University of Eötvös Lorand
Faculty of Education and Psychology
PhD School of Psychology
Programme of Personality and Health Psychology

Burnout in Hungarian and Swedish Emergency Nurses: Demographic Variables, Work-Related Factors, Social Support, Personality, and Life Satisfaction as Determinants of Burnout.

PhD Dissertation

Anita Gombor

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Tutor: Prof. Dr. Habil. Attila Olah, C.Sc.
Dean of the School of Psychology

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ABSTRACT

The purpose of this study was to look at the differences in burnout among 90 Swedish and 97 Hungarian emergency nurses, and to see to which extent demographic variables, work-related factors, social support, personality, and life satisfaction, could be related to burnout in the two samples. Also, this study intended to look into if some of these factors might serve as protective factors against burnout and give suggestions for burnout prevention. The results showed that the Hungarian nurses had significantly higher levels of burnout than the Swedish nurses. It was also shown that the Hungarian nurses experienced more work-related stress in general than the Swedish nurses. The assumed work stress factors for each sample could be significantly related to burnout, however the ones not assumed in the study could also be significantly related to burnout in each sample. The Swedish nurses scored higher on life satisfaction but it was shown that life satisfaction did not have any influence on burnout, even when nationality was taken into consideration. Looking at the personality variable, the Swedish nurses' had higher psychological immunity levels and it was shown that higher psychological immunity resulted in lower burnout for the Swedish nurses. No significant differences could be found for social support between the two samples, thus it could not be related to lower burnout for the Hungarian nurses, as assumed in the study. Swedish nationality and psychological immunity were both shown to serve as protective factors against burnout, and more precisely it was shown that higher psychological immunity was the best protective factor against burnout. Only two demographical variables had a significant effect on burnout, namely nationality and marital status, and more precisely Swedish nurses together with married nurses had lower levels of burnout.

Keywords: burnout • nurses • Hungary • Sweden • demographical variables • work-related factors • social support • personality • life satisfaction

1. INTRODUCTION

1.1. PURPOSE OF THE STUDY

The use of the term burnout began to appear with some regularity in the 1970s, in America and especially among people working in the human services. The first articles appeared in the mid 1970s in America and they described the basic phenomenon of burnout, gave it a name, and showed that it was not an uncommon response. The first articles were written by Herbert Freudenberger in 1974 and Christina Maslach in 1976. Initial research about burnout was descriptive and qualitative, using interviews, case studies and onsite observations. The central focus of the research at this time was on relationships between provider and client, provider and co-workers, and provider and family members. Also, in the 1970s, workshops were a primary intervention used for burnout (Maslach, Schaufeli & Leiter, 2001).

In the 1980s work on burnout was shifted to more systematic empirical research, quantitative methods, and larger subject

populations. It was also during the 1980's that the Maslach Burnout Inventory, MBI, came; more precisely in 1981. At this time burnout was viewed as a form of job stress with concepts like job satisfaction, organizational commitment, and turnover (Maslach et al., 2001).

In the 1990's the empirical researches of burnout continued, however research extended beyond the human services and education. Researchers started conducting research on burnout in the military, with managers, and within the computer technology. Also at this time researches were improved with more sophisticated methodology and statistical tools. A few longitudinal researches started to emerge concerning the links between work environment, and people's thoughts and feelings (Maslach et al., 2001). Burnout was, according to Maslach (1982) a response to the chronic emotional strain of dealing with other human beings, particularly when they are troubled or having problems. Thus, burnout could be mentioned as a type of response to work-related stress. Although it has some of the same negative effects as other stress responses, what is unique about burnout is that the stress arises from the ***social*** interaction between for example the nurse and the patient. According to Halbesleben & Buckley (2004), today the common definition of burnout is that it is a psychological response to work stress characterized by emotional exhaustion, depersonalization and reduced personal accomplishment.

Halbesleben & Buckley (2004), state that the last decade of research on the antecedents of burnout has continued to focus on work context and the work environment as the cause of burnout.

Chang, Daly, Hancock, Bidewell, Johnson et al. (2006) report that today researchers agree about work-related stress having a negative affect on the health of workers. According to Lambert & Lambert (2001) research has especially been looking into the effects of stress for health care workers and then in particular health effects for nurses. There has been extensive research conducted about the effects of stress on the health and well-being of nurses (see for example Burnard, Edwards, Fothergill, Hannigan & Coyle 2000; Edwards, Hannigan, Fothergill & Burnard, 2002; Edwards & Burnard, 2003; Hannigan, Edwards, Coyle, Fothergill & Burnard, 2000; Lambert, Lambert, Itano, Inouye, Kim, et al., 2004). According to Allen & Mellor (2002) nurses have especially been documented as suffering from poor health outcomes due to work-related stress arising from the characteristics of their jobs. Nurses are caring for other people, and also the hospitals and the patients have high expectations on them. This is the reason why burnout has especially been related to nurses and why researchers have especially investigated nurses and their levels of burnout.

In the literature there has been studies dealing with stress and burnout related to different hospital wards and among nurses having different specialties. Research has shown that burnout and stress levels may be different in connection to different wards. It has for example been shown that the level of stress is less for those nurses working in palliative wards than in oncology wards (Sherman, 2004). Escriba-Aguir, Martin-

Baena & Perez-Hoyos (2006) has pointed out that nurses working in emergency wards are facing a number of psychosocial risk factors due to the nature of their work. These psychosocial risk factors can include workload, not having social support, not having much spare time, unmanageable working rotation, patients with serious illnesses etc. These psychosocial risk factors can have a disadvantageous effect on the nurses' physical and mental health, and their well-being.

Looking more specifically at burnout in Hungary, Piko (1999) state that the nursing profession in Hungary has undergone dramatic changes due to an ongoing general Health Care reform. Since 1989 there have been major changes in the health care system connected to policy-making, ownership, financing, management, service structure, patient's rights, and medical and nursing education. There have been severe cuts in social welfare and health care expenditures. Today in Hungary there is a situation where health care staff has low salaries and there is a tendency among nurses to leave their jobs. Piko (op. cit.) state that research in Hungary has shown that burnout is generally high among Hungarian nurses and that there is a strong relationship between burnout and psychosomatic symptoms. Emotional exhaustion has been strongly related to job dissatisfaction, and emotional exhaustion together with depersonalization has been related to role conflict.

When it comes to burnout in Sweden, the Swedish Work Environment Authority has listed health care work as one employment sector with significant work environment problems and an area that has to receive prioritized attention. It is said that one third of all reported occupational diseases within the Swedish health care sector during 2004 were related to organizational or social factors, like workload, incompatible or diffuse work demands, and traumatic experiences. Also, registered nurses had the highest frequency of such reported cases, followed by assistant nurses. Research in Sweden has for example found that perception of the possibility of receiving a high level of support from supervisors, co-