



Jelisavka Bulatovic

College of Textile Design, Technology and Management in Belgrade, Serbia

DEMOGRAPHIC DIFFERENCES AND PROFESSIONAL STRESS OF COLLEGE EMPLOYEES: A CASE STUDY IN SERBIA

ABSTRACT

This study explores the perception of professional stress and stress coping strategies in a sample of 80 employees at the college. The data was collected by using an inventory of perceived sources of stress and work stress indicator (coping scale). In addition to developing the concept of professional stress, the study had two objectives: to measure the level of professional stress in different categories of staff at the college and to study and analyze stress in Serbia in relation to individual differences (gender, age, marital status, parenthood, number of children, education, class, and working hours). The highest level of stress experienced was by respondents with three or more children, over 50 years old, have a college degree, and professors. Employees younger than 30 years of age, members of the student parliament, employees with a university degree, and the parents of one child experienced the lowest level of stress. As for the relationship between individual differences and stress levels, the results show that there is a relationship between age, marital status, parenting, and the education of the children and how they are experiencing stress. By contrast, gender, class, and working hours are not associated with it. The research integrates a broader set of variables that are prerequisites to a better understanding of demographic and employment factors that lead to professional stress. This should help better understand the proportion of variance of employee satisfaction, performance, and help better cope with it.

Key words:

professional stress, sources of stress and the effects professional, college employees, individual differences, Serbia

1. Introduction

Occupational stress and stress, in general, is a fact of modern life that seems to have increased. Professional is also known as work-related or job stress. This happens when there is a mismatch between the job's requirements and the individual. Occupational stress is defined as the experience of negative emotional states, such as frustration, worry, anxiety, and depression, which is attributable to work-related factors¹. For the last few decades, professional stress in the human services professions, especially professors, has been the focus of studies. Numerous studies have investigated stress, mainly from psychological, sociological, and medical perspectives. From a business perspective, researchers address the issue of professional stress and the effects that stress has on modern employees. Specifically, researchers have dealt with: 1) the sources professional stress²; 2) coping with professional stress³; 3) costs of professional stress⁴; 4) the relationship between professional stress and concepts, such as job satisfaction, job performance, and organizational commitment⁵; 5) the relationship between professional stress and employee

¹ C. Kyriacou, *Teacher Stress: Directions for Future Research*, "Educational Review" 2001, No. 1, Vol. 53, pp. 27–35.

² C.L. Cooper, J. Marshall, *Occupational Sources of Stress: A Review of the Literature Relating to Coronary Heart Disease and Mental Ill Health*, "Journal of Occupational Psychology" 1976, No. 1, Vol. 49, pp. 11–28.

³ R. Comish, B. Swindle, *Managing Stress in the Workplace*, "National Public Accountant" 1994, No. 9, Vol. 39, pp. 24–28; L.R. Murphy, *Managing Job Stress – An Employee Assistance/Human Resource Management Partnership*, "Personnel Review" 1995, No. 1, Vol. 24, pp. 41–50; W.D. Rees, *Managerial Stress – Dealing with the Causes, not the Symptoms*, "Industrial and Commercial Training" 1997, No. 2, Vol. 29, pp. 35–40; A. Shuttleworth, *Managing Workplace Stress: How Training Can Help*, "Industrial and Commercial Training" 2004, No. 2, Vol. 36, pp. 61–65.

⁴ M. McHugh, *Stress at Work: Do Managers Really Count the Costs?*, "Employee Relations" 1993, No. 1, Vol. 15, pp. 18–32; H. Hoel, K. Sparks, C.L. Cooper, *The Cost of Violence/Stress at Work and the Benefits of a Violence/Stress-Free Working Environment*, Report Commissioned by the International Labour, 2001.

⁵ S.E. Sullivan, R.S. Bhagat, *Organizational Stress, Job Satisfaction and Job Performance: Where Do We Go from Here?*, "Journal of Management" 1992, No. 2, Vol. 18, pp. 353–374; C.G. Blake, S.D. Saleh, H.H. Whorms, *Stress and Satisfaction as a Function of Technology and Supervision Type*, "International Journal of Operations & Production Management" 1996, No. 5, Vol. 16, pp. 64–73; M. Vakola, I. Nikolaou, *Attitudes towards Organizational Change – What Is the Role of Employees' Stress and Commitment?*, "Employee Relations" 2005, No. 2, Vol. 27, pp. 160–174; J.-C. Chen, C. Sil-

health⁶; 6) professional stress in different countries⁷; 7) professional stress in different industries (e.g. Dua⁸; Sharpley et al.⁹; and Antoniou et al.¹⁰ dealt with the stress in the teaching; Erkutlu; Chafra¹¹ dealt with stress in the tourism industry); 8) stress in different professions industry (Ross¹², about stress in the HR field and Ote see Lind¹³, and the stress on sale see Sager¹⁴ and Montgomery et al¹⁵); and 9) stress management and the stress coping styles of managers¹⁶. Moreover, there is a large amount of research on individual differences that are included in the job-stress process (research has examined the relationship between different individual characteristics/circumstances and occupational stress, such as gender¹⁷,

verthorne, J.-Y. Hung, *Organization Communication, Job Stress, Organizational Commitment, and Job Performance of Accounting Professionals in Taiwan and America*, "Leadership & Organization Development Journal" 2006, No. 4, Vol. 27, pp. 242–249.

⁶ D.C. Ganster, J. Schaubroeck, *Work Stress and Employee Health*, "Journal of Management" 1991, No. 2, Vol. 17, pp. 235–271.

⁷ K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, *Occupational Stress in Different Organizations: A Saudi Arabian Survey*, "Journal of Managerial Psychology" 1995, No. 5, Vol. 10, pp. 24–28; B. Kirkcaldy, A. Furnham, *Stress Coping Styles among German Managers*, "Journal of Workplace Learning" 1999, No. 1, Vol. 11, pp. 22–26; L. Lu, C.L. Cooper, S.-F. Kao, Y. Zhou, *Work Stress, Control Beliefs and Well-Being in Greater China – An Exploration of Sub-Cultural Differences between the PRC and Taiwan*, "Journal of Managerial Psychology" 2003, No. 6, Vol. 18, pp. 479–510.

⁸ J.K. Dua, *Job Stressors and Their Effects on Physical Health, Emotional Health, and Job Satisfaction in a University*, "Journal of Educational Administration" 1994, No. 1, Vol. 32, pp. 59–78.

⁹ C.F. Sharpley, R. Reynolds, A. Acosta, J.K. Dua, *The Presence, Nature and Effects of Job Stress on Physical and Psychological Health at a Large Australian University*, "Journal of Educational Administration" 1996, No. 4, Vol. 34, pp. 73–86.

¹⁰ A.S. Antoniou, F. Polychroni, A.N. Vlachakis, *Gender and Age Differences in Occupational Stress and Professional Burnout between Primary and High School Teachers in Greece*, "Journal of Managerial Psychology" 2006, No. 7, Vol. 21, pp. 682–690.

¹¹ H.V. Erkutlu, J. Chafra, *Relationship between Leadership Power Base and Job Stress of Subordinates: Example from Boutique Hotels*, "Management Research News" 2006, No. 5, Vol. 29, pp. 285–297.

¹² G.F. Ross, *Tourism Industry Employee Workstress – A Present and Future Crisis*, "Journal of Travel & Tourism Marketing" 2005, No. 2–3, Vol. 19, pp. 133–147.

