	MPS2	

Table 2 - Variables, Constructs and their coding



13	I do not get colleagues' support, in doing my job.	MPS3	
14	I cannot share my experiences and feelings with other employees in the department.	MPS4	
15	I do not have enough support from my immediate supervisor.	MPS5	
16	I do not have sufficient information about the patients' conditions.	MPS6	
17	Often, adequate number of doctors are not available in the department.	PC1	PC
18	I feel tensed for not knowing what a patient or a patient's family to be informed about the patient's condition & treatment.	PC2	
19	I feel helpless when a patient fails to improve.	PC3	
20	I feel helpless watching a patient suffer.	PC4	
21	I feel guilty when a patient passes away.	PC5	
22	I feel inadequately prepared to satisfy the emotional needs of a patient, and/ or his/her family.	PC6	
23	I have to hide my emotions, while dealing with patients or patients' families.	EL1	E.
22	I feel guilty as I cannot devote enough time to my family	日2	
23	I often fail to perform my duty at home, due to the demanding nature of my job.	EL3	
24	I often feel tired at home, after coming from work.	E _4	
25	I do not have enough time to relax.	EL 5	
26	I do not go on vacations regularly	EL.6	

Source: Based on the above figure

The model proposed will be evaluated and tested using PLS-SEM and the following section gives the details of the method.

Partial Least Squares Structural Equation Modelling (PLS-SEM)

The partial least squares structural equation modelling (PLS-SEM) is a method of structural equation modelling which allows estimating complex causeeffect relationship models with latent variables. It is used when theory is less developed and in research contexts that are simultaneously data-rich and theoryskeletal. The model building is then an evolutionary process and the model extracts new findings from the data and this can be used to build new theories (Lohmoller and Wold (1980)). This method was developed by Wold (1974, 1980, and, 1982). This is more exploratory in nature and primarily used when the objective of applying structural modelling is prediction and explanation of target constructs (Rigdon (2012)). In the current study we use PLS-SEM to explore the possibility of building a model to explain stress of nurses working in hospitals and to explain the constructs that measure the stress. Note that, the objective of the study is to establish a new theory that measures the stress of the nurses and hence PLS-SEM has been adopted in the current study.

In order to adopt PLS-SEM, one has to specify a model that has an inner model as well as an outer model. The outer model works as a measurement model that links the observed variables to the latent constructs. This is primarily used to measure the latent constructs using the observed variables. The second is the inner model or the structural model that links the latent constructs measured in the outer model with the main latent construct.

In the current study, we use the observed variables to measure the latent constructs related to different aspects related to work of nurses in the hospitals. They include administrative related, work related, patients related, and, personal emotions. We propose few



constructs related to these aspects and propose the model. Using the data collected, we try to check whether the model can be used to predict the constructs. Using the model evaluation criterion, we rebuild the model and if necessary re -define the constructs. PIS-SEM is used for this purpose and this is one reason the method is popular when one is looking to explore and build the model.

The outer and inner models will be evaluated using composite reliability, average variance extracted, outer loadings, discriminant validity, R-square, f-square, and, Q-square. The details of the same will be presented in the following sections.

Measurement Model/Outer Model for measuring the constructs

Outer model will be built either using a reflexive indicators or formative indicators. In the current study, we use reflexive indicators. Reflective indicators constitute a representative set of all possible variables within the conceptual domain of a construct (Diamantopoulos and Winklhofer, 2001). Because of this, reflective variables are interchangeable, highly correlated and capable of being omitted without changing the definition of the construct. Reflective indicators are linked to a construct through loadings, which are the bivariate correlations between the indicator and the construct. In the above model proposed, the following figure 2 gives the outer model.





Source: Constructed from the proposed model

One can observe that there are five latent constructs with corresponding reflexive indicators.

Structural Model

The structural model is the one that links the latent constructs in the model. The constructs are divided into predictor constructs and outcome constructs. The predictor constructs will be linked to the outcome constructs through a regression path. The following figure 3 gives the structural model in the current study.

Figure 3- Structural model



Source: Constructed based on the proposed model

Evaluation of Measurement Model/Outer model

The outer model is evaluated using composite reliability, Average Variance Extracted (AVE), outer loadings, convergent validity, and discriminant or Divergent validity.

