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THE IMPACT OF WORK OVERLOAD AND COPING MECHANISMS ON DIFFERENT DIMENSIONS OF STRESS AMONG UNIVERSITY TEACHERS

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Abstract

EN

Teaching at a university is no longer considered as a low-stress profession as it was often considered before [Winelfield et al., 2003] in western countries, but also in developing countries like Pakistan where this study took place. In Pakistan, growth in the higher education sector was particularly strong since year 2000 and competition has intensified because of entrance of many private sector universities which resulted in heavy responsibilities and challenging demands on faculty members. In wake of recent challenges faced by Higher Education Institutes (HEIs) which led to performance pressures and increased workload, coping with stress becomes an important research issue in academic contexts. The current study was conducted on a sample of 80 individuals (61 men and 19 women) of a public sector university of Pakistan. It is focused on the moderating effect of coping skills on stress. The first part of our research analyzes the impact of overload on stress, including its extreme level, burnout. Coping skills are then considered as moderators of this relationship. Two classical scales have been used, one developed by Pareek [2002] named ORS (Organizational Role Stressors) scale, and the other by Maslach & Jackson [1986] named MBI-ES, (Maslach Burnout Inventory – Educators Survey). Scales measuring stress (General and Job Related) and coping resources (Proactive Planning, Social Support, Acceptance and Avoidance, Turning to God) were constructed based on existing scales and were based on the results of a preliminary exploratory study (interviews). Results reveal that social support significantly moderates the relationship between overload and stress. Avoidance behaviors showed a significant positive impact on stress and

depersonalization. Stress management interventions at primary, secondary and tertiary level have been recommended to help universities dealing with the negative effects of stress and burnout.

Keywords

Overload, stress, burnout, coping, faculty, university

Résumé

FR

Le métier d'enseignant universitaire n'est plus considéré comme une profession peu stressante comme il l'a été souvent jusqu'à présent [Winelfield et al., 2003] dans les pays occidentaux, mais aussi dans des pays en voie de développement comme le Pakistan où cette étude a été réalisée. Au Pakistan, le secteur de l'enseignement supérieur s'est fortement développé depuis l'année 2000 et la concurrence s'est accrue du fait de l'arrivée de plusieurs universités privées, avec pour conséquences de lourdes responsabilités et des exigences difficiles à satisfaire. À la suite de ces défis récents rencontrés par les institutions d'enseignement supérieur, qui se sont traduits par des pressions en termes de performance et par une charge de travail accrue, la gestion du stress est devenue une question de recherche importante dans le contexte académique.

Cette étude porte sur un échantillon de 80 personnes (61 hommes et 19 femmes) travaillant dans une université publique au Pakistan. Elle est centrée sur l'effet modérateur des capacités d'adaptation (coping) sur le stress. La première partie de notre recherche analyse l'impact de la surcharge sur le stress, y compris le niveau extrême que constitue l'épuisement professionnel (burnout). Les capacités d'adaptation sont alors considérées comme des modérateurs de cette relation. Deux échelles classiques ont été utilisées, l'une développée par Pareek [2002], l'ORS (Organizational Role Stressors), et l'autre par Maslach & Jackson [1986], le MBI-ES (Maslach Burnout Inventory - Educators Survey). Les autres échelles mesurant le stress (général ou lié à l'emploi) et les ressources d'adaptation (la planification anticipée, le soutien social, l'acceptation, l'évitement et l'appel à Dieu) ont été construites à partir d'échelles existantes et fondées sur les résultats d'une étude exploratoire préliminaire par entretiens.

Les résultats montrent que le soutien social a un effet modérateur significatif sur la relation entre la surcharge et le stress. Les comportements d'évitement augmentent de façon significative le stress. Des interventions pour gérer le stress au premier, deuxième ou troisième niveau sont recommandées afin d'aider les universités à gérer au mieux les effets négatifs du stress.

Mots-clés

Surcharge, stress, burnout, adaptation, coping, enseignants, université

INTRODUCTION

The job of higher education academic staff has often been considered as being relatively stress-free; it has been envied for its relatively lower workload, its flexibility, tenure and the opportunity of overseas trips for conferences [Gillespie et al., 2001]. However, recently new challenges have imposed on them more administrative tasks e.g. entrance of private sector universities as competitors, research based performance pressures, rankings and the requirement of quality certifications to attract and retain a talented pool of faculty [Rajarajeswari, 2010]. This has increased their level of stress and burnout, and higher education institutes have been considered as "stress factories" [Barkhuizen & Rothmann, 2008, p. 321]. In this context, teachers are vulnerable to serious risks of health and well being [Taris et al., 2001]. However people vary significantly in beliefs, values, and personal resources, and they appraise the situations differently. Stress is not expressed on the same way by different people in different work contexts [Karimi & Alipour, 2011]. Therefore it is important to get a deeper knowledge of the sources and moderators of stress and on the functional coping mechanisms which can help overcome the impact of stressors [Srivastav, 2007] and the long term chronic stress that could lead to burnout [Cherniss, 1980].

Stress and burnout, if not managed properly, increase turnover intentions of the good performers, and indirectly increase recruitment and selection costs [Ongori, 2007; Grigoryan, 2008,]. Even if they do not quit, stress affects their physical and psychological health [Christo & Pienaar, 2006]. Therefore, there is a need for management to develop appropriate interventions to manage stress in their organizations [Grigoryan, 2008, Ongori & Agolla, 2008].

Our study was conducted on academic staff of a public sector university of Pakistan. It aims at understanding the relationship between stressors, coping mechanisms, stress and burnout. More precisely, it examines the moderating effect of coping mechanisms/resources on the relationship between different stressors and the resulting stress. After reviewing the literature on stress, burnout and coping, our research design and methodology will be presented. The results will then be analyzed and discussed.

1. KEY CONCEPTS AND LITERATURE REVIEW

Claude Bernard, the renowned 19th century French physiologist was one of the most important researchers who studied stress as an adaptive response to external stimuli. This concept was developed later by Hans Selye [1956] who studied the strains which arise when people struggle to adapt and cope because of changing environments. For most of the people nowadays, stress and coping has become a "part of life" [Iwasaki et al., 2005, p. 1] and it refers to a feeling of physical and/or emotional tension because of being unable to cope with anxiety and demands, as a response to challenging events [Cherniss, 1980; Kahn et al., 1964; Lazarus, 1991; Selye, 1956].

› **1.1. Stress:** Although many studies have been conducted on stress, this term is still subject to “divergence of opinions and is covered by a mask of confusion” [Barkhuizen & Rothmann, 2008, p. 321]. According to Lazarus [1990, p. 4], “stress is a multivariate process involving inputs, outputs and the mediating activities of appraisal and coping”. Occupational stress is defined as the perception of a discrepancy between environmental demands (stressors) and individual capacities to fulfill these demands in the job [Topper, 2007; Vermunt & Steensma, 2005]. Stressors are the factors which cause stress. Stress can be positive (the good stress or eustress [Selye, 1956] when it inspires and encourages. On the other side, distress is the bad stress, the one that gets the person irritated and eventually leads to dysfunctional consequences [Rees & Redfern, 2000].

According to the Person-Environment Fit (PE-Fit) theory [French & Kahn, 1962; French & Caplan, 1972], stress and strain at work come into action in the interaction of a person with his job environment, particularly when the challenging environment at job creates a threat for the individual, which ends up in an incompatible PE-Fit and ultimately leads to physical and psychological strain [French, Caplan & Harrison, 1982]. Karasek [1979] in his Demand–Control model of job strain mentioned that workers experiencing high psychological demands (e.g. high workload and conflicting roles) and low decision latitude (e.g. having no freedom in one’s job) are more likely face distress. The Demand–Control model also highlighted the positive effects of social support from supervisors and colleagues [Karasek et al., 1982].

The PE-Fit theory and the Demand-Control model are considered as two of the most important contributions to explain job stress and strain, and they have guided the construction of many measures of job stress [Vagg & Spielberger, 1998].