¹³ S.L. Lind, F.L. Otte, *Management Styles, Mediating Variables, and Stress Among HRD Professionals*, "Human Resource Development Quarterly" 1994, No. 4, Vol. 5, pp. 301–316.

¹⁴ J.K. Sager, *Reducing Sales Manager Job Stress*, "The Journal of Consumer Marketing" 1990, No. 4, Vol. 7, pp. 5–14.

¹⁵ D.C. Montgomery, J.G. Blodgett, J.H. Barnes, *A Model of Financial Securities Salespersons' Job Stress*, "The Journal of Services Marketing" 1996, No. 3, Vol. 10, pp. 21–38.

¹⁶ L.H. Chusmir, V. Franks, *Stress and the Woman Manager*, "Training & Development Journal" 1988, No. 10, Vol. 42, pp. 66–70; J.K. Sager, op.cit.; M. Fulcheri, G. Barzega, G. Maina, F. Novara, L. Ravizza, *Stress and Managerial Work: Organizational Culture and Technological Changes: A Clinical Study*, "Journal of Managerial Psychology" 1995, No. 4, Vol. 10, pp. 3–8; C.G. Blake, S.D. Saleh, H.H. Whorms, op.cit.; W.D. Rees, op.cit.; B. Kirkcaldy, A. Furnham, op.cit.

¹⁷ J.K. Dua, op.cit.; C.F. Sharpley, R. Reynolds, A. Acosta, J.K. Dua, op.cit.; B. Kirkcaldy, A. Furnham, op.cit.; A.S. Antoniou, F. Polychroni, A.N. Vlachakis, op.cit.; R. Fotinatos-Ventouratos, C. Coop-

age¹⁸, educational level¹⁹, nationality/ethnicity²⁰, marital status²¹, social class²², position in a hierarchy²³, mandate, experience²⁴, performance²⁵, management style of superiors²⁶, organizational size, type of organization²⁷, might supervisor²⁸, and personality characteristics²⁹. Researchers have studied individual differences in the belief that they influence reactions to stressful events or objective assessments of events as stressful or simply add to the variance in the outcome of stress³⁰. In Serbia, few studies addressed the concept of professional stress and its determinants in different demographic aside from employees. Thus, in order to develop the professional stress concept, the main objectives of this study were as follows:

- to measure the level of stress among the various categories professional staff at Serbian colleges,
- to study and analyze the stress in Serbia in relation to individual differences in college employees (gender, age, marital status, parenthood, number of children, hierarchical position, division, and time).

er, *The Role of Gender and Social Class in Work Stress*, "Journal of Managerial Psychology" 2005, No. 1, Vol. 20, pp. 14–23.; M. Vakola, I. Nikolaou, op.cit.

¹⁸ J.K. Sager, op.cit.; J.K. Dua, op.cit.; K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.; C.F. Sharpley, R. Reynolds, A. Acosta, J.K. Dua, op.cit.; B. Kirkcaldy, A. Furnham, op.cit.; A.S. Antoniou, F. Polychroni, A.N. Vlachakis, op.cit.; M. Vakola, I. Nikolaou, op.cit.

¹⁹ J.K. Dua, op.cit.; K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.; B. Kirkcaldy, A. Furnham, op.cit.; M. Vakola, I. Nikolaou, op.cit.

²⁰ J.K. Dua, op.cit.; K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.; L. Lu, C.L. Cooper, S.-F. Kao, Y. Zhou, op.cit.

²¹ B. Kirkcaldy, A. Furnham, op.cit.

²² R. Fotinatos-Ventouratos, C. Cooper, op.cit.

²³ J.K. Dua, op.cit.; B. Kirkcaldy, A. Furnham, op.cit.

²⁴ K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.; C.C. Moran, *Stress and Emergency Work Experience: A Non-Linear Relationship*, "Disaster Prevention and Management" 1998, No. 1, Vol. 7, pp. 38–46; B. Kirkcaldy, A. Furnham, op.cit.

²⁵ P.E. Varca, *Work Stress and Customer Service Delivery*, "The Journal of Services Marketing" 1999, No. 3, Vol. 13, pp. 229–241.

²⁶ S.L. Lind, F.L. Otte, op.cit.

²⁷ K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.

²⁸ H.V. Erkutlu, J. Chafra, op.cit.

²⁹ J.K. Sager, op.cit.; S.L. Lind, F.L. Otte, op.cit.; D.C. Montgomery, J.G. Blodgett, J.H. Barnes, op.cit.; T.L. Frei, B. Racicot, A. Travagline, *The Impact of Monochromic and Type A Behavior Patterns on Research Productivity and Stress*, "Journal of Managerial Psychology" 1999, No. 5, Vol. 14, pp. 374–387.

³⁰ D.C. Ganster, J. Schaubroeck, op.cit.

2. Professional stress

Professional (job, work, or workplace) stress has become one of the most serious issues in the modern world³¹ since it can occur in any occupation and is present more often than it was a decade ago. In other words, the job world of today differs considerably from the working environment of 30 years ago: longer hours at work are not unusual, frequent changes in culture and structure are often cited, as well as the loss of lifetime career paths³², which all leads to the greater presence and levels of stress.

2.1. The definition of professional stress

In general, stress can be defined as a reaction to the requests of individuals (stressors) imposed on them. This applies to situations where individuals are adversely affected by their failure to cope with the demands of their environment³³. Occupational stress is the inability to cope with work-related pressures³⁴ because of the poor fit between a person's abilities, his/her job requirements, and work conditions³⁵. A person's mental and physical condition affects his/her productivity, effectiveness, personal health, and quality of work³⁶.

Most surprising of all, employees in most college professions think they are under stress³⁷, undergo the combustion process³⁸, or suffer from depressive symp-

³¹ L. Lu, C.L. Cooper, S.-F. Kao, Y. Zhou, op.cit.

³² R. Fotinatos-Ventouratos, C. Cooper, op.cit.

³³ H.V. Erkutlu, J. Chafra, op.cit.

³⁴ W.D. Rees, op.cit.

³⁵ M. Holmlund-Rytkönen, T. Strandvik, *Stress in Business Relationships*, "Journal of Business & Industrial Marketing" 2005, No. 1, Vol. 20, pp. 12–22.

³⁶ R. Comish, B. Swindle, op.cit.

³⁷ J. Beer, J. Beer, *Burnout and Stress, Depression and Self-Esteem of Teachers*, "Psychological Reports" 1992, No. 71, pp. 1331–1336; G.J. Boyle, M.G. Borg, J.M. Falzon, A.J. Baglioni, *A Structural Model of the Dimensions of Teacher Stress*, "British Journal of Educational Psychology" 1995, No. 1, Vol. 65, pp. 49–67; C. Hammen, R. DeMayo, *Cognitive Correlates of Teacher Stress and Depressive Symptoms: Implications for Attributional Models of Depression*, "Journal of Abnormal Psychology" 1982, No. 2, Vol. 91, pp. 96–101; U. Kinnunen, K. Salo, *Teachers Stress: An 8-Year Follow-up-Study on Teacher's Work, Stress, and Health, "Anxiety Stress Coping"* 1994, No. 7, pp. 319–337; C. Kyriacou, *Teacher Stress and Burnout: An International Review*, "Educational Research" 1987, No. 2, Vol. 29, pp. 146–152; J.L. Malik, R.O. Mueller, D.L. Meinke, *The Effects of Teaching Experience and Grade Level Taught on Teachers Stress: A LISREL Analysis*, "Teaching and Teacher Education" 1991, No. 1, Vol. 7, pp. 57–62; R.T. Pithers, *Teachers Stress Research: Problems and Progress*, "British Journal of Educational Psychology" 1995, No. 65, pp. 387–392.