In order to check the internal consistency of the variables in measuring the latent constructs, one has to observe the composite reliability. It is calculated using the outer loadings of the variables of a construct. The cut-off points for the composite reliability are 0.70 and 0.90. A value of composite reliability, more than

sdmimd

0.90 is not desirable because they indicate that all the indicator variables are measuring the same phenomenon and are therefore not likely to be a valid measure of the construct. (Hair et.al (2014).

Convergent validity is the extent to which a variable correlates positively with alternate variables of the same construct. The variables of a specific reflexive construct should converge or share a high proportion of variance. To evaluate convergent validity of reflexive constructs, one has to consider the outer loadings of the variables and the average variance extracted (AVE). AVE gives the percent of variance of the indicators explained by the construct. It is similar to comunality of a construct. Outer loadings are the bivariate correlations between the indicator and the construct. For AVE the cut-off value is >0.50 and for variable outer loadings the cut-off value is more than 0.708.

Discriminant validity is the extent to which a construct is truly distinct from other constructs by empirical standards. Thus, establishing discriminant validity implies that a construct is unique and captures phenomena not represented by other constructs in the model. We use Fornell-Larker criterion to assess discriminant validity. It compares the square root of the AVE values with the latent variable correlations. The criterion for a construct is satisfied if the square root of the AVE is greater than its highest correlation with any other construct.

Evaluation of the Structural Model

To evaluate the inner model, we use collinearity assessment measure VIF, Coefficient of determination (R2), Predictive Relevance (Q2), Size and significance of path coefficients, f2 effect sizes.

VIF or variance inflation factor values should be less than 5 for the criterion to be satisfied and one can conclude that there is not collinearity between the variables or the constructs. This is observed as outer VIF values and inner VIF values.

Coefficient of determination (R2) is used to evaluate the amount of variance in the dependent construct explained by the independent constructs. A value of R2 equal to 0.75, 0.50, and, 0.25 is considered as substantial, moderate, and, weak values of R2.

f2 effect sizes looks at evaluating the impact of excluding an independent variable on the value of R2, from the model. The cut-off values for f2 are 0.02, 0.15, and, 0.35, respectively, and represent small, medium, and, large effect (Cohen (1988)) of the independent construct on the value of R2.

The Q2 is a means for assessing the inner model's predictive relevance. The measure builds on a sample re-use technique, which omits a part of the data, estimates the model parameters and predicts the omitted part using the estimates. The smaller the difference between predicted and original values the greater the Q2 and thus the model's predictive accuracy. Specifically, a Q2 value larger than zero for a particular endogenous construct indicates the path model's predictive relevance for this particular construct. It should, however, be noted that while comparing the Q2 value to zero is indicative of whether an independent construct can be predicted, it does not say anything about the quality of the prediction (Rigdon, 2014; Sarstedt et al., 2014). To check this, we use blindfolding procedure.

After checking all the above criterion, we look at the size of the regression path coefficients and significance of the path coefficients. To achieve this, we use bootstrapping method to test the significance of the path coefficients.

We also use bootstrapping to test the significance of all the above criterion used to evaluate the inner model.

The following sections give the results of the model building, evaluation and testing.

Data Analysis and Model Building

In this section, we present the results of the survey conducted on the nurses. It includes description of the sample respondents, reliability of the questionnaire, testing the model proposed, evaluation of the model, and, proposing the final model.



Results of the Survey

Description of the sample respondents

Under this, we describe the sample respondents based on their demographic factors (table 3 to 8 and graph 1 to 6).

Table 3- Distribution of	the r	respondents	based	on
gen	der			

	Frequency	Percent	Valid Percent	Cumulative Percent
Female	107	66.5	66.5	66.5
Male	54	33.5	33.5	100.0
Total	161	100.0	100.0	

Source: Based on researcher's data analysis



Graph 1- Representation based on gender

Source: Constructed based on above table



	Frequency	Percent	Valid Percent	Cumulative Percent
Married	58	36.0	36.0	36.0
Unmarried	103	64.0	64.0	100.0
Total	161	100.0	100.0	