› **1.2. Burnout:** Chronic and continual stress ultimately results in a state of exhaustion and fatigue termed as burnout [Cherniss, 1980]. According to Maslach & Jackson [1986], burnout consists of three dimensions: the first dimension is emotional exhaustion, where the individual is in a state of depletion of emotional resources and feels worn out. The second is depersonalization which is a negative, cynical attitude towards one’s work or the recipients of one’s care (e.g. students in the case of teachers’ burnout). The third dimension of burnout is decreased personal accomplishment, marked by a sense of inefficacy, negative self evaluation and inadequacy with reference to job performance. Burnout is a work-related syndrome that mostly influences human-service professionals [Togia, 2005, p.130] and it is often regarded as a serious problem among teachers [Van Horn et al., 1997]. It has been mainly found in individuals who come across high level of interaction with the public and whose job demands include a high sense of ideals, for example medical professionals and teachers [Evers et al., 2005]. It is also the result of excessive workload, conflicting values, lack of rewards or role pressures [Maslach & Leiter, 1999; Lee & Ashforth, 1996].

› **1.3. Coping:** “Coping is any effort, healthy or unhealthy, conscious or unconscious, to prevent, eliminate or weaken stressors, or tolerate their effects in the least harmful manner” [Matheny et al., 1986]. Lazarus [1993, p. 8] conceptualizes coping as “a person’s ongoing efforts in thought and action to manage specific demands appraised as taxing or exceeding the resources of the person”. Folkman and Lazarus [1980, 1985] developed a Ways of Coping Scale. A clear difference can be seen between two major types of coping termed as problem-focused coping and emotion-focused coping. Problem-focused coping aims to solve the problems in advance or in other words to try maneuvering the source of stress before it creates any problem, whereas emotion-focused coping aims to reduce the emotional distress which is linked with a situation [Carver et al., 1989]. Problem-focused coping mechanisms (e.g. proactive coping) involve goal setting and are associated with social support resources in contrast to a reactive strategy where coping is used after stress has been experienced [Greenglass and Fiksenbaum, 2009]. Emotion-focused coping includes acceptance and positive interpretation of stressful events, denial, avoidance and seeking social support for emotional reasons [Carver et al., 1989]. Problem-focused coping is used mostly in situations which were appraised as changeable and emotion-focused coping in scenarios appraised as unchangeable [Lazarus & Folkman, 1984].

Taris et al., [2001, p. 294] in their study on coping behaviors mention that strains and withdrawal behaviors (avoidance) were expected to be most prominent among those faculty members who reported “having few resources and/or who reported high job demands”. Dick & Wagner [2001] while studying the “stress and strain in teaching” found that workload leads to physical stress, but that the support from the principal (supervisor) reduces the negative perceptions related to workload: social support served as a moderator between stress and strain. Their results also show that teachers using ‘adaptive’ coping mechanisms have a lower level of burnout compared to those who used ‘ignoring’ or ‘avoiding’ coping tactics.

› **1.4. Relationship between stressors, stress, burnout and coping:** Despite of the recognition of “stress” as an important research topic, researchers are still not in agreement on a common definition of this controversial subject [Rees & Redfern, 2000], and stress has been sometimes used in the same context as burnout. Burnout describes a state of professional exhaustion. It can be distinguished from job stress; however depression as one of the important dimension of stress (identified as “general stress” in this study) represents the depressive thoughts and loss of pleasure [Terluin et al., 2004]. Stress therefore shares several ‘qualitative’ characteristics with burnout [Iacovides et al., 2002]. In our study, the various dimensions of burnout will be considered as part of a more global concept of stress.

While studying stress, one must be clear with the other three classes of variables i.e. stressors, strains and health outcomes. Stressors are the environmental stimuli which impact on the well being of the individual; strains involve the individual's physiological and psychological reactions to such stressors, and health outcomes are the negative health conditions of the individuals who are exposed to stressors [Hurrell et al., 1998]. To study the strain factors as psychosomatic health problems, depression, anxiety and burnout, many researchers have developed self-report instruments which have been widely used in this domain. Beck et al., [1961], Zung et al., [1965], Goldberg [1978], Maslach & Jackson [1981] are few of the pioneers who developed instruments to measure depression, anxiety and burnout, and these scales have been widely used by stress researchers.

Lazarus [1966] argues that stress consists of three processes including primary appraisal (perceiving a threat), secondary appraisal (potential response to threat) and coping (executing the response). Cherniss [1980] termed burnout as a three phase process including stress, strain and coping. It is the result of the constantly increasing effect of stressful job situations that exceeds the coping capacity. It can lead to introversion [Toker, 2011], depersonalization and indifference in interpersonal relations [Ozdemir, 2006]. However, even with constant levels of stressors, coping strategies can act as moderators to buffer the stress-strain relationship and reduce the level of burnout of employees [Yip et al., 2008]. Coping has often been viewed as reaction to stressful situations, but recently it has also been defined as an action before an anticipated stressful situation, with multiple positive outcomes on stress and burnout [Greenglass and Fiksenbaum, 2009]. In other words, appropriate coping strategies should be used to reduce consequential strains [Dick & Wagner, 2001]. In this paper, the concept of "coping mechanism" will be preferred to the concept of "coping strategy" which has a long term connotation.

› 1.5. Sources and Consequences of Stress in Academic Staff

The job of a modern university teacher demands working round the clock with multiple responsibilities of teaching, research and community service and work overload has been reported as the most significant source of stress among them [Omolavon, 2010]. Barkhuizen & Rothmann [2008] in their studies on occupational stress of academic staff found that work overload and work-life balance contributed significantly to psychosomatic stress of teachers. Studies carried out by Lacritz [2004] and Gillespie et al., [2001] examined burnout and related issues among university faculty and found that burnout significantly correlated with the number of students taught and their evaluations, with insufficient resources, overload, poor organizational practices, insecurity and inadequate recognition.

Sources of stress among academic staff could be either external (environmental) or internal. External environmental sources of stress are those generated by outside

factors e.g. organizational and societal challenges. The internal stress is generated from within an individual including personality traits, coping skills etc, as individual differences also define how they perceive and appraise the stressors [Spielberger, 1979]. How much these factors affect the individual depends on how s/he responds to these stressors. Research shows that teachers' stress becomes problematic and quite harmful in terms of its consequences when the challenges teachers face outpace their perceived ability to cope, or when they perceive that their important needs are not being met [Kahn et al., 1964].

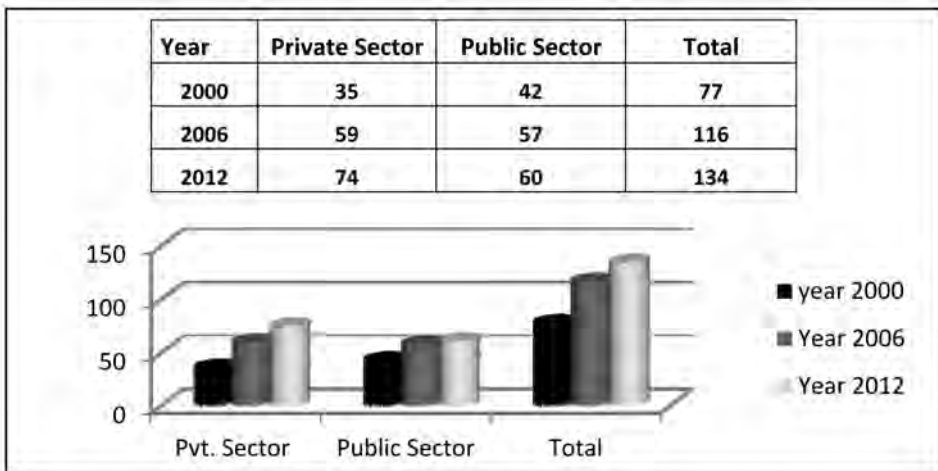
Though research revealed that some level of stress is imperative to improve job performance, most of the literature on stress among academics reveals severe negative consequences of chronic stress and burnout. The literature shows that long-term physical effects of stress and burnout such as fatigue, migraines, irregular sleeping patterns, insomnia, high blood pressure or heart diseases are ultimately very harmful for the individual and the organization (Hinton & Rotheiler, 1998). With particular reference to job stress of academicians, Johnson et al., [2005] studied the relationship between physical stress, psychological stress and job satisfaction among 26 different professions and identified teachers among those who showed worse than average scores on each of the three factors. In this context, Dick & Wagner [2001, p. 244] revealed that "teacher stress is seen mainly as a negative affect with diverse psychological (e.g., job dissatisfaction), physiological (e.g., high blood pressure), and behavioral (e.g., absenteeism) correlates". According to them, these negative stress outcomes in the long run lead to psychosomatic and even severe health problems like heart diseases. Sufficient evidence in this context suggests that "teachers are vulnerable to serious risks of health and well being" [Taris et al., 2001, p. 284], therefore it important to develop appropriate proactive interventions to manage stress [Grigoryan, 2008; Ongori & Agolla, 2008]. On the positive end however, research also shows that a certain amount of stress is unavoidable and even beneficial [Yerkes & Dodson, 1908].