³⁸ J. Beer, J. Beer, op.cit.; R.J. Burke, E. Greenglass, *Job Stressors, Type A Behavior, Coping Responses, and Psychological Burnout among Teachers*, "International Journal of Stress Management"

toms³⁹. There is a substantial body of literature describing teaching as a stressful occupation and suggests that teacher stress is more of a problem⁴⁰. In recent years, several studies have examined work stress in the teaching profession. Studies have suggested that professors experience disproportionately high levels of stress⁴¹.

Typically, they include stress fields in work roles (e.g. workload); administration, number of students, role ambiguity, and conflict (for example, sometimes conflicting demands of collage administration); pressures of the role of professors (e.g., counsellor, facilitator); poor conditions work, little recognition and low remuneration, lack of involvement in decision-making, student pranks, lack of effective communication, as well as many emotional demands of teaching⁴². In addition, Farber assessed the sources of stress in suburban professors in the United States and found that excessive paperwork, unsuccessful administrative meetings, and the lack of opportunities for advancement affected their stress levels. One's workload, lack of resources, poor relations with colleagues, inadequate professional salaries, student misbehaviour, difficult interactions with parents, and other staff expectations have been identified as sources of stress in many studies⁴³. Negative

1995, No. 2, pp. 45–57; C. Kyriacou, *Teacher Stress and Burnout...*, op.cit.

³⁹ C. Hammen, R. DeMayo, op.cit.; I.S. Schonfeld, *Psychological Distress in a Sample of Teachers*, "Journal of Psychology" 1990, No. 4, Vol. 12, pp. 321–328; I.S. Schonfeld, *A Longitudinal Study of Occupational Stressors and Depressive Symptoms in First-Year Female Teachers*, "Teaching and Teacher Education" 1992, No. 2, Vol. 8, pp. 151–158.

⁴⁰ A.S. Antoniou, F. Polychroni, A.N. Vlachakis, op.cit.; R.P. Chaplain, *Stress and Job Satisfaction: A Study of English Primary School Teachers*, "Educational Psychology" 1995, No. 4, Vol. 15, pp. 473–489; C. Kyriacou, *Teacher Stress: Directions...*, op.cit.; A. Laughlin, *Teacher Stress in an Australian Setting: The Role of Biographical Mediators*, "Educational Studies" 1984, No. 1, Vol. 10, pp. 7–22; R. Manthei, A. Gilmore, *Teacher Stress in Intermediate Schools*, "Educational Research" 1996, No. 1, Vol. 38, pp. 3–19; V. Munt, *The Awful Truth: A Microhistory of Teacher Stress at Westwood High*, "British Journal of Sociology of Education" 2004, No. 5, Vol. 25, pp. 578–591; K.F. Punch, E. Tuetteman, *Reducing Teacher Stress: The Effects of Support in the Work Environment*, "Research in Education" 1996, No. 56, pp. 63–72.

⁴¹ D.A. Adeyemo, B. Ogunyemi, *Emotional Intelligence and Self-Efficacy as Predictors of Occupational Stress among Academic Staff in a Nigerian University*, 2005, www.leadingtoday.org/weleadin-learning/da05.htm [access: 06.05.2010]; M.D. Borg, *Hypertension, Peptic Ulcer, and Diabetes in Teachers*, "Journal of Australian Medical Association" 1990, No. 224, pp. 489–492.

⁴² E. G.B. Blix, R.J. Cruise, B.M. Mitchell, G.G. Blix, *Occupational Stress among University Teachers*, "Educational Research" 1994, No. 36, pp. 157–169; G.L. Cooper, M. Kelly, *Occupational Stress in Head Teachers: A National UK Study*, "British Journal of Educational Psychology" 1993, No. 63, pp. 130–143; K.F. Punch, E. Tuetteman, *Correlates of Psychological Distress among Secondary School Teachers*, "British Educational Research Journal" 1990, No. 16, pp. 369–382.

⁴³ M.G. Borg, R.J. Riding, J.M. Falzon, *Stress in Teaching: A Study of Occupational Stress and Its Determinants, Job Satisfaction and Career Commitment among Primary Schoolteachers*, "Educational Psychology" 1991, No. 1, Vol. 11, pp. 59–75; G.J. Boyle, M.G. Borg, J.M. Falzon, A.J. Baglioni, op.cit.; C.M.B. Pierce, G.N. Molloy, *Psychological and Biographical Differences between Secondary School Teachers Experiencing High and Low Levels of Burnout*, "British Journal of Educational Psychology"

self-perception, negative life events, low morale, and fights for the values and maintain personal standards in all classrooms take their toll⁴⁴. He stressed professors had more illness, drug intake, anxiety, depression, and sexual passivity. Professors experiencing high combustion reported more psychological and psychosomatic symptoms⁴⁵. However, very few studies showed that other employees at the college were also subject to higher levels of professional stress, which we prove in our research.

2.2. Sources professional stress

Among all of the environments, the working place stands out as a potentially significant source of stress purely because of the amount of time spent in this environment⁴⁶. Over the years, a large number of job stressors of varying degrees of difficulty were identified. According to Murphi, common organizational and individual stressors can be classified into five groups: 1) organizational practices (performance reward systems, supervisory practices, promotion opportunities), 2) job/task functions (load, workplace, autonomy), and 3) organizational culture/climate (employee value, personal growth, integrity), 4) relationships (supervisors, co-workers, clients), and 5) personal characteristics of employees (personality traits, family relationships, coping skills). Lu et al. grouped working stressors into the following six categories: physical environment, role stressors, organizational structure and job characteristics, relationships with others, career development, and work family conflict. Lu et al. also identified six sources of stress at work: factors inherent in business, management roles, relationships with others, career success, organizational structure and climate, and home/work interface. Antoniou et al. point out that the special conditions that make jobs stressful can be categorized

1990, No. 60, pp. 37–51; R.T. Pithers, R. Soden, *Scottish and Australian Teacher Stress and Strain: A Comparative Analysis*, "British Journal of Educational Psychology" 1998, No. 68, pp. 269–279.

⁴⁴ V.B. Goodman, *Urban Teacher Stress: A Critical Literature Review*, ERIC Document Reproduction Service Number, ED 221 611, 1990; S.B. Schnacke, *Burnout: Coping with Predictable Professional Life Crises*, Paper presented at the annual meeting of the American Association of Colleges for Teacher Education, Houston, TX (ERIC Document Reproduction Service Number ED 257 836), 1982; D.C. Schwanke, *Teacher Stress: Selected ERIC Resources*, Washington, DC: ERIC Clearinghouse on Teacher Education, ERIC Document Reproduction Service Number ED, 1981, pp. 204–258.

⁴⁵ J. Bauer, A. Stamm, K. Virnich, K. Wissing, U. Mueller, M. Wirsching, *Correlation between Burnout Syndrome and Psychological and Psychosomatic Symptoms among Teachers*, "International Archives of Occupational and Environmental Health" 2006, No. 79, pp. 199–204.