Source: Based on researcher's data analysis





Source: Constructed based on above table

Table 5- Distribution of the respondents based on

 time to commute from home to hospital

	Frequency	Percent	Valid Percent	Cumulative Percent
15-30 Minutes	50	31.1	31.1	31.1
30-45 Minutes	40	24.8	24.8	55.9
Less than 15 Minutes	66	41.0	41.0	96.9
More than 45 minutes	5	3.1	3.1	100.0
Total	161	100.0	100.0	

Source: Based on researcher's data analysis

Graph 3- Representation based on time to commute from home to hospital



Source: Constructed based on above table

 Table 6- Distribution of the respondents based on age

9						
	Frequency	Percent	Valid Percent	Cumulative Percent		
24-29 years	63	39.1	39.1	39.1		
30-34 years	23	14.3	14.3	53.4		
Less than 24 years	46	28.6	28.6	82.0		
More than 35 years	29	18.0	18.0	100.0		
Total	161	100.0	100.0			

Source: Based on researcher's data analysis

Graph 4- Representation based on age



Source: Constructed based on above table

 Table 7- Distribution of the respondents based on

 work experience in nursing

	Frequency	Percent	Valid Percent	Cumulative Percent
6–10 years	45	28.0	28.0	28.0
Less than 5 years	77	47.8	47.8	75.8
More than 10 years	39	24.2	24.2	100.0
Total	161	100.0	100.0	

Source: Based on researcher's data analysis



Graph 5- Representation based on work experience in nursing



Source: Constructed based on above

 Table 8- Distribution of the respondents based on

 educational qualification

	Frequency	Percent	Valid Percent	Cumulative Percent
Certificate	10	6.2	6.2	6.2
Diploma	133	82.6	82.6	88.8
Graduation	18	11.2	11.2	100.0
Total	161	100.0	100.0	

Source: Based on researcher's data analysis

Graph 6- Representation based on educational qualification



Source: Based on researcher's data analysis

Reliability of the questionnaire

In this section, we present the overall reliability of the questionnaire in building the model. The following table 9 gives the results.

Cronbach Alpha	Cronbach Alpha Based on Standardized Items	N of Items
0.878	0.879	28

Source: Based on researcher's data analysis

From the above table one can note that, the Cronbach alpha value is more than 0.8 and hence we conclude that the questionnaire has required reliability and consistency levels to build the model. This covers the first stage of reliability check the following table 10 gives the results of the second stage of reliability check. Under this we check whether the variables proposed to measure the latent constructs have required consistency levels to measure them.

|--|

S. No.	Construct/ Factor	Number of items	Cronbach alpha	Remarks
1	Administrative Workload (AW)	6	0.700	Acceptable
2	Managing work conflict (MWC)	4	0.736	Acceptable
3	Managing patients and support (MPS)	6	0.745	Acceptable
4	Dealing with patients' conditions (PC)	6	0.796	Acceptable
5	Balancing emotions and lifestyle (巳)	6	0.841	Good

Source: Based on researcher's data analysis

The construct administrative workload (AW) is measured using 6 items and the alpha value is 0.700. This indicates that the 6 items have enough consistency amongst them in measuring the construct AW. Managing work conflict (MCW) is measured using 4 items and has the alpha value 0.736. That is, the 4 items have sufficient consistency levels in measuring the construct MCW. The construct managing patients and support (MPS) has 6 items and has the alpha value as 0.745. It indicates that MPS can be measured using the 6 items with better consistency between them. Dealing with patients' conditions (PC) has 6 items and the items have enough consistency between them to measure the construct. Similarly, balancing emotions and lifestyle has 6 items and the alpha value indicates that the items have better consistency levels in measuring the construct EL.

Based on these, we conclude that the constructs can be measured by their respective items. Taking this into consideration, we propose the following model to measure the construct 'Stress".

Model Proposed in the study

The following figure 4 is the model built to measure



the construct 'Stress". The constructs AW, MWC, MPS, PC, and, EL, put together are expected to measure the construct "Stress". The arrows in the model are the regression paths and are tested for their contribution in measuring "Stress".





Source: Constructed by the researcher

The above model has two parts. The first one is the outer model or the measurement model and this is used to measure the constructs AW, MWC, MPS, PC, and, EL. The second one is called as the inner model that links the constructs to "Stress". Using PLS-SEM, we evaluate the above model, before we finally proceed to conduct the final round of survey to propose the model for application. For this, we check for reliability and validity of the outer model first and re-build the outer model if necessary. We do not evaluate the inner model till the outer model satisfies all the criteria. Note that, the above factors are not final and will be re-build and also re-shuffle them to build new set of constructs relevant to measure construct "Stress". We initially try to build the model using above constructs and upon the evaluation we redefine them.