› 1.6. The context of the study: Higher Education Institutes (HEIs) of Pakistan

Pakistan has observed more rapid economic, social, political and technological changes than ever before, the number of universities have almost doubled during last 12 years (See table 1) and the future of higher education in Pakistan depends on how the stakeholders respond to these challenges [Rao, 2003]. Because of the efforts of the Higher Education Commission of Pakistan (HEC), universities are gaining more and more attention both at local and international level, but on the other hand faculty members in universities are facing many problems because of work-overload, work-life imbalance, role ambiguity or lack of resources, which must be addressed properly at organizational and individual level. In the higher education sector of Pakistan (where this study took place),

the above mentioned challenges have created a new context for institutions which are striving their best for accreditations, high rankings and quality certifications. Promotion policies in HEIs of Pakistan are strictly based on research papers to be published in high-ranked journals, categorically identified by the Higher Education Commission of Pakistan (hec.gov.pk). On the average, lecturer and assistant professor have to teach 300 (credit) hours of course per year (usually in two semesters) and usually the class size is 40-50 students. The performance pressures with particular reference to research has gained more importance than ever before, and the workload has increased, thus making the higher education academic staff more vulnerable to stress. There is an ominous need of HRM research on causes and consequences of stress in higher education which is an area of main importance for developing countries like Pakistan.

**Table 1. Increase in Private and Public Sector during 2000-2012
(Number of universities – Source: Education Statistics of Pakistan)**



› 1.7. Hypotheses:

Based on the literature review, specific hypotheses were developed to characterize the links between stressors, coping mechanisms and stress. Some of the problem-focused and emotion-focused coping mechanisms were used as moderating variables for our hypotheses on the relationship between stress (as a dependent variable) and overload (as an independent variable). The literature expresses two main types of relationships between stressors, stress and coping mechanisms:

- The impact of stressors (overload in this study) on the different dimensions of stress.
- The moderating effect of various coping skills on the link between stressors and stress.

As discussed in the literature review, many studies in the academic context found overload stressors as being major sources of stress and burnout [Biron et al., 2008; Gillespie et al., 2001; Lacritz, 2004]. Overload happens when people are subject to too high expectations from their organizations and the demanding organizational roles interfere with family roles, creating a work-life imbalance [Srivastav, 2007]. Based on these studies, following hypothesis is proposed:

H1: Overload increases stress

Coping mechanisms include a diverse range of coping variables: social support resources and proactive planning are considered as problem-focused coping, whereas avoidance behavior and acceptance (positive reinterpretation) are considered to be emotion-focused coping mechanisms [Carver et al., 1989].

Social support is defined as effective support such as love, respect, confirmation of actions and readiness to help by the people around [Kahn & Antonucci, 1980]. Relationship between occupational stressors and strains is affected by social support, i.e. high social support protects individuals from negative effects of occupational stressors. It has also been found as having a moderating effect on the relationship between stressors and ill health, as social support gives access to social resources and is typically attached with perceptions of positive feelings which reduce the negative effects of stressors [Frese 1999]. Leiter & Meechan [1986] report that social support is associated with less burnout and might be helpful in moderating burnout.

Schwarzer and Knoll [2007] explain that “social support and social integration are theoretical constructs that refer to the degree to which individuals are socially embedded and have a sense of belonging, obligation, and intimacy” (p. 244). Social support may be considered as a coping mechanism, an interactive process based on perception of reciprocity and perceived availability of support/resources by others [Schwarzer and Knoll, 2007; Schwarzer & Leppin, 1991]. In a relationship-driven culture like Pakistan, which stands high on collectivism [Hofstede, 2001], social integration and social support play an important role in family issues and organizational functioning. In such a collectivist society, Triandis [1995] showed that trust is considered as a main component of social relationships. In Pakistan, nepotism is viewed positively as it guarantees hiring trustworthy people who can be a support resource during times of trouble. Pakistanis prefer to work with people they know and trust. They rely on social support resources which imply a sense of belonging, but also some obligations. In France, Roques [1999] and Roques & Roger [2004] have shown the importance of social support as a moderator between stressors and stress in various contexts (education, army, large company).

Based on these studies, following hypotheses are proposed with reference to social support as a coping resource:

H2: Social support resources reduce stress

H3: Social support resources reduce the impact of overload on stress

One of the dimensions of problem-focused coping, **pro-active coping**, is future oriented, which suggests that tactics are elaborated in advance to cope with potential stressors. [Aspinwall & Taylor, 1997; Folkman & Moskowitz, 2004, p. 757]. "Active coping refers to strategies that are directed at problem solving, and entail taking direct action to confront the stressor and reduce its effects" [Updegraff & Taylor, 2000, p. 13]. According to Rowe [2000], people using proactive coping strategies can effectively cope with the stressors, feel higher level of personal accomplishment and less emotional exhaustion. Research suggests that the use of active coping mechanisms in dealing with a stressful life event can contribute to lower levels of depression and are associated with less burnout [Shaufeli & Enzmann, 1998]. Based on this, following hypotheses are proposed:

H4: Proactive coping reduces stress

H5: Proactive coping reduces the impact of overload on stress

"**Acceptance** and positive reinterpretation is one of the dimensions of emotion-focused coping. It refers to acceptance of a stressor as real and unavoidable and attempts to focus on the positive aspects of a situation" [Updegraff and Taylor, 2000, p. 13]. Schaefer & Moos [1992] have found that positive reinterpretation and acceptance are strongly related to stress. When the stressors are unchangeable (not manageable), positive reinterpretation and acceptance coping tactics are fruitful [Carver et al., 1989]. Based on this, following hypotheses have been proposed:

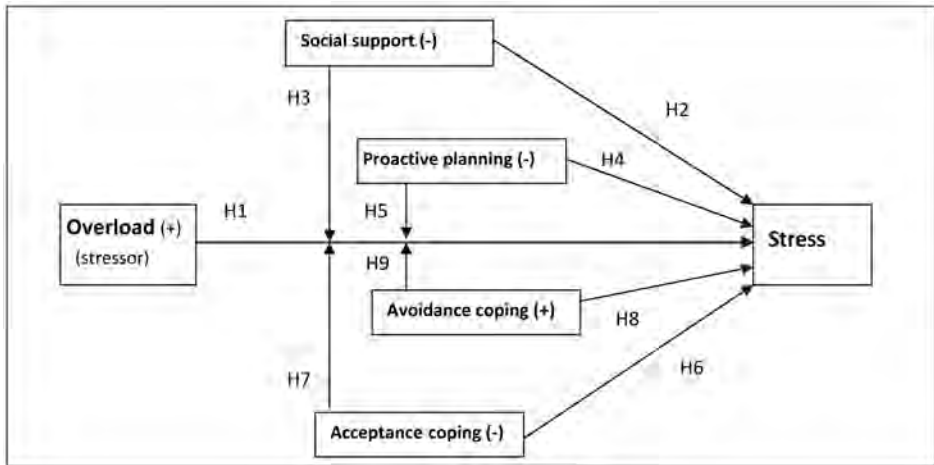
H6: Acceptance coping reduces stress

H7: Acceptance coping reduces the impact of overload on stress

Avoidance coping in our study is also an emotion-focused tactic. It has been usually found associated with higher levels of burnout [Etzion & Pines, 1986]. It may reduce the distress associated with stressors in the short run, but without reducing the harmful aspects of the stressors in long run: mental and behavioral disengagement, drugs, denial etc [Updegraff and Taylor, 2000; Carver et al., 1989; Folkman & Moskowitz, 2004]. Taris et al., [2001] found that withdrawal behaviors (avoidance) were expected to be most prominent among those faculty members who had little resources coupled with high job demands. Dick & Wagner [2001] found that teachers using avoidance coping revealed higher levels of burnout compared to those who used adaptive coping mechanisms. This leads us to hypotheses 8 and 9, and the global model is presented in figure 1.