⁴⁶ H.V. Erkutlu, J. Chafra, op.cit.

as either exogenous (i.e. unfavourable professional conditions, excessive workload, lack of cooperation, etc.) or endogenous pressures (i.e. individual personality characteristics, etc.). When one adds to the complexity and turbulence of the modern business environment and organizational life, professional stress causes can be grouped into two main groups: 1) job-related stressors (with three subgroups: environment-specific, organization-specific, and business-specific stressors) and 2) individual-related stressors, which may be either a consequence or an effect of the individual characteristics of individual circumstances.

2.3. Consequence of the stress professional

Stress produces a number of undesirable, costly, and debilitating consequences⁴⁷, which affect both individuals and organizations.

At the individual level, there are three main sub-strains⁴⁸: 1) unwanted feelings and behaviours, such as job dissatisfaction, lower employee motivation, low morale, less organizational commitment, reduced total quality of life, work absenteeism, turnover, intention to leave the job, lower productivity, reducing the amount and quality of work, inability to make sound decisions, more theft, sabotage and work downtime, alienation, and increased smoking and alcohol consumption; 2) physiological disease (poor physical health), such as increased blood pressure and pulse, cardiovascular disease, high cholesterol, high blood sugar, insomnia, headaches, infections, skin problems, suppressed immune system, injuries, and fatigue; 3) psychological illness (poor emotional (mental) health), such as psychological distress, depression, anxiety, passivity/aggression, boredom, loss of self-confidence and self-esteem, loss of concentration, feelings of uselessness, and impulsivity regardless of social norms and values, dissatisfaction with one's job/life, loss of contact with reality, and emotional exhaustion.

At the organizational level, the professional consequences of stress can be grouped into two major subgroups⁴⁹: 1) organizational symptoms, such as dissatisfaction and poor morale among the workforce, performance/productivity losses, bad publicity,

⁴⁷ G.F. Ross, op.cit.

⁴⁸ L.H. Chusmir, V. Franks, op.cit.; R. Comish, B. Swindle, op.cit.; J.K. Dua, op.cit.; S.L. Lind, F.L. Otte, op.cit.; K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.; P.R. Johnson, J. Indvik, *Stress and Workplace Violence: It Takes Two to Tango*, "Journal of Managerial Psychology" 1996, No. 6, Vol. 11, pp. 18–27; J. Earnshaw, L. Morrison, *Should Employers Worry? Workplace Stress Claims Following the John Walker Decision*, "Personnel Review" 2001, No. 4, Vol. 30, pp. 468–487; A.S. Antoniou, F. Polychroni, A.N. Vlachakis, op.cit.

⁴⁹ M. McHugh, op.cit.; M.J. Schabracq, C.L. Cooper, *The Changing Nature of Work and Stress*,

damage to corporate image and reputation, lost opportunities, high rates of accidents and errors, high labor turnover, loss of valuable staff, increased sick leave, early retirements among the staff, reduced cooperation, poor internal communications, more internal conflicts, and a dysfunctional work environment; 2) organizational costs, such as high replacement costs (increased recruitment and training/retraining costs), increased sick leave, increased health care costs and disability payments, litigation/compensation costs, and costs associated with equipment damage.

Due to the significant economic implications of stress it is not only a burden⁵⁰, but also one of the fastest growing problems in modern organizations, especially given the high level of competition and environmental turbulence, which does not allow organizations to bear the costs caused by stress⁵¹. However, the costs of stress in human or financial terms is rarely calculated. Despite the obvious need to measure the cost of stress, it appears that the assessment of the enormous indirect costs is relatively limited.

Finally, it is worth noting that, contrary to popular belief, stress can be associated with both pleasant and unpleasant events and only becomes a problem when it remains unresolved⁵². In other words, it could be argued that not all stress is dysfunctional and that stress is, in fact, not inherently bad and that limited amount of stress, combined with appropriate responses, can actually benefit both the individual and the organization⁵³. Namely, such as low and high (Severe or chronic stress job is dysfunctional⁵⁴, which is associated with many strains at the organizational and individual levels, all of which adversely affect the net profit) predict poor stress effect, a moderate stress provides maximum performance⁵⁵, the complete elimination of stress should not be focused on.

2.4. Facing the professional stress

The harmful and costly effects of stress suggest the need for strategies to limit the stress within the organization, as well as to deal with the stress that has already

“Journal of Managerial Psychology” 2000, No. 3, Vol. 15, pp. 227–241; H. Hoel, K. Sparks, C.L. Cooper, op.cit.; G.F. Ross, op.cit.

⁵⁰ K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.

⁵¹ M. McHugh, op.cit.

⁵² H.V. Erkutlu, J. Chafra, op.cit.

⁵³ L.H. Chusmir, V. Franks, op.cit.

⁵⁴ D.C. Montgomery, J.G. Blodgett, J.H. Barnes, op.cit.

⁵⁵ C.F. Sharpley, R. Reynolds, A. Acosta, J.K. Dua, op.cit.

happened. In fact, those organizations that fully address the issue of work-related stress by identifying problems and troubleshooting activities will be in a better position to deal with the demands of a rapidly changing world and thus improve their chances of gaining a competitive advantage⁵⁶. Fortunately, there are ways to deal with job stress. First, organizations and their employees should be aware of the extent to which stress is an unnecessary cost and that they must seek to eliminate if their organizations are to survive and thrive. Of course, this awareness must begin at the highest level of management, where the estimated cost of stress is sufficient to generate an organizational commitment to future action⁵⁷. Second, professional stress is going to become an issue that is increasingly on the agenda of effective managers⁵⁸. Third, training and employee assistance programs to deal with stress should be employed. Various workshops, seminars, and conferences should be used to increase employee awareness of the costs associated with employee stress and to teach them how to cope with stressful situations. As Shuttleworth explains, the training can have a positive impact on mounting stress in the workplace because it helps employees become more resistant to stress, allowing them to address the causes of any problems, and helps managers not only need to manage their level stress, but they are responsible for their direct reports. Unfortunately, in the end, it must be said that education in the West seems to have taken actions based on their greater understanding of the relationship between stress and organizational outcomes and the benefits that accrue from such initiatives have so far not been recognized in Serbia.

3. Problem and research hypothesis

3.1. The objectives of the research

Individual differences affect our perceptions and interpretations of the events around us. They contribute to our experience of stress (primary appraisal) and our decisions about what to do to deal with the stressor – our choice of the coping process (secondary appraisal)⁵⁹. As Lu et al. explain, vast individual differences in vulnerability to stress alter an individual's perception of a potential source of stress

⁵⁶ M. McHugh, op.cit.

⁵⁷ Ibidem.

⁵⁸ Ibidem.

⁵⁹ C.C. Moran, op.cit.

(direct effect), impact on the transformation of perceived stress into various consequences of stress (indirect effect), and ameliorate these stress consequences (direct effect). The personality variables that have been linked to stress include locus of control, self-esteem, type a behavior pattern, hardiness, and negative affectivity⁶⁰. Demographic variables that have been proven to relate to someone's job stressor/health relationships include gender, age, marital status, job tenure, job title, and hierarchical level⁶¹, among which gender, age and hierarchical level were found to be the most significant, as further explanations reveal. There is a general tendency in the literature to report that females experience higher levels of occupational stress regarding gender-specific stressors and have different ways of interpreting and dealing with problems related to their work environment⁶². For example, Sharpley et al. found that males have statistically significant lower job stress scores and found that female managers are under much more pressure than their male counterparts are while Antoniou et al. found that female professors experienced significantly higher levels of occupational stress compared to their male counterparts. Ganster and Schaubroeck point out that women experience a greater level of stress since they are more vulnerable to the demands of work – to the extent that they often have more non-work demands than men do. Gregory⁶³ notices that, for the female professional, gender stereotyping in the workplace adds to the role stress experiences conflict. Comish and Swindle explain that role demands, such as that of being a wife, mother, and professional, provoke role conflict. Finally, the results of the bivariate analysis revealed significant differences in terms of physical and psychological wellbeing among the male and female sample.