Partial Least Squares Structural Equation Modelling (PLE-SEM)-Model Testing

In order to test the reliability and validity of the outer model, we first look at outer loadings of the outer model. Based on the loading values, we rebuild the model by excluding those variables that have the loadings less than 0.708. The following figure 5 and table give the model with outer loadings.

Figure 5- Model with Outer loadings



Source: Constructed by the researcher

From the above figure 5, one can observe that few variables have outer loadings less than 0.708 and hence will be excluded from the model and the model will be re-build. Also, based on the relevance of the variables in the study, not all variables will be excluded. Only those that are not so important will be excluded. Another point is, based on the literature and the experience of the researcher, few variables will be combined to build a new construct. This will be followed iteratively to build new set of factors to measure the construct "Stress" (table 11).



Table 11 Outer loadings for the outer model

	AW	EL	MPS	MWC	PC
AW1	0.596				
AW2	0.518				
AW3	0.554				
AW4	0.650				
AW5	0.670				
AW6	0.666				
巳1		0.716			
日2		0.857			
日3		0.764			
EL4		0.629			
EL5		0.797			
EL6		0.711			
MCW1				0.730	
MCW2				0.728	
MCW3				0.79	
MCW4				0.738	
MPS1			0.648		
MPS2			0.664		
MPS3			0.732		
MPS4			0.644		
MPS5			0.591		
MPS6			0.686		
PC1					0.601
PC2					0.670
PC3					0.727
PC4					0.656
PC5					0.802
PC6					0.748

Source: Based on researcher's data analysis

As mentioned, variables will be re-shuffled to re-build the constructs and the model. The following discussion gives the details of the same. We first start with the construct AW and on an exploratory basis try to drop those that are having less than 0.6 outer loadings and rebuild the construct. We have found that the construct can be split into two constructs. The first construct will be named as "Manpower adequacy" (MA) with two variables (AW1, AW2), and the same will be named as (MA1, MA2) in the new model. The three variables (AW4, AW5, and, AW6) are taken together to from the new construct "Administrative flexibility". Variable AW3 has been excluded completely from the model. Construct MWC will be renamed as Conflict Management and all the variables are retained but, with new names (CM1, CM2, CM3, and, CM3). This is to align with the names of other constructs. The construct MPS has been split and only variables (MPS1, MPS2, and, MPS3) are taken together to form a new construct "Confrontation with patients and families (CPF). The corresponding variables are named as (CPF1, CPF2, and, CPF3). Variable MP6 along with (PC2, PC4) form a new construct "Patients' conditions" (PC). Variables (PC3, PC5, and, PC6) are grouped to form the construct "Management of Negative Emotions" (MNE). Variable EL4 has been dropped and other variables (EL1, EL2, EL3, EL5, and, EL6) have been grouped to form the construct "Work Life Balance" (WLB). Note that, the constructs are formed based on outer loadings.

Using on the new formulation of the constructs, a new model has been built (table 12).



Table 12 - New model

ITEM NO.	NEW ITEM NO.				
		Factor I – Manpower Adequacy (MA)			
1	MA1	I do not have adequate number of nursing staff in my department.			
2	MA2	I have too many patients to take care.			
		Factor II– Administrative Flexibility (AF)			
4	AF1	Duty hours, allocated to me, is demanding.			
5	AF2	Workload fluctuates heavily in my profession.			
6	AF3	The office rules and regulations are inflexible.			
		Factor III-Conflict Management (CM)			
7	CM1	I often face conflict with the duty doctors.			
8	CM2	I often face conflict with my supervisor.			
9	CM3	I often face conflict with the management.			
10	CM4	l often face conflict with my colleagues.			
		Factor IV – Confrontation with patients and families (CPF)			
11	CPF1	I often face conflict with my patients.			
12	CPF2	I often face conflict with my patients' families.			
13	CPF3	I do not get colleagues' support, in doing my job.			
		Factor V- Patients' conditions (PC)			
16	PC1	I do not have sufficient information about the patients' conditions.			
18	PC2	I feel tensed for not knowing what a patient or a patient's family to			
10	1.02	be informed about the patient's condition & treatment.			
20	PC3	I feel helpless watching a patient suffer.			
		Factor VI – Management of negative emotions (MNE)			
19	MNE1	I feel helpless when a patient fails to improve.			
21	MNE2	I feel guilty when a patient passes away.			
22	MNE3	I feel inadequately prepared to satisfy the emotional needs of a			
		patient, and/ or his/her family.			
		Factor VII- Work-life balance (WLB)			
23	WI B1	I have to hide my emotions, while dealing with patients or patients'			
20		families.			
24	WLB2	I feel guilty as I cannot devote enough time to my family			
25	WI B3	I often fail to perform my duty at home, due to the demanding			
		nature of my job.			
27	WLB4	I do not have enough time to relax.			
28	WI B5	L do not go on vacations regularly			