H8: Avoidance coping increases stress.

H9: Avoidance coping increases the impact of overload on stress

Figure 1. Model to be tested. (+ or – indicate a positive or negative relationship)

2. METHODOLOGY

› 2.1. Sampling and Data Collection

Our target sample is the academic staff of a public sector university of Pakistan. The respondents belong to different departments and have different levels of experience. Examining academic stress without considering the professional and personal differences is inappropriate as “academics is not a homogeneous group of professionals” [Barkhuizen & Rothmann, 2008, p. 324]. Therefore in this study two demographic variables, gender and experience are used as control variables. Table 2 shows these demographic details of the respondents:

Table 2. Demographic details of the respondents (N = 80)

| Demographic Characteristic | | Number | Percentage |
|----------------------------|-------------------|--------|------------|
| Gender | Male | 61 | 76 % |
| | Female | 19 | 24 % |
| Experience | Less than 5 years | 39 | 49 % |
| | More than 5 years | 41 | 51 % |

Because of limitations of time, convenience based sampling has been used. However utmost care has been taken that the sample should represent the population of faculty members of this public sector university. The total size of the faculty was 370, and 100 questionnaires were distributed among selected faculty members through their coordination offices. Through e-mails and telephonic requests, the respondents were

requested to visit the meeting rooms of their concerned department to fill/return the questionnaire in a congenial environment in the presence of principal investigator. Confidentiality and anonymity was guaranteed. 80% of the respondents returned the completely filled questionnaire.

› 2.2. Instrumentation

“Stress is an imprecise and misused term and a system of measurement should provide a structure and language that facilitates the understanding of the subject” [Williams & Cooper, 1998, p. 306]. To overcome such issues, we did not take the risk to construct new instruments but preferred to use already tested (reliable) instruments. Thus a survey instrument in the form of a close-ended questionnaire was developed which was composed of many sub-sections including demographic information, role stressors, general and job related stress, burnout and coping. However, to provide a preliminary understanding of some of the tools used in this study and to adapt the already existing scales in this particular context, 20 faculty members were interviewed. The interviews provided a number of insights into their perceptions regarding stress and coping, which on one hand helped to select the appropriate instruments to be used, and on the other hand helped us to modify/adapt these instruments in a user friendly language. They showed for example that overload was one of the main stressors for faculty members and they confirmed the relevance, in the specific context of Pakistan, of the variable “Turning to God” which is not usually included for example in the models of French or American researchers. It is worthwhile to mention that because of time and space limitations, in this study we have only analyzed the quantitative relationships between role stressors, various dimensions of stress and coping variables. The details of the instruments used are as under:

2.2.1. Overload: Overload was measured by a scale adapted from Pareek [2002] merging two highly inter-correlated components (stressors) of this scale: ‘role overload’ (sample item: *“Too many and too high expectations from one’s role which s/he can’t fulfill”*) and ‘inter role distance’ (sample item: *“Demanding organizational roles interfering with family roles creating work-life imbalance”*). The 10 items composing this scale had a reliability of Alpha = .82.

2.2.2. General and Job Related Stress Indicators: Some of the items measuring depression and somatization have been adapted in this survey from the General Health Questionnaire [GHQ – Goldberg, 1978] and Four Dimensional Stress Questionnaire [4DSQ – Terluin et al., 2004]. But prior to that, our interviews with twenty faculty members helped to identify pertinent health related stress indicators (psychosomatic stress symptoms). These indicators assess various symptoms of stress over a period of time (not linked to specific event). Interestingly, the factor analysis identified two dimensions; the first dimension includes 6 items and is clearly related to Job Stress (e.g. *“I feel recurrent*

headaches because of my job"). The second dimension including 5 items relates to General Stress (e.g. "Everything seems worthless and meaningless to me"). Cronbach's Alphas are 0.79 for Job related stress and 0.76 for General stress (see table 4).

Table 3. Two dimensions of stress (Factor analysis, Varimax rotation)

| Components of Stress | Dimensions | |
|---|--------------------|----------------|
| | Job-related stress | General stress |
| <i>During job, I feel tense and get easily irritated</i> | .76 | |
| <i>I feel recurrent headaches because of my job</i> | .76 | |
| <i>Because of job frustrations, I feel migraines</i> | .74 | .31 |
| <i>I feel my sleeping routine is quite disturbed because of my job</i> | .64 | |
| <i>I feel I am highly stressed most of the time because of the nature of my job</i> | .62 | |
| <i>Because of my job, I feel frequently anxiety</i> | .55 | |
| <i>Everything seems worthless and meaningless for me</i> | | .77 |
| <i>I feel I cannot enjoy anything anymore</i> | .32 | .75 |
| <i>I feel I cannot do anything productive anymore</i> | .31 | .72 |
| <i>I would be better if I were dead</i> | | .69 |
| <i>I face difficulty in getting asleep at night even if I am tired</i> | | .53 |
| Percentage of variance (total: 52.1 %) | 27.7 | 24.4 |
| Cronbach alpha | 0.79 | 0.76 |
| (only coefficients above .30 are presented in the table) | | |

2.2.3. Maslach Burnout Inventory-Educational Scale (MBI-ES): MBI is one of the most reliable and frequently used burnout measuring instrument [Azeem & Nazeer, 2008]. An adaptation of MBI-ES [Maslach & Jackson, 1981: 1986] was used in our study. MBI-ES consists of 22 statements, measuring the burnout on three subscales: Emotional Exhaustion, Depersonalization and Personal Accomplishment. Reliability coefficients of MBI-ES have been found above 0.70 in original studies by Maslach & Jackson [1981]. According to them, High scores of Emotional Exhaustion and Depersonalization along with a low score of Personal Accomplishment reveal a high level of burnout. In our study, Cronbach alphas were .80 for Emotional Exhaustion, .74 for Depersonalization, but only .65 for Personal Accomplishment. Because of this lower score for personal accomplishment and because it did not appear to be clearly related to stress or burnout for the faculty members we interviewed in our preliminary study, we decided to remove this dimension.

2.2.4. Coping Behaviors: Based on the preliminary interviews and literature available, nine dimensions of coping inventory have been finalized and adapted to our study from Carver et al., [1989]. These dimensions included acceptance, avoidance, active planning, social support, turning to God, venting of emotions, mental disengagement and ability

to relax. Some of these had reliability scores (Cronbach alpha) under .60 and were eliminated. Five dimensions were selected for our study as the factor analysis identified five clear dimensions, and although two of the reliability scores were slightly under 0.70. These include Acceptance (.70), Avoidance (.71), Active planning (.63), Social support (.68) and Turning to God (.78).

› 2.3. Data Analysis

Selecting reliable instruments to assess the relationships between stressors, coping and stress is no doubt very important, but data analysis methods have to be adapted to the objectives of the research [Hurell et al., 1998]. Many studies conducted in this context are quantitative in nature using advance statistical softwares and techniques. In our study, because of the limitation of the number of respondents (n=80), structural equations were not adapted. We used multiple regressions with SPSS for data analysis.

3. RESULTS

Table 4 shows the summary of the results of a hierarchical regression predicting stress related to overload and coping variables. When gender and experience are entered as control variables in the first step, the adjusted R^2 shows that they only explain 2 % to 7 % of the variance, indicating that these two variables have little impact on our dependent variables. In step 2, when the main effects of Overload and of the coping variables are entered, the results show an increase in explained variance varying from 7 % to 38 % (for General stress). In step 3, which measures the moderating effects by including the interactions with the coping variables, the increase in explained variance does not exceed 3 % for all the variables except for Job related stress (10%).