Concerning the relationship between age and occupational stress, the ability to handle stress associated with one's job and organization was found to increase with age (experience)⁶⁴. For example, research revealed that younger staff members reported more job stress than older staff did⁶⁵. Employees who are younger than 30 years old experience the highest levels of stress⁶⁶; staff between the ages of 31 and 40 suffered the most from job stress⁶⁷; and younger teachers experienced high-

⁶⁰ D.C. Ganster, J. Schaubroeck, op.cit.; S.L. Lind, F.L. Otte, op.cit.; L.R. Murphy, op.cit.

⁶¹ J.K. Dua, op.cit.; S.L. Lind, F.L. Otte, op.cit.; L.R. Murphy, op.cit.

⁶² A.S. Antoniou, F. Polychroni, A.N. Vlachakis, op.cit.

⁶³ A. Gregory, *Are Women Different and why Women Are thought to Be Different. Theoretical and Methodological Perspectives*, "Journal of Business Ethics" 1990, No. 4–5, Vol. 9, pp. 257–266.

⁶⁴ J.K. Sager, op.cit.

⁶⁵ J.K. Dua, op.cit.

⁶⁶ K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jefri, op.cit.

⁶⁷ C.F. Sharpley, R. Reynolds, A. Acosta, J.K. Dua, op.cit.

er levels of burnout, specifically in terms of emotional exhaustion and disengagement from the profession⁶⁸. The major explanation for such a finding is that older employees have often reached a stage where career development is not their major concern. Hence, a number of job characteristics that may cause stress for younger staff members, who have their careers ahead of them, do not cause stress for older staff members⁶⁹. Lastly, members of the staff that employed at higher positions are less stressed than those employed at the lower job levels⁷⁰. Furthermore, different managerial levels influence the preference for stress-coping styles. Specifically, delegation and maintaining relationships are considering the most useful stress-coping styles for those in upper management positions⁷¹.

Many studies have dealt with teachers working in education, but very few studies dealt with the professional research employee stress in college. Mondal et al.⁷² found a significant difference between male and female teachers; male teachers have stress that is more psychological and physical stress than female teachers. Moreover, males were discovered to have greater stress and anxiety than women⁷³. However, female teachers tend to complain more than male teachers⁷⁴. Some researchers also do not acknowledge that there is any kind of significant evidence to support gender differences in their study on the level of stress and gender. In addition, those who are widowed/divorced/separated generally have higher stress levels. On the other hand, some researchers⁷⁵ indicate there is no significant difference between the levels of stress.

⁶⁸ A.S. Antoniou, F. Polychroni, A.N. Vlachakis, op.cit.

⁶⁹ J.K. Dua, op.cit.

⁷⁰ Ibidem.

⁷¹ B. Kirkcaldy, A. Furnham, op.cit.

⁷² J. Mondal, S. Shrestha, A. Bhaila, *School Teachers: Job Stress and Job Satisfaction, Kaski, Nepal*, "International Journal of Occupational Safety and Health" 2011, No. 1, pp. 27–33.

⁷³ K.-L. Cheng, *Occupational Stress as Perceived by Assistant Principals in Hong Kong Aided Secondary Schools*, Dissertation presented in part fulfillment of the requirements of degree of Master Degree of Education, University of Hong Kong 1993; I. Brember, M. Brown, S. Ralph, *Gender-Related Causes of Stress in Trainee Teachers on Teaching Practice in the School of Education, University of Manchester, UK*, "Westminster Studies in Education" 2002, No. 2, Vol. 25, pp. 175–186; M. Gursel, A.M. Sunbul, H. Sari, *An Analysis of Burnout and Job Satisfaction between Turkish Head Teachers and Teachers*, "European Journal of Psychology of Education" 2002, No. 1, Vol. 17, pp. 35–45; R.P. Chaplain, op.cit.

⁷⁴ R. Ravichandran, R. Rajendran, *Perceived Sources of Stress among the Teachers*, "Journal of the Indian Academy of Applied Psychology" 2007, No. 1, Vol. 33, pp. 133–136; D. Bhadoria, T. Singh, *Relationships of Age and Gender with Burnout among Primary School Teachers*, "Indian Journal of Social Science Researches" 2010, No. 2, Vol. 7, pp. 10–17.

⁷⁵ K.-L. Cheng, op.cit.; G.L. Cooper, M. Kelly, op.cit.; D. Fontana, R. Abouserie, *Stress Levels*

The aim of this study was to examine the relationship between professional stress (dependent variable) with the gender, age, marital status, parenthood status, number of children, class, education, and working hours (independent variables) among employees at the college. As was already mentioned, the objectives of the empirical part of this paper were:

- to measure occupational stress levels among different categories of employees at the Serbian colleges,
- to find out whether there is a relationship between individual differences and occupational stress of employees at the colleges.

The impetus for such a study came from the literature, which reveals that, in addition to fact that most people experience job-related stress, there also exists stress unique to specific groups of employees. And, this makes them disadvantaged compared to the group of employees that do not experience the same kind of stress⁷⁶.

3.2. Hypotheses

H1: There is no significant difference in stress perceived by men and women.

H2: There was no significant difference in stress experienced by respondents in relation to their age.

H3: The marital status of the respondents does not affect the level professional stress.

H4: Respondents with children experience significantly less professional stress.

H5: Occupational stress does not increased with the number of children in the family.

H6: The higher the educational level of a person, the higher amount of professional stress he/she experiences.

H7: Respondents who are not closely related to teaching at the college have higher professional stress.

H8: Employees who work longer hours have a higher level of professional stress.

Gender and Personality Factors in Teachers, "British Journal of Educational Psychology" 1993, No. 63, pp. 261–270.

⁷⁶ R. Comish, B. Swindle, op.cit.

4. Research methodology

4.1. The instrument

Employees were grouped into categories according to variables that were utilized for assessing the relationship between individual characteristics and the self-reported levels of occupational stress that were acquired from previous research and stress models. More specifically, five demographic characteristics (gender, age, marital status, parenthood and number of children) and three organizational determinants (education, department and working hours) were used to analyze the various levels of stress. Data on professional stress was collected through a questionnaire. The questionnaire consisted of 20 items and uses a five-point Likert numerical scale ranging from 1 (practically never) to 5 (almost always). The original scale of the "Occupational stress intensity questionnaire" ranges from 0 to 4. However, the author of this paper decided to modify the scale into a 1-to-5 one as Serbian employees are accustomed to such a scale. In addition to the stress measurement questionnaire, study participants were asked to respond to a number of items related to their individual characteristics.

4.2. Respondents

The population that was examined in this study were the employees of the College of Textile – Design, Technology, and Management in Belgrade, Serbia. The study included eighty employees of said college. The survey was conducted in 2012. The sample size is acceptable as researchers in the field often draw their conclusions using similar sample sizes. For example, Blake et al. had a total study population of 62 production supervisors and 15 maintenance supervisors. 104 questionnaires were returned in the study conducted by White et al.⁷⁷, 71 service consultants participated in Varca's final data collection process, and Chen et al. had 144 employees working in accounting capacities in various businesses in their sample.