The following hypotheses are tested.

Hypothesis 1

Hypothesis 10 : The model identified is not significant in studying stress among the nursing staff in private hospitals.

Hypothesis la : The model identified is not significant in studying stress among the nursing staff in private hospitals.

Hypothesis 2

Hypothesis 20 : The construct manpower adequacy has no significant impact on stress among the nursing staff in private hospitals.

Hypothesis 2a : The construct manpower adequacy has significant impact on stress among the nursing staff in private hospitals.



Hypothesis 3

Hypothesis 30 : The construct administrative flexibility has no significant impact on stress among the nursing staff in private hospitals.

Hypothesis 3a : The construct administrative flexibility has significant impact on stress among the nursing staff in private hospitals.

Hypothesis 4

Hypothesis 40 : The construct conflict management has no significant impact on stress among the nursing staff in private hospitals.

Hypothesis 4a : The construct conflict management has significant impact on stress among the nursing staff in private hospitals.

Hypothesis 5

Hypothesis 50 : The construct confrontation with patients and families has no significant impact on stress among the nursing staff in private hospitals.

Hypothesis 5a : The construct confrontation with patients and families has significant impact on stress among the nursing staff in private hospitals.

Hypothesis 6

Hypothesis 60 : The construct patients' conditions has no significant impact on stress among the nursing staff in private hospitals.

Hypothesis 6a : The construct patients' conditions has significant impact on stress among the nursing staff in private hospitals.

Hypothesis 7

Hypothesis 70 : The construct management of negative emotions has no significant impact on stress among the nursing staff in private hospitals.

Hypothesis 7a : The construct management of negative emotions has significant impact on stress among the nursing staff in private hospitals.

Hypothesis 8

Hypothesis 80 : The construct work life balance has no significant impact on stress among the nursing staff in private hospitals.

Hypothesis 8a : The construct work life balance has significant impact on stress among the nursing staff in private hospitals.

The following figure 6 studies the above.

Figure 6- Re-build model with new constructs



Source: Constructed by the researcher

We now evaluate the model and the following table give the results of the same. For this we use reliability measures, convergent validity and divergent validity measures. Also, use the bootstrapping to test the significance of the results, to test the hypotheses.

Evaluation of the outer model

We first present the table 13 of outer loadings for the new model and then other tables.



	AF	СМ	CPF	MA	MNE	PC	WLB
AF1	0.660						
AF2	0.741						
AF3	0.772						
CM1		0.729					
CM2		0.728					
CM3		0.79					
CM4		0.738					
CPF1			0.799				
CPF2			0.789				
CPF3			0.807				
MA1				0.915			
MA2				0.84			
MNE1					0.795		
MNE2					0.86		
MNE3					0.815		
PC1						0.788	
PC2						0.769	
PC3						0.738	
WLB1							0.743
WLB2							0.855
WLB3							0.767
WLB4							0.799
WLB5							0.727

Table 13- Outer loadings for the new model

Source: Based on researcher's data analysis

From the above table, one can note that except for the variable AF1, all others have loadings above 0.708. But, due to the relevance of the variable to the study, AF1 is not excluded. We now check for the significance of the outer loadings to the indicators and the following table gives the results of the same (table 14).



Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
AF1 <- AF	0.660	0.656	0.067	9.795	0.0001
AF2 <- AF	0.741	0.738	0.059	12.606	0.0001
AF3 <- AF	0.772	0.768	0.049	15.612	0.0001
CM1 <- CM	0.729	0.725	0.058	12.541	0.0001
CM2 <- CM	0.728	0.727	0.057	12.716	0.0001
CM3 <- CM	0.79	0.79	0.042	18.788	0.0001
CM4 <- CM	0.738	0.733	0.061	12.173	0.0001
CPF1 <- CPF	0.799	0.794	0.049	16.298	0.0001
CPF2 <- CPF	0.789	0.784	0.052	15.309	0.0001
CPF3 <- CPF	0.807	0.809	0.043	18.598	0.0001
MA1 <- MA	0.915	0.898	0.158	5.789	0.0001
MA2 <- MA	0.840	0.808	0.179	4.684	0.0001
MNE1 <- MNE	0.795	0.793	0.044	18.035	0.0001
MNE2 <- MNE	0.860	0.861	0.024	36.529	0.0001
MNE3 <- MNE	0.815	0.814	0.037	22.262	0.0001
PC1 <- PC	0.788	0.784	0.044	17.885	0.0001
PC2 <- PC	0.769	0.769	0.044	17.603	0.0001
PC3 <- PC	0.738	0.738	0.046	15.904	0.0001
WLB1 <- WLB	0.743	0.743	0.041	18.084	0.0001
WLB2 <- WLB	0.855	0.854	0.025	34.303	0.0001
WLB3 <- WLB	0.767	0.767	0.042	18.196	0.0001
WLB4 <- WLB	0.799	0.801	0.038	20.865	0.0001
WLB5 <- WLB	0.727	0.726	0.048	15.092	0.0001

Table 14- Significance of outer loadings

Source: Based on researcher's data analysis

One can observe from the above table that, all the outer loadings are significant and hence we conclude that the indicator reliability of the variables is satisfied and significant. This indicates that, all the variables are relevant in measuring their respective constructs (table 15).

Table 15- Composite reliability and Average variance extracted (AVE)

Construct	Composite Reliability	Average Variance Extracted (AVE)
AF	0.769	0.527
CM	0.834	0.557
CPF	0.841	0.638
MA	0.871	0.772
MNE	0.864	0.679
PC	0.809	0.586
WLB	0.885	0.608

Source: Based on researcher's data analysis

One can observe from the above table that, both the composite reliability and the AVE are above the cutoff points of 0.700 and 0.500 respectively. Also, tableand table-indicate that the composite reliability and AVE are significant. Hence, we conclude that the model satisfies the reliability and convergent validity.



Construct	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Value
AF	0.769	0.766	0.028	27.026	0.0001
CM	0.834	0.832	0.021	40.082	0.0001
CPF	0.841	0.838	0.023	37.263	0.0001
MA	0.871	0.857	0.066	13.22	0.0001
MNE	0.864	0.863	0.019	45.841	0.0001
PC	0.809	0.807	0.027	29.706	0.0001
Stress	0.895	0.893	0.014	63.093	0.0001
WLB	0.885	0.885	0.015	57.839	0.0001

Table 16- Significance of Composite reliability

Source: Based on researcher's data analysis

Construct	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/ STDEV)	P Value
AF	0.527	0.525	0.038	13.837	0.0001
CM	0.557	0.557	0.036	15.603	0.0001
CPF	0.638	0.636	0.038	16.791	0.0001
MA	0.772	0.758	0.061	12.73	0.0001
MNE	0.679	0.679	0.034	19.796	0.0001
PC	0.586	0.585	0.042	13.954	0.0001
WLB	0.608	0.609	0.035	17.206	0.0001

Source: Based on researcher's data analysis

We now look at discriminant validity and the following table gives the same.

Table 18- Discriminant Validity

	AF	CM	CPF	MA	MNE	PC	WLB
AF	0.726						
CM	0.418	0.747					
CPF	0.272	0.523	0.799				
MA	0.355	0.129	0.052	0.879			
MNE	0.421	0.287	0.316	-0.014	0.824		
PC	0.379	0.428	0.316	0.081	0.551	0.765	
WLB	0.399	0.169	0.083	0.177	0.433	0.418	0.78

Source: Based on researcher's data analysis

The above table 18 indicates that the discriminant validity is satisfied by the model and hence we conclude that the outer model satisfies all the criterion.