The main significant results are highlighted in grey in table 4.

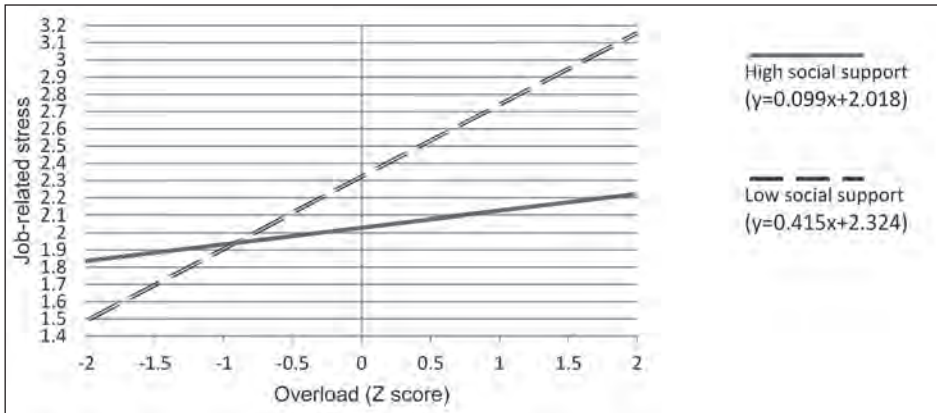
1. Overload has a significant positive impact on Job related stress, General stress and mainly on Emotional exhaustion. (Beta = .29*, Beta = .21* and Beta = .54**).
2. Acceptance has a significant positive impact on General stress. (Beta = .27*)
3. Avoidance has a significant positive impact on Job related stress, General stress and Depersonalization. (Beta = .28*, Beta = .59**, Beta = .32*)
4. Social support has a significant negative impact on General stress (Beta = -0.23*)
5. Social support significantly reduces the impact of Overload on General stress (Beta = -0.23*)
6. Social support significantly reduces the impact of Overload on Job related stress (Beta = -0.37**)
7. Turning to God was included in the regression for exploratory purposes. It had no significant impact on any of the dimensions of stress.

Table 4. Hierarchical regression model of predicting Stress from Overload, and Overload interactions with Coping variables –
Entries are based on Z-values (standardized) regression coefficient

| <i>*p < .05, **p < .01</i> | Job Related Stress | General Stress | Emotional Exhaustion | Depersonalization |
|---|---------------------------|-----------------------|-----------------------------|--------------------------|
| STEP 1: Control Variables | | | | |
| Gender | .09 | .11 | .11 | -.21 |
| Experience / Post | .17 | .17 | .03 | .06 |
| R² | .09 | .08 | .06 | .03 |
| Adjusted R² | .07 | .05 | .04 | .02 |
| STEP 2: Overload and coping | | | | |
| Overload | .29* | .21* | .54** | .16 |
| ACCEPTANCE | -.02 | .27* | .03 | .10 |
| PROACTIVE | -.08 | -.01 | -.08 | .02 |
| AVOIDANCE | .28* | .59** | .22 | .32* |
| SOCIALSUPPORT | -.12 | -.23* | -.09 | .02 |
| TURNING to GOD | .00 | -.07 | .01 | .03 |
| R² | .30 | .49 | .37 | .13 |
| Adjusted R² | .22 | .43 | .30 | .08 |
| Change in Adjusted R² | +.15 | +.38 | +.26 | +.07 |
| STEP 3: Interactions | | | | |
| Overload x ACCEPTANCE | .13 | .04 | .10 | -.03 |
| Overload x PROACTIVE | .15 | -.01 | -.01 | .16 |
| Overload x AVOIDANCE | -.04 | .05 | -.00 | -.16 |
| Overload x SOCIALSUPPORT | -.37** | -.23* | -.16 | -.08 |
| Overload x TURNING to GOD | .00 | -.08 | -.15 | .01 |
| R² | .42 | .54 | .43 | .22 |
| Adjusted R² | .31 | .45 | .32 | .08 |
| Change in Adjusted R² | +.10 | +.02 | +.02 | -.01 |

Figure 2 illustrates the moderating effect of Social support on the relationship between Overload and Job-related stress. For high levels of Overload, Social support clearly reduces the level of stress. The post-hoc test suggested by Aiken & West [1991] shows that the difference between the slopes is highly significant for low social support ($t = 3.28, p < 0.01$).

Figure 2. Moderating effect of Social support on the link between overload and Job-related stress



| | Slope | ES | t | p (bilateral) |
|----------------------------------|-------|-------|------|---------------|
| Low social support (m - 1 s.d.) | 0.415 | 0.126 | 3.28 | .0012 |
| High social support (m + 1 s.d.) | 0.099 | 0.089 | 1.11 | .2695 |

4. DISCUSSION

The purpose of this study was to examine the relationship between overload, stress, and coping tactics/resources of academic staff, based on a sample of faculty members in a public sector university of Pakistan. The higher education sector of Pakistan has witnessed many challenges during the last decade; competition has intensified because of the entrance of many private sector universities (see figure 1), accreditations, competition for high rankings, performance pressures and quality certifications which resulted in heavy responsibilities and challenging demands on faculty members, making them more vulnerable to stress. Previous research had shown strong relationships between perceived stress, coping strategies, and the consequences of stress-related maladaptive responses [Endler & Parker 1990]. Our results show that overload is significantly related to some of the dimensions of stress. Three types of coping mechanisms, avoidance, acceptance and social support were also linked to stress, and social support moderated the relationships between overload and job-related or general stress. No significant difference was observed between male and female teachers. Similarly no significant difference was observed between Assistant professors (> 5 years seniority) and less experienced faculty members (lecturers).

As expected, **“overload”** had a significant positive impact on job related stress, general stress and mainly on emotional exhaustion, thus partly supporting hypotheses 1.

These results confirm those of some authors including Taris et al. [2001] and Gillespie et al. [2001] who mentioned that increase in student enrollment, mandatory use of new technologies, additional administrative tasks, time pressures and unrealistic deadlines, which have increased the workload for many academicians, are a source of stress. Maslach et al. [2001, p. 403] also described emotional exhaustion as a response to job overload and mentioned that too many challenging demands ultimately exhaust an individual's energy, thus leading to emotional exhaustion. The results of our study support Leiter [1991], who mentioned that emotional exhaustion arises as a response to challenging work environments and is followed by cynicism as employees try to seek emotional distance from their job and from the recipients of their service.

In Pakistan's higher education context, our preliminary interviews revealed that faculty members are not only occupied with heavy workloads of teaching and research, but they are also engaged in many administrative tasks in parallel. Their organizational roles interfere with their family life even on weekends, which makes them emotionally exhausted most of the time.

"Social Support", in our study, had a significant impact to reduce General stress, but not Job-related stress; it had no significant effect on the other dimensions taken from the Maslach's burnout scale. These results partly confirms hypothesis H2. Social support also interacted with overload and showed a significant moderating effect on two dimensions of stress (general and job related), suggesting that faculty members who have sufficient social support resources are less vulnerable to stress when they are exposed to overload, but social support had no significant moderating effect on the link between overload and the two other dimensions. These results partly support hypothesis H3.

Our results corroborate those of Yip et al., [2008], Gillespie et al., [2001], Maslach et al., [2001] and Salami [2011]. Yip et al., [2008] mention that employees use more intangible or emotional support and can express themselves better if they have social support: this support weakens the relationship between overload and cynicism (or depersonalization). Human interaction helps employees to develop feelings of better moral standing, which contributes to an improved state of well-being; employees work more effectively if they receive support when it is required [Park et al., 1996]. Support from subordinates, peers and supervisor consists in sharing workload, being able to ask for help or sharing. This support plays an important role to cope with work related stress [Gillespie et al., 2001]. Our results do not confirm the buffering effect of support resources found in the literature on the impact of overload on the other dimensions of stress taken from the Maslach's burnout scale: a research by Himle et al. [1991] indicated for example that some kinds of social support can be helpful in moderating this relationship. In their studies on burnout among social workers, they found that informational and instrumental support given by both co-workers and supervisors had moderating effects on the link between stressors and burnout components.