The data regarding the level of occupational stress was self-reported, which introduces distortion that is inherent to the medium. However, a self-reported

⁷⁷ B. White, D. O'Connor, L. Garrett, *Stress in Female Doctors*, "Women in Management Review" 1997, No. 8, Vol. 12, pp. 325–334.

stress measure is common in research dealing with the issue⁷⁸. Table 1 shows the profile of respondents.

Table 1. Profile of respondents

Variable	Structure (%)
Gender	Male (22.5%), female (77.5%)
Age	under 30 years (10.00%), 30–40 years (23.75%), 40–50 years (43.75%), over 50 years (22.50%)
Marital status	Not married or are divorced (18.75%), married (81.25%)
Parenthood	No children (12.50%), children (87.50%)
Number of children	One (6.25%), two (75.00%), three or more (6.25%), no children (12.50%)
Education	Secondary degree (21.25%), college degree (3.75%), university degree (26.25%), graduate degree (master's/doctorate) (48.75%)
Department	College Council-Board of Directors (15.00%), professors (38.75%), assistants (16.25%), student services (6.25%), student parliament (7.50%), library (2.50%), administration (6.25%), and other staff (7.50%)
Working hours	less than 8 hours per day (61.25%), 8 to 9 hours per day (26.25%), more than 9 hours per day (12.50%)

Except for descriptive statistic calculations (mean values and standard deviations), in order to test the relationship between different categories of employees and their perceived levels of job stress a one-way ANOVA analysis (F tests) was utilized. Calculations and tests were conducted using the Statistical Package for the Social Sciences (SPSS) software.

5. Research findings

The research findings are presented in two sections, following the two research objectives. The first section presents the levels of occupational stress among the different categories of employees at the college. In the second section, the relationship between individual differences and occupational stress is assessed.

⁷⁸ E. g. see J.K. Dua, op.cit.; S.L. Lind, F.L. Otte, op.cit.; K.A. Ben-Bakr, I.S. Al-Shammari, O.A. Jelfri, op.cit.; C.F. Sharpley, R. Reynolds, A. Acosta, J.K. Dua, op.cit.; T.L. Frei, B. Racicot, A. Travagline, op.cit.; B. Kirkcaldy, A. Furnham, op.cit.; P.E. Varca, op.cit.; L. Lu, C.L. Cooper, S.-F. Kao, Y. Zhou, op.cit.; R. Fotinatos-Ventouratos, C. Cooper, op.cit.; M. Vakola, I. Nikolaou, op.cit.; A.S. Antoniou, F. Polychroni, A.N. Vlachakis, op.cit.; J.-C. Chen, C. Silverthorne, J.-Y. Hung, op.cit.; H.V. Erkutlu, J. Chafra, op.cit.

5.1. Professional stress among different categories of Serbian employees in the College

In order to find out whether employees differ in their average level of perceived stress as a consequence of their demographic and work characteristics, employees were grouped into 28 subgroups that were devised using eight individual differences (gender, age, marital status, parenthood, number of children, education, department, and working hours). Average stress results (ASR) for different categories of respondents are provided in Table 2.

Table 2. Average stress results for different categories of employees

Individual difference	Subgroups	Average stress result*	Standard deviation
Gender	male	50.31	13.40
	female	55.31	13.70
Age	up to 30 years old	43.77	11.40
	30–40 years old	54.53	12.41
	40–50 years old	56.14	14.27
	more than 50 years old	62.86	9.12
Marital status	not married or are divorced	51.00	13.63
	married	56.41	13.45
Parenthood	no children	50.21	12.07
	children	56.13	14.11
Number of children	one	49.55	16.30
	two	59.39	10.93
	three or more	70.00	12.12
	no children	56.41	13.45
Education	secondary degree	50.70	14.34
	college degree	60.33	13.12
	university degree	49.50	16.03
	graduate degree (master's/doctorate)	55.82	15.26
Department	College Council-Board of Directors	51.75	17.95
	professors	61.80	14.39
	assistants	50.90	11.30
	student services	54.53	12.41
	student parliament	44.33	10.97
	library	50.70	14.34
	administration	55.82	15.26
	other staff	51.75	17.95

Individual difference	Subgroups	Average stress result*	Standard deviation
Working hours	less than 8 hours per day	55.45	12.14
	8 to 9 hours per day	53.43	13.76
	more than 9 hours per day	53.90	15.64
TOTAL	all respondents	54.23	13.63

* The average stress result was measured on a scale of 20 to 100.

As is evident from table 2 Serbian employees of the college experience moderate stress. On the stress measuring scale from 20 to 100, with 60 being the boundary between high and low stress perceived, the average result for all respondents in the sample was 54.23. This implies that they, on average, experience moderate stress.

Serbian employees of the college were divided into small, medium, and high levels of stress according to the average stress scores. According to investigators, this scale has a split-half reliability of 0.79. The internal consistency alpha is 0.88. Another consistency test performed point scale total correlation techniques. The item total score correlation was between 0.35 and 0.69 for all items, with a total test.

Among 29 subgroups of respondents, respondents who have three or more children (ASR = 70.00), those aged 50 and over (ASR = 62.86), those employed as professors (ASR = 61.80), and respondents with a college education (ASR = 60.33) perceived the greatest level of stress. The lowest level of stress was perceived by respondents younger than 30 (ASR = 43.77), student parliamentarians (ASR = 44.33), and parents with one child (ASR = 49.55). Respondents in all other subgroups (22 of them) expressed an average between 50.21 and 59.39.

Consequently, it can be concluded that certain employee groups perceive higher levels of stress than others. Having that in mind, colleges should attach greater importance to the demographic and work characteristics of individuals when recruiting, developing, and motivating as those characteristics provide a good starting point for understanding and predicting how people will respond under different types of stress. Moreover, by considering how different categories of employees perceive stress at work, the findings may help in the implementation of effective prevention programs to fight occupational stress. Still, we have to be aware that interpreting differences in levels of stress is a difficult task since there are many intervening factors. As Cooper and Marshall stress, the area of stress is essentially multifactorial, requiring that we focus on more than one stressor at a time, if we are to draw meaningful conclusions from our data.

5.2. The relationship between individual differences and professional stress

As was previously mentioned, individual differences that were explored to determine whether or not they relate to the level of stress experienced by individuals were gender, age, marital status, parenthood, number of children, hierarchical level, department, and working hours. The results of the one-way ANOVA analysis, conducted with the purpose of determining the significant findings related to the variables explored, and are give in Table 3.

5.3. The relationship between gender and professional stress

Calculate our test statistic for treatments f

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	1	121	121	3.7068
Error	14	457	32.6428571429	
Total	15	578		

$$f = 3.706 \quad p = 0.067$$

Obtain critical value: From F critical value table, we get our critical value of 4.6001

Draw conclusion: Since our test statistic $f = 3.706$ does not exceed our critical value of 4.6001, we accept the hypothesis H1

The T-value is 2.07282. The P-Value is 0.05863. The result is *not* significant at $p < 0.05$ and confirms hypothesis H1

5.4. The relationship between age and professional stress

Calculate our test statistic for treatments f

ANOVA Table Values:

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	3	46.75	15.5833333333	7.3643
Error	28	59.25	2.11607142857	
Total	31	106		

$$f = 7.364 \quad p = 0.00073 \quad \text{level of sign. } 0.01$$

Obtain critical value: From F critical value table, we get our critical value of 2.9467 Draw Conclusion: Since our test statistic $f = 7.364$ is greater than our critical value of 2.9467, we reject the hypothesis H2

Age	T - value			
	(I)	(II)	(III)	(IV)
<30 (I)				
31-40 (II)	3.274			
41-50(III)	4.473	2.435**		
>50 (IV)	2.017*,**	0.178*,**	2.263**	

* $P < 0.05$, ** $P < 0.01$

The T-value (I-II) is 3.274. The P-Value is 0.005538.