Evaluation of the structural or inner model

We now evaluate the inner model and based on the results we confirm the model.

VIF or Collinearity

The following table gives the VIF values for the variables, also called as outer VIF values. A value less than 5 indicates that there is no Collinearity between the variables in measuring the latent constructs (table 19).



Table 19- Outer VIF values

Variable	VIF
CM1	1.371
CM2	1.318
CM3	1.453
CM4	1.447
CPF1	1.471
CPF2	1.468
CPF3	1.324
MA1	1.435
MA2	1.435
MNE1	1.502
MNE2	1.663
MNE3	1.522
PC1	1.313
PC2	1.276
PC3	1.219
PC4	1.826
PC5	2.41
PC6	2.2
WLB1	1.674
WLB2	2.318
WLB3	1.713
WLB4	1.842
WLB5	1.58

Source: Based on researcher's data analysis

The above table indicates that, there is no problem Collinearity amongst the variables in the model. We now look at the inner VIF values.

Construct	Stress
AF	1.678
CM	1.666
CPF	1.455
MA	1.203
MNE	1.746
PC	1.721
WLB	1.427

Source: Based on researcher's data analysis

The above table 20 indicates that there is no Collinearity between the inner constructs. We hence conclude that there is no problem of multi-collinearity in the model.

f-square effect sizes

The following table gives the f-square effect sizes for the constructs.

Construct	Stress
AF	1.187
CM	2.137
CPF	1.643
MA	0.505
MNE	2.459
PC	2.138
WLB	5.831

Table 21- f-square value	able 21	- f-squar	e value
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Source: Based on researcher's data analysis

The above table 21 indicates that all the independent constructs are having enough effect sizes and hence we conclude that all the independent constructs are relevant in explaining the variation in stress. The following table gives the significance of the effect sizes for each of the constructs.

From the table 22, one can note that the effect sizes for all the independent constructs are significant.

Coefficient of determination R square and adjusted R square

Table 22

Construct	R Square	R Square Adjusted
Stress	0.985	0.985

Source: Based on researcher's data analysis

The table 23 indicates that all the independent constructs explain larger proportion of the variance of the latent construct "Stress".



Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/ STDEV)	P Value
AF -> Stress	1.187	1.255	0.351	3.377	0.001
CM -> Stress	2.137	2.181	0.573	3.729	0.0001
CPF -> Stress	1.643	1.64	0.496	3.313	0.001
MA -> Stress	0.505	0.548	0.291	1.736	0.083
MNE-> Stress	2.459	2.595	0.692	3.552	0.0001
PC -> Stress	2.138	2.211	0.522	4.093	0.0001
WLB -> Stress	5.831	6.236	1.878	3.105	0.002

Table 23- Significance of f-square

Source: Based on researcher's data analysis

Table	24-	Sian	ificance	of R-	-souare
- marc		OLGII	TTTCCARCC	OT IV	DYUULC

	Original Sample		Standard	T Statistics	Р
	Sample (O)	Mean (M)	Deviation (STDEV)	(O/STDEV)	Value
Stress	0.985	0.986	0.002	448.011	0.0001

Source: Based on researcher's data analysis

The above table 24 indicates that the R-square values are significant in explaining the variance of the latent construct "Stress".

Q2 -predictive relevance

	SSO	SSE	Q ² (=1- SSE/ SSO)
AF	483	483	
CM	644	644	
CPF	483	483	
MA	322	322	
MNE	483	483	
PC	483	483	
Stress	4,508.00	3,528.63	0.217
WLB	805	805	

Table 25- Construct Cross validated redundancy

Source: Based on researcher's data analysis

From the above table 25, one can note that the Q2 value is greater than zero for the construct stress. Note that, stress is the dependent construct predicted by other constructs. We hence conclude that the model

has predictive relevance or it can be predicted appropriately by the model.

We now look at the path coefficients and their significance. Note that, they form the key hypotheses of the study and helps us to identify those constructs that have higher impact on predicting stress. Also, bootstrapping will help us to test the significance of the paths between constructs and stress.

Size and significance of the path coefficients

The following tables give the size and significance of the paths coefficients.