Regarding “**proactive coping**”, hypotheses H4 and H5 were not supported by our results: no significant relationship was found between proactive coping and stress. Proactive coping in our results did not even act as a moderator between overload and stress. These results contradict Yip et al.’s [2008] suggestion that rational problem solving, a form of active coping, has a positive role in work well-being and strain reduction. In our results, employees anticipating a positive reaction to stress and taking stress as a source of inspiration and motivation (high **acceptance**) are more prone to general stress, as opposed to hypothesis 6 which suggested a negative relationship. No significant relationship is found with any other dimension. There is no support either for hypotheses 6 and 7. Maslach et al., [2001, p. 405] found that employees taking stress as a challenge (high acceptance), “who work hard in support of their ideals but cannot achieve the desired goals experience higher stress”, but this finding was not confirmed on our sample of faculty members in Pakistan.

Our results reveal that “**avoidance coping**” has a significant positive impact on job related stress, general stress and depersonalization, thus partly supporting hypothesis H8. As expected, using avoidance as a coping tactic increases the chances of stress and burnout. Those who use avoidance coping compromise on quality and avoid contacts by maintaining a distance (depersonalization), and this leads the employees to respond to clients in dehumanized ways [Maslach et al.,2001]. Avoidance coping encompasses doubts particularly about the likelihood of managing stress in an adaptive way and has been termed as escape coping by Greenglass and Burke [2000]. These authors reported that escape coping was associated with higher levels of burnout. Research on coping also reveals that, where proactive coping does not exist, the alternatives are either avoidance or “passive” ways to reduce discomforting emotions [Lazarus & Folkman, 1984], but these avoidance and emotion-focused coping tactics result in greater psychological distress [Endler & Parker, 1990]. As opposed to hypotheses 9, Avoidance coping had no significant moderating impact on stress.

Globally, our results point out that Overload significantly increases General stress, Job-related stress and one of the dimensions of burnout, Emotional exhaustion. Three coping mechanisms have a direct impact on stress: as expected, avoidance or acceptance are the worst of the coping mechanisms as they increase stress or burnout instead of reducing it. On the other side, social support has a direct positive impact on general stress, but also a moderating impact to reduce the influence of Overload on stress.

5. CONCLUSION AND RECOMMENDATIONS

Results from our study reveal that the use of emotion-focused coping i.e. avoidance and acceptance increase some dimensions of stress instead of reducing them, and they do not moderate the relationship between overload and stress or burnout. The literature shows that when employees cannot reduce stress by using problem-focused coping

actions, then tend to opt for avoidance actions [Lazarus & Folkman, 1984]. This type of emotion-focused coping strategy produces greater psychological distress instead of reducing distress [Endler & Parker, 1990]. We would therefore suggest that managers help their employees to use more problem-focused coping interventions rather than avoidance and acceptance. However it may vary from situation to situation; for example if the outcomes are uncontrollable as in case of expected downsizing at a university, they could be encouraged to use acceptance focused coping. In parallel, proactive measures could also be taken such as new job search, training, etc. In Pakistan for example, if the Higher Education Commission announces that each faculty member must have a doctoral degree by a certain deadline, in such scenario avoidance coping would be totally useless and only specific problem-focused coping can rescue the faculty members who decide to start a PhD program. Universities should thus provide full support to their faculty members by reducing their administrative workload, introducing career development interventions and providing resources such as research labs, equipments, research associates etc. In this way the non-PhD faculty can proactively plan their future/careers, manage their jobs and studies in parallel without feeling overburdened and with less vulnerability to stress.

One of the limitations of this study is the relatively small sample of faculty members in a single public sector university ($n=80$). This did not allow us to use more advanced quantitative tools like structural equation modeling. Because of the cross-sectional design, we were unable to ascertain the causal direction of the relationships. Future studies should be encouraged to use a longitudinal research design which would enable this type of analysis [Yip et al., 2008, p. 878]. For future research we suggest to develop comparative analyses based on the type of university (public and private sector) and the type of job. Intercultural differences between countries may also lead to different ways of reacting to stressors. Reactions to stressors also vary for non academic staff compared to academic staff. Even among academic staff, the stressors can vary between faculty members who are teaching high-tech courses with extensive use of lab/equipments, and teachers who are teaching relatively simple courses. Moreover similar type of research on teachers' stress at lower level education institutes can be carried out to observe the differences in their potential stressors, levels of stress and the impact of coping mechanisms as moderators. It would also be interesting to study the relationships between faculty stress and student stress. Variables such as personality type, performance and turnover intentions could also be included in future studies.

Using personal and social support resources can also help in such a scenario. Thus it is suggested that academicians focus on future-oriented or proactive coping; in this way they can tackle the adverse effects of the unexpected future events and this can help them to handle stress and burnout [Folkman & Moskowitz, 2004]. Pertaining to work-life balance, it seems difficult to reduce this role overload, but social support from

family, friends and partner for example can help overcome such work-life balance issues thus buffering stress and burnout [Love et al., 2010].

Management could also introduce stress management interventions which can also be proactive or reactive. Proactive interventions, also termed as primary interventions, seek to identify and reduce sources of stress in order to increase the person-environment fit [Fogarty et al., 1999; Barkhuizen & Rothmann, 2008]. Examples of such primary (or proactive) interventions are an equal distribution of workload rather than putting more load on hardworking employees only (which is a trend in many universities), hiring research associates to help the senior faculty who are also engaged in administrative tasks, conducting regular training seminars (e.g. time management), designing appropriate recruitment and selection procedures to hire faculty members with aptitudes for teaching and research.

Reactive interventions, also termed as tertiary interventions by some authors, are focused on treatment of the existing situation. It can be done by providing treatment services to employees who are in trouble because of stress. The main efforts are then focused on treatment. Universities can hire the services of psychologists for such troubled workers before the negative effect of stress are too serious and affect students and other stakeholders. The presence of social support networks can be very helpful in such scenarios. Between the primary and tertiary approaches is the secondary approach, based on prevention, which includes common stress management techniques. Universities can for example educate their staff through seminars, discussion forums and many other sources explaining the positive outcomes related to proactive coping and the negative outcomes of avoidance coping. However, there is no one best solution: coping tactics should vary from time to time, depending upon the person and the severity and the type of stressors. With reference to role stress, faculty members can be encouraged to use interventions such as employment assistance programs or mental health counselors to help them learn the required skills to overcome their role stress and inter-role conflicts positively before these lead to burnout.

BIBLIOGRAPHIE

AIKEN, L.S. ; WEST, S.G. (1991), *Multiple Regression: Testing and Interpreting Interactions*, Newbury Park, CA: SAGE Publications.

ASPINWALL, L. G. ; TAYLOR, S. E. (1997), "A stitch in time: self-regulation and proactive coping", *Psychol. Bull*, vol. 121, p. 417-436.

AZEEM, S. M. ; NAZEER, N. A. (2008), "A study of job burnout among university teachers", *Psychology Developing Societies*, vol. 20, n°1, p. 51-64.