The T-value (I-III) is 4.473. The P-Value is 0.000525.

The T-value (I-IV) is 2.017. The P-Value is 0.063251.

The T-value (II-III) is 2.435. The P-Value is 0.028813.

The T-value (II-IV) is 0.178. The P-Value is 0.860669.

The T-value (III-IV) is 2.263. The P-Value is 0.040053.

5.5. The relationship between marital status and professional stress

Calculate our test statistic for treatments f

ANOVA Table Values:

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	1	156.25	156.25	5.0666
Error	14	431.75	30.8392857143	
Total	15	588		

$f = 5.066$ $p = 0.039$ level of sign. 0.05

Obtain critical value: From F critical value table, we get our critical value of 4.6001 Draw conclusion: Since our test statistic $f = 5.066$ is greater than our critical value of 4.6001, we reject the hypothesis H3

The T-value is 2.250909. The P-Value is 0.040984. The result is significant at $p < 0.05$ and we reject hypothesis H3

5.6. The relationship between parenthood and professional stress

Calculate our test statistic for treatments f

ANOVA Table Values:

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	1	225	225	6.4417
Error	14	489	34.9285714286	
Total	14	714		

$f = 6.442$ $p = 0.023$ level of sign. 0.05

Obtain critical value: From F critical value table, we get our critical value of 4.6001. Draw Conclusion: Since our test statistic $f = 6.442$ is greater than our critical value of 4.6001, we reject the hypothesis H_4

The T-value is 2.538054. The P-Value is 0.023659. The result is significant at $p < 0.05$ and the rejected hypothesis H_4

5.7. The relationship between number of children and professional stress

Calculate our test statistic for treatments f

ANOVA Table Values:

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	3	268.75	89.5833333333	6.9821
Error	28	359.25	12.8303571429	
Total	31	628		

$f = 6.982$ $p = 0.001$ level of sign. 0.01

Obtain critical value: From F critical value table, we get our critical value of 2.9467. Draw conclusion: Since our test statistic $f = 6.83$ is greater than our critical value of 2.9467, we reject the hypothesis H_5

Number of children	T - value			
	(I)	(II)	(III)	(IV)
one children (I)				
two (II)	2.885			
three or more (III)	0*,**	2.885		
no children (IV)	0.727*,**	2.568**	0.727*,**	

* $P < 0.05$, ** $P < 0.01$

The T-value (I-II) is 2.885. The P-Value is 0.011978.

The T-value (I-III) is 0. The P-Value is 1.

The T-value (I-IV) is 2.727. The P-Value is 0.479137.

The T-value (II-III) is 2.885. The P-Value is 0.011978.

The T-value (II-IV) is 2.568. The P-Value is 0.022289.

The T-value (III-IV) is 0.727. The P-Value is 0.479137.

5.8. The relationship between education and professional stress

Calculate our test statistic for treatments f

ANOVA Table Values:

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	3	82.5	27.5	4.1067
Error	28	187.5	6.69642857143	
Total	31	270		

$f = 4.106$ $p = 0.014$ level of sign. 0.05

Obtain critical value: From F critical value table, we get our critical value of 2.9467

Draw conclusion: Since our test statistic $f = 4.1067$ is greater than our critical value of 2.9467, we reject the hypothesis H_0

Education	T - value			
	(I)	(II)	(III)	(IV)
secondary degree (I)				
college degree (II)	2.288**			
university degree (III)	0.535*,**	3.454		
graduate degree (master's/doctorate) (IV)	1.608*,**	2.858	1.353*,**	

* $P < 0.05$, ** $P < 0.01$

The T-value (I-II) is 2.288. The P-Value is 0.038182.

The T-value (I-III) is 0.535. The P-Value is 0.600445.

The T-value (I-IV) is 1.608. The P-Value is 0.130106.

The T-value (II-III) is 3.454. The P-Value is 0.003866.

The T-value (II-IV) is 2.858. The P-Value is 0.012628.

The T-value (III-IV) is 1.353. The P-Value is 0.197343.

5.9. The relationship between department and professional stress

Calculate our test statistic for treatments f

ANOVA Table Values:

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	7	75	10.7142857143	1.3605
Error	56	441	7.875	
Total	63	516		

$$f = 1.361 \quad p = 0.238$$

Obtain critical value: From F critical value table, we get our critical value between 2.1665–2.1435

Draw conclusion: Since our test statistic $f = 1.361$ is greater than our critical value, we reject the hypothesis H_7

Education	T - value							
	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)
College Council-Board of Directors (I)								
Professors (II)	0.896*,**							
Assistants (III)	0.177*,**	0.849*,**						
Student services (IV)	1.548*,**	1.243*,**	1.776*,**					
Student parliament (V)	1.210*,**	1.189*,**	1.416*,**	0.277*,**				
Library (VI)	2.375**	1.390*,**	2.624**	1.210*,**	1.247*,**			
Administration (VII)	1.4*,**	1.236*,**	1.604*,**	0*,**	0.238*,**	0.916*,**		
Other staff (VIII)	1.070*,**	1.180*,**	1.251*,**	0.224*,**	1	0.966*,**	0.202*,**	

* $P < 0.05$, ** $P < 0.01$

The T-value (I-II) is 0.896. The P-Value is 0.385057.

The T-value (I-III) is 0.177. The P-Value is 0.861911.

The T-value (I-IV) is 1.548. The P-Value is 0.143748.

The T-value (I-V) is 1.210. The P-Value is 0.246158.

The T-value (I-VI) is 2.375. The P-Value is 0.032322.

The T-value (I-VII) is 1.4. The P-Value is 0.183283.

The T-value (I-VIII) is 1.070. The P-Value is 0.302608.
 The T-value (II-III) is 0.849. The P-Value is 0.409837.
 The T-value (II-IV) is 1.243. The P-Value is 0.234233.
 The T-value (II-V) is 1.189. The P-Value is 0.253948.
 The T-value (II-VI) is 1.390. The P-Value is 0.185968.
 The T-value (II-VII) is 1.236. The P-Value is 0.236546.
 The T-value (II-VIII) is 1.180. The P-Value is 0.257442.
 The T-value (III-IV) is 1.776. The P-Value is 0.097427.
 The T-value (III-V) is 1.416. The P-Value is 0.178558.
 The T-value (III-VI) is 2.624. The P-Value is 0.020013.
 The T-value (III-VII) is 1.604. The P-Value is 0.130898.
 The T-value (III-VIII) is 1.251. The P-Value is 0.231266.
 The T-value (IV-V) is 0.277. The P-Value is 0.785565.
 The T-value (IV-VI) is 1.210. The P-Value is 0.246158.
 The T-value (IV-VII) is 0. The P-Value is 1.
 The T-value (IV-VIII) is 0.224. The P-Value is 0.825681.
 The T-value (V-VI) is 1.247. The P-Value is 0.232779.
 The T-value (V-VII) is 0.238. The P-Value is 0.814904.
 The T-value (V-VIII) is 0. The P-Value is 1.
 The T-value (VI-VII) is 0.916. The P-Value is 0.374915.
 The T-value (VI-VIII) is 0.966. The P-Value is 0.350391.
 The T-value (VII-VIII) is 0.202. The P-Value is 0.842573.