The hypothesis we test here is, the paths are significant in predicting the stress of nurses. The corresponding null hypothesis is, the paths are insignificant in predicting the stress of nurses against the alternative hypothesis that the paths are significant in predicting stress of nurses. The level of significance chosen is 5%.



Table 26 -	Path	Coefficients
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Construct	Stress
AF	0.171
CM	0.228
CPF	0.187
MA	0.094
MNE	0.251
PC	0.232
WLB	0.349

Source: Based on researcher's data analysis

Table 27- Significance o	of the path	coefficients
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Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/ STDEV)	P Values
AF -> Stress	0.171	0.171	0.024	7.151	0.0001
CM -> Stress	0.228	0.223	0.031	7.449	0.0001
CPF -> Stress	0.187	0.181	0.031	6.119	0.0001
MA -> Stress	0.094	0.091	0.029	3.272	0.001
MNE-> Stress	0.251	0.25	0.031	7.99	0.0001
PC -> Stress	0.232	0.23	0.025	9.418	0.0001
WLB -> Stress	0.349	0.349	0.049	7.163	0.0001

Source: Based on researcher's data analysis

From the above table 26 and 27, one can note that all the paths are significant in predicting the stress of nurses. Among the latent constructs, WLB has higher impact on stress, followed by management of negative emotions, patients' conditions conflict management, confrontation with patients and families, administrative flexibility, and, manpower adequacy. This proves that H10, H20, H30, H40, H50, H60, H70, and, H80 were rejected.

Final model for application

Based on the above analysis and results, we conclude that the model is the final model. We hence propose it for application. The following figure 7 gives the same.





Source: Constructed by the researcher based on the above analysis

Discussion and conclusion

The proposed project seeks to investigate the issues related to causing and managing stress among the



nursing staff, working in the private hospitals in India.

In order to achieve the research objectives of the study, we have used causal research design. This is because, the study tries to establish a causal relation between the construct "Stress" and the factors related to the construct in the form of a model. Also, the study tries to observe the variation in the construct "Stress" in relation with the constructs related to the activities of nurses.

The sample data required to address the objectives of the study is drawn using a non-probability sampling technique. Nurses are approached and asked to be a part of the study and whoever has co-operated and accepted, are included in the study. The questionnaire designed for meeting the purpose of the study are then circulated to them and responses are collected from the nurses. (has to be elaborated with respect to places).

Taking into consideration the objectives of the study, based on the literature review and the experience of the researcher, a questionnaire has been designed. It consists of questions that draws the responses from the nurses on aspects related to their workload, working conditions, conflict at the work etc. The questions are framed based on the literature review on these aspects and the same are used to build a model in the later stages.

The present study supported the existing literature and the result revealed that, stress among nursing staff can be studied with the help of a number of constructs, such as, manpower adequacy, administrative flexibility, conflict management, confrontation with patients and families, patients' conditions, management of negative emotions, and, work-life balance.

Among the latent constructs, Work life balance has higher impact on stress, followed by management of negative emotions, patients' conditions conflict management, confrontation with patients and families, administrative flexibility, and, manpower adequacy. The above clearly demonstrates that, the sheer nature of the job of the nursing staff, irrespective of their department or day-to-day work demand, cause unique stressful conditions. For example, work-life balance is the construct, where nursing staff face unique challenges. Their personal lives often get affected due to their mental and physical conditions, resulting from the extreme pressure, tension, and time-bound challenges at work they face, while saving and serving the patients.

The constructs, such as, confrontation with patients and families, and, patients' conditions are unique conditions, which nursing staff must experience, unlike the employees in other sectors (such as IT, Retail, etc.) . This is also proved in the present study.

Similarly, management of negative emotions becomes more crucial for the nursing staff, as the lack of the same may affect the patients' conditions, in addition to affect their own mental and physical condition.

However, the administrative flexibility, and, manpower adequacy are the two constructs which employees working in all the sectors face, more or less.

Limitation and future scope of study

As mentioned earlier, the data was collected from the nursing staff working in the private hospital in different cities in India. It would be interesting to investigate the nursing staff in the government hospitals and draw a comparison between the stress factors, faced by the two sets of respondents. Also, further studies are needed to understand the usefulness of the model, built in the study, by applying it on a larger number of respondents. It would also be interesting to investigate whether the male and female nursing staff have any difference in the stress management issues.

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