- BARKHUIZEN, N. ; ROTHMANN, S. (2008), "Occupational stress of academic staff in South African higher education institutions", *SA Journal of Psychology*, vol. 28, p. 321-336.
- BECK, A. T. ; WARD, C. H. ; MENDELSON, M. ; MOCK, J. ; ERBAUGH, J. (1961). "An inventory for measuring depression", *Archives of general psychiatry*, vol. 4, n° 6, p. 561-572.
- BIRON, C. ; BRUN, J. P. ; IVERS, H. (2008), "Extent and sources of occupational stress in university staff", *Work* 3, p. 511-522.
- CARVER, C. S. ; SCHEIER, M. F. ; WEINTRAUB, J. K. (1989), "Assessing coping strategies: A theoretically based approach", *Journal of Personality and Social Psychology*, vol. 56, p. 267-283.
- CHERNISS, C. (1980), *Staff Burnout – Job stress in the human services*, Beverly Hills. Sage Publications.
- CHRISTO, B. ; PIENAAR, J. (2006), "South Africa correctional official occupational stress: The role of psychological strengths", *Journal of Criminal Justice*. vol 34, n°1, p.73-84.
- DICK, R.V. ; WAGNER, W. (2001), "Stress and strain in teaching: A structural equation approach", *British Journal of Educational Psychology*, vol. 71, p. 243-259.
- ENDLER, N. S. ; PARKER, J. D. (1990), "Multidimensional assessment of coping: A critical evaluation", *Journal of Personality and Social Psychology*, vol. 58, n° 5, p. 844-854.
- ETZION, D. ; PINES, A. (1986), "Sex and culture in burnout and coping among human service professionals: A social psychological perspective", *Journal of Cross-Cultural Psychology*, vol. 17, p. 191-209.
- EVERS, W. ; TOMIC, W. ; BROWERS, A. (2005), "Does equity sensitivity moderate the relationship between self-efficacy beliefs and teacher burnout?", *Representative Research in Social Psychology*, vol. 28, p. 35-46.
- FRENCH, J. R. ; CAPLAN, R. D. (1972), "Organizational stress and individual strain", *The failure of success*, 30, 66.
- FRENCH, J. R. ; KAHN, R. L. (1962), "A Programmatic Approach to Studying the Industrial Environment and Mental Health", *Journal of Social Issues*, vol. 18, n°3, p. 1-47.
- FRENCH, J. R. ; CAPLAN, R. D. ; VAN HARRISON, R. (1982), *The mechanisms of job stress and strain*, vol. 8, New York: Wiley.
- FOGARTY, G. ; MACHIN, A. M. ; ALBION, M. ; SUTHERLAND, L. ; LALOR, G. L. ; REVITT, S. (1999), "Predicting occupational strain and job satisfaction: the role of stress, coping, and positive and negative affectivity", *Journal of Vocational Behavior*, vol. 54, p. 429-452.
- FOLKMAN, S. ; MOSKOWITZ, J.T. (2004), "Coping: Pitfalls and Promise", *The Annual Review of Psychology*, vol.55, p. 745-774.
- FOLKMAN, S. ; LAZARUS, R.S. (1980), "An analysis of coping in a middle aged community sample", *Journal of Health and Social Behavior*, vol. 21, 219-239.

FOLKMAN, S. ; LAZARUS, R.S. (1985), "If it changes, it must be a process: A study of emotion and coping during three stages of college examination", *Journal of Personality and Social Psychology*, vol. 48, p. 150-170.

FRESE, M. (1999), "Social support as a moderator of the relationship between work stressors and psychological dysfunctioning: a longitudinal study with objective measures", *Journal of Occupational Health Psychology*, vol. 4, p. 179-92.

GILLESPIE, N.A. ; WALSH, A. ; WINEFIELD, A. H. C. ; DUA, J. ; STOUGH, C. (2001), "Occupational stress in universities: staff perceptions of causes, consequences and moderators of stress", *Work & Stress*, vol. 15, n°1, p. 53-72.

GOLDBERG, D. P. (1978), *Manual of the General Health Questionnaire*. Nfer.

GREENGLASS, E. R. and BURKE, R.J. (2000), "Hospital downsizing, individual resources and occupational stressors in nurses", *Anxiety, Stress, and Coping: An International Journal*, vol. 13, p. 371-390.

GREENGLASS, E.R. and FIKSENBAUM, L. (2009), "Proactive coping, positive affect and well being: Testing for mediation using path analysis", *European Psychologist*, vol. 14, n°1, p. 29-39.

GRIGORYAN, A. A. (2008), "A new paradigm shift in managing occupational stress in organizations", *Розділ 4 Макроекономічні механізми, Механізм регулювання економіки*, n°3, p. 206-235.

HIMLE, D.P. ; JAYARATNE, S. and THYNESS, P. (1991), "Buffering effects of four social support types on burnout among social workers", *Social Work Research and Abstracts*, vol. 27, p. 22-27.

HINTON, J. W. ; ROTHEILER, E. L. (1998), "The psychophysiology of stress in teachers", *Stress in teachers: Past, Present, and future*, p. 95-119.

HOFSTEDE, G. H. (2001), *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*, Sage.

HURRELL, Jr J. J. ; NELSON, D. L. ; SIMMONS, B. L. (1998), "Measuring job stressors and strains: where we have been, where we are, and where we need to go", *Journal of occupational health psychology*, vol. 3, n°4, p. 368-389.

IACOVIDES, A. ; FOUNTOLAKIS, K.N. ; KAPRINIS, S. ; KAPRINIS, G. (2002), "The relationship between job stress, burnout and clinical depression", *Journal of Affective Disorders*, vol. 75, n°3, p. 209-221.

IWASAKI, Y. ; MACKAY, K. ; MACTAVISH, J. (2005), "Gender based analysis of coping with stress among professional managers: Leisure coping and non leisure coping", *Journal of Leisure Research*, vol. 37, n°1, p. 1-28.

JOHNSON, S. ; COOPER, C. ; CARTWRIGHT, S. ; DONALD, I. ; TAYLOR, P. ; MILLET, C. (2005), "The Experience of Work-Related Stress across Occupations", *Journal of Managerial Psychology*, vol. 20, n°1/2, p. 178-187.

- KAHN, R. L. ; WOLFE, D. M. ; QUINN, R. P. ; SNOEK, J. D. ; ROSENTHAL, R. A. (1964), *Organizational stress: Studies in role conflict and ambiguity*, New York, John Wiley & Sons.
- KAHN, R.L. ; ANTONUCCI, T.C (1980), "Convoys over the life-course: Attachment, roles and social support" in P.B Baltes & O.G. Brim (eds.). *Life-span development and behavior* (p. 253-286). San Diego, CA: Academic Press.
- KARASEK Jr, R. A. (1979), "Job demands, job decision latitude, and mental strain: Implications for job redesign", *Administrative science quarterly*, vol. 24, p. 285-308.
- KARASEK, R. A. ; TRIANTIS, K. P. ; CHAUDHRY, S. S. (1982), "Coworker and supervisor support as moderators of associations between task characteristics and mental strain", *Journal of Organizational Behavior*, vol. 3, n°2, p. 181-200.
- KARIMI, R. ; ALIPOUR, F. (2011), "Reduce Job Stress in Organizations: Role of Locus of Control", *International Journal of Business and Social Science*, vol. 2, n°18, p. 232-236.
- LACKRITZ, J. R. (2004), "Exploring burnout among university faculty: incidence, performance, and demographic issues", *Teaching and Teacher Education*, vol. 20, p. 713-729.
- LAZARUS, R. S. (1966), *Psychological Stress and the Coping Process*, New York: McGraw-Hill.
- LAZARUS, R. S. (1990), "Theory based stress measurement", *Psychological Inquiry*, vol. 1, n°1, p. 3-13.
- LAZARUS, R. S. (1991), *Emotion and adaptation*, London: Oxford University Press.
- LAZARUS, R. S. (1993), From psychological stress to the emotions: A history of a changing outlook. *Annual Review of Psychology*, vol. 44, p. 1-21.
- LAZARUS, R. S. ; FOLKMAN S. (1984), *Stress, appraisal and coping*: New York: Springer.
- LEE, R. ; ASHFORTH, B. E. (1996), "A meta-analytic examination of the correlates of the three dimensions of job burnout", *Journal of Applied Psychology*, vol. 81, p. 123-133.
- LEITER, M. P. ; MEECHAN, K. A. (1986), "Role structure and burnout in the field of human services", *Journal of Applied Behavioural Science*, vol. 22, p. 47-52.
- LEITER, M. P. (1991), "Coping patterns as predictors of burnout: The function of control and escapist coping patterns" *Journal of Organizational Behaviour*, vol. 12, p. 123-144.
- LOVE, K. M. ; TATMAN, A. W. ; CHAPMAN, B. P. (2010), "Role stress, inter-role conflict and job satisfaction among university employees: the creation and test of a model", *Journal of Employment Counseling*, vol. 47, p. 30-37.
- MASLACH, C. ; JACKSON, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, vol. 2, p. 99-113.
- MASLACH, C. ; JACKSON, S. E. (1986). *Maslach Burnout Inventory Manual* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

MASLACH, C. ; LEITER, M. P. (1999). "Take this job and love it!" *Psychology Today*, vol. 32, n°5, p. 50-53.