5.10. The relationship between working hours and professional stress

Calculate our test statistic for treatments f

ANOVA Table Values:

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Square	f
Treatments	2	101.083333333	50.5416666667	0.5172
Error	21	2052.25	97.7261904762	
Total	23	2153.33333333		

$$f = 0.517 \quad p=0.602$$

Obtain critical value: From F critical value table, we get our critical value of 3.4668

Draw Conclusion: Since our test statistic $f = 0.5172$ does not exceed our critical value of 3.4668, we accept the hypothesis H_0

Education	T - value		
	(I)	(II)	(III)
less than 8 hours per day (I)			
8 to 9 hours per day (II)	0.572*,**		
more than 9 hours per day (III)	0.845*,**	0.673*,**	

*P<0.05, **P<0.01

The T-value (I-II) is 0.572. The P-Value is 0.576032.

The T-value (I-III) is 0.845. The P-Value is 0.412055.

The T-value (II-III) is 0.673. The P-Value is 0.511565.

Table 3. One-way ANOVA results for the relationship between individual differences and level of perceived occupational stress

Individual difference	F-ratio	Sign.	Level of sign.
Gender	3.706	0.067	
Age	7.364	0.000	0.01
Marital status	5.066	0.039	0.05
Parenthood	6.442	0.023	0.05
Number of children	6.982	0.001	0.01
Education	4.106	0.014	0.05
Department	1.361	0.238	
Working hours	0.517	0.602	

Table 3 depicts five out of eight respondents' demographic and work characteristics that are significant for the level of occupational stress they experience. ANOVA showed that one's age, marital status, parenthood status, number of children, and education significantly affect the levels of perceived stress and, therefore, should be considered and dealt with in the organizational setting. By contrast, gender, the department, and working hours could not be predictors of stress. Specifically, ANOVA and t-test revealed the following:

1. There is no significant difference in stress perceived by men and women, just as Kirkcaldy and Furnham found in their survey. This finding does not correspond with the prevailing findings around the globe since Serbian males and females did not perceive significantly different levels of work-related stress, although average for women (ASR = 55.31) is greater than the average for men (ASR = 50.31). The hypothesis H1 was confirmed (t-test shows the dependence between groups).

2. Contrary to the dominant research findings, the study revealed that older people perceive significantly higher levels of stress. This could be explained in part by the persistent problem in Serbia of a surplus of older (and on average technologically less competent) employees. The research results hypothesis rejected H2 and that shows was the respondents experience no significant difference in stress in relation to their age (t-test shows the dependence between groups).
3. One's marital status relates significantly to the perceived occupational stress level. Married people, probably because of their work/home conflict, experience higher levels of stress (ASR = 56.41) than single persons (ASR = 51.00). According to the findings, H3 is rejected as the results show that the marital status of the respondents does not affect the level professional stress (t-test shows the dependence between groups).
4. People who have children perceive significantly higher levels of stress (ASR = 56.13) compared to their colleagues without children (ASR = 50.21). Like with one's marital status, this could be result of the work/family conflict. Hypothesis H4 is rejected (t-test shows the dependence between groups).
5. Not only does the level of professional stress increase with the number of children, it is significantly higher with each additional child. Respondents with one child report an ASR of 49.55. Those with two children reported an ASR of 59.39 and those with three or more children had an ASR of 70.00. Such a finding corresponds with the common sense an individual's responsibilities multiply with the number of children. The findings result in hypothesis H5 that professional stress does not increase with a greater number of children in the family being rejected (t-test shows the dependence between groups).
6. Education is significantly related to the professional stress level. Respondents with "secondary" education (i.e. college) have the highest level of stress (ASR = 60.33). The respondents with the lowest level of stress are those with a university degree (ASR = 49.50). This could be because respondents who graduated college have a "middle position" with lesser responsibilities and report to higher levels. Hypothesis H5 that the respondents with a higher educational level experience higher stress is rejected (t-test shows the dependence between groups).
7. The department or field in which a person is employed does not correspond significantly to his/her level of occupational stress. This finding is perhaps a consequence of the relatively small number of respondents that were surveyed in the relatively high number of departments that. The H6 hypothe-

sis that respondents who are not closely related to teaching at the college have higher professional stress (t-test shows the dependence between groups) is rejected according to the research findings.

8. The number of hours that a respondent works (less, equivalent, or more than he/she should according to the law) was not found to relate significantly to that person's level of occupational stress, although common sense suggests that employees working longer hours experience a greater amount of stress. The research results confirms hypothesis H7 that employees who work more have higher professional stress (t-test shows the dependence between groups).

Altogether, because of the cross-sectional nature of this research, the cause-and-effect relationship between the parameters could not be established. However, demonstrating that there is a linkage between individual differences of age, marital status, parenthood, number of children, and education and that the levels of stress experienced, helps us focus on variables that might merit closer inspection in longitudinal studies and determine which variables should be focused on by managers.

6. Conclusion

The demands on employees to keep up with the accelerating pace of change and to increase the level of productivity and accuracy will bring some employees to the breaking point⁷⁹. Furthermore, personal problems, emotional frustration, and substance abuse will lead to problems in the workplace⁸⁰. Therefore, employers should take a serious interest in stress since occupational stress has serious costs, such as litigation, out-of-court settlements, illness, and those associated with an unmotivated and underproductive workforce⁸¹. The total cost of work-related might constitute 1–3.5% of a country's GDP⁸². This study is unique in that it integrates a broader set of antecedent variables (i.e. demographic and occupational characteristics, such as gender, age, marital status, parenthood, number of children, education, class, and time). The survey found that employees belonging to

⁷⁹ P.R. Johnson, J. Indvik, *op.cit.*

⁸⁰ *Ibidem.*

⁸¹ J. Earnshaw, L. Morrison, *op.cit.*

⁸² H. Hoel, K. Sparks, C.L. Cooper, *op.cit.*

different subgroups experience different levels of stress and that there is a link between individual performance and stress. Specifically, those with the highest level of stress were employees with three or more children, who are older than 50 years, those employees with a college degree, and professors. Those that experienced the lowest level of stress were employees under 30 years of age, students, employees with a university degree, and the parents of one child. As for the relationship between individual differences and levels of stress experienced, although the cross-sectional study design does not allow causal interpretation of relationships that were found, the findings suggest that there is a relationship between age, marital status, parenthood, number of children, and education and the way stress is perceived while one's gender, department, and working hours are not associated with it. Thus, there is a need to ensure the existence of a proper enabling environment and support staff at the college to cope with the work-related stress. Employees of the college should be positive in facing its challenges, which will help them improve their functional abilities and reduce stress so that their profession is not compromised. It was recommending that regular assessments of stress level should be carried out for preventive measures. In addition, the establishment or management has to check, monitor, support, and ensure that the relationships are properly cared for and improved. Most importantly, it was recommended to investigate the causes of stress and assess the organizational climate at the college. They also need to propose ways (e.g. workshops and seminars) to mitigate and cope with stress.

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