MASLACH, C. ; SCHAUFELI, W. B. ; LEITER, M. P. (2001), "Job Burnout", *Annual Review of Psychology*, vol. 52, p. 397-422.

MATHENY, K. B. ; AYCOCK, D. W. ; PUGH, J. L. ; CURLETTE, W. L. ; SILVA CANELLA, K. A. (1986), "Stress Coping, A qualitative and Quantitative Synthesis with Implications for Treatment", *The Counseling Psychologist*, vol. 14, p. 499-549.

OMOLAWON, K. (2010), "Perceived influences of work-related variables on stress and coping strategies by academic staff of university of Ibadan", *Ilorin Journal of Education*, vol. 29, n°1, p. 45-52.

ONGORI, H. (2007), "A review of the literature on employee turnover", *African Journal of Business Management*, vol.1, n°3, p. 49-54.

ONGORI, H. ; AGOLLA, J. E. (2008), "Occupational stress in organizations and its effects on organizational performance", *Journal of Management Research*, vol. 8, n°1, p. 123-135.

OZDEMIR, S. (2006), "Burnout levels of teachers of students with AD/HD in Turkey: comparison with teachers of non-AD/HD students", *Education and Treatment of Children*, vol. 29, n°4, p. 693-709.

PAREEK, U. (2002), *Training Instruments in HRD and OD*, 2nd ed., New Delhi, Tata McGraw-Hill, Publishing Company Limited.

PARK, C. L. ; COHEN, L. H. ; MURCH, R. L. (1996), "Assessment and Prediction of Stress-Related Growth", *Journal of Personality* vol. 64, n°1, p.71-105.

RAJARAJESWARI, S. (2010), "Role stress among the aided and self financing college teachers: A discriminant analysis", *Global Management Review*, vol. 4, n°4, p. 73-86.

RAO, V. K. (2003). *Higher education*. New Delhi, India: A. P. H. Public Corporation.

REES, C. J. ; REDFERN, D. (2000), "Recognizing the Perceived Causes of Stress: A Training and Development Perspective", *Journal of Industrial and Commercial Training*, vol. 32, n°4, p. 120-127.

RÖBKEN, H. (2009), "Career Paths of German Business Administration Academics", *Zeitschrift für Personalforschung*, vol. 23, n°3, p. 219-236.

ROQUES, O. (1999), "Les réactions des salariés aux transitions de carrière : une approche en termes de stress au travail", *Thèse de doctorat de Doctorat de Sciences de Gestion*, Université d'Aix-Marseille III, IAE d'Aix-en-Provence.

ROQUES, O. ; ROGER, A. (2004), "La gestion de la mobilité géographique des salariés : le cas de Technicatome", *Revue Française de Gestion*, n° 150, mai-juin, p. 71-85.

- ROWE, M. M. (2000), "Skills training in the long-term management of stress and occupational burnout", *Current Psychology: Developmental, Learning, Personality, Social*, vol. 19, p. 215-228.
- SALAMI, S. O. (2011), "Job stress and burnout among lecturers: Personality and Social Support as moderators", *Asian Social Science*, vol. 7, n°5, p. 110-121.
- SCHAEFER, J. ; MOOS, R. (1992), "Life crises and personal growth. In B. Carpenter (Ed.)", *Personal coping: Theory, research, and application*, p. 149-170. Westport, CT: Praeger.
- SCHAUFELI, W. B. ; ENZMANN, D. (1998), *The burnout companion to study and practice: A critical analysis*. London: Taylor & Francis.
- SCHAUFELI, W. B. ; GREENGLASS, E. R. (2001), "Introduction to special issue on burnout and health", *Psychology and Health*, vol. 16, p. 501-510.
- SELYE, H. (1956). *The stress of life*, New York, McGraw-Hill.
- SCHWARZER, R. ; KNOLL, N. (2007), "Functional roles of social support within the stress and coping process: A theoretical and empirical overview", *International Journal of Psychology*, vol. 42, n°4, p. 243-252.
- SCHWARZER, R. ; LEPPIN, A. (1991), "Social support and health: A theoretical and empirical overview", *Journal of social and personal relationships*, vol. 8, n°1, p. 99-127.
- SPIELBERGER, C. D. (1979), "Preliminary manual for the State-Trait Personality Inventory (STPI)", unpublished manuscript, University of South Florida.
- SRIVASTAV, A. K. (2007). "Stress in organizational roles – individual and organizational implications", *Icfaian Journal of Management Research*, vol.6, n°12, p. 64-74.
- TARIS, T. W. ; SCHREURS, P. J. G. ; VAN IERSAL-VAN SILFHOUT, I. J. (2001), "Job stress, job strain, and psychological withdrawal among Dutch university staff: Towards a dual-process model for the effects of occupational stress", *Work and Stress*, vol. 15, p. 283-296.
- TERLUIN, B. ; VAN RHENEN, W. ; SCHAUFELI, W.B. ; DE HAAN, M. (2004), "The Four-Dimensional Symptom Questionnaire (4DSQ): Measuring distress in a working population". *Work and Stress*, vol. 18, p. 187-207.
- TOGIA, A. (2005), "Measurement of burnout and the influence of background characteristics in Greek academic librarians", *Library Management*, vol. 26, n°3, p. 130-138.
- TOKER, B. (2011), "Burnout among university academicians: An empirical study on the universities of Turkey", *Doğuş Üniversitesi Dergisi*, vol. 12, n°1, p. 114-127.
- TOPPER, E. F. (2007), "Stress in the Library", *Journal of New Library*, vol. 108, n° 11/12, p. 561-564.
- TRIANDIS, H. C. (1995). *Individualism & collectivism*. Westview Press.

UPDEGRAFF, J. A. ; TAYLOR, S. E. (2000), From vulnerability to growth: Positive and negative effects of stressful life events. In J. Harvey & E. Miller (Eds.) *Loss and Trauma: General and Close Relationship Perspectives* (p. 3-28).

VAGG, P. R. ; SPIELBERGER, C. D. (1998), "Occupational stress: Measuring job pressure and organizational support in the workplace", *Journal of Occupational Health Psychology*, vol. 3, n°4, p. 294–305.

VAN HORN, J. E. ; SCHAUFELI, W. B. ; GREENGLASS, E. S. ; BURKE, R. J. (1997), "A Canadian-Dutch Comparison of Teachers Burnout", *Psychological Reports*, vol. 81, n°2, p. 371-382.

VERMUNT, R. ; STEENSMA, H. (2005), "How can Justice be Used to Manage Stress in Organizations, in Greenberg, J. and Colquitt, J. A. (Eds.), *Handbook of Organizational Justice*, p. 383-410, Erlbaum, Mahwah, NJ.

WILLIAMS, S. ; COOPER, C. L. (1998). "Measuring occupational stress: development of the pressure management indicator", *Journal of occupational health psychology*, vol. 3, n° 4, p. 306-321.

WINEFIELD, A. H. ; GILLESPIE, N. ; STOUGH, C. ; DUA, J. ; HAPUARACHCHI, J. ; BOYD C. (2003), "Occupational stress in Australian university staff: Results from a national survey", *International Journal of Stress Management*, vol. 10, p. 51-63.

YERKES, R. M. ; DODSON, J. D. (1908), «The relation of strength of stimulus to rapidity of habit-formation», *Journal of Comparative Neurology and Psychology*, vol. 18, p. 459-482.

YIP, B. ; ROWLINSON, S. ; SIU, O. L. (2008), «Coping Strategies as moderators in the relationship between role overload and burnout», *Construction Management and Economics*, vol. 26, p. 869-880.

ZUNG, W. W. ; RICHARDS, C. B. ; SHORT, M. J. (1965), "Self-rating depression scale in an outpatient clinic: further validation of the SDS", *Archives of general psychiatry*, vol.13, n°6, p. 508-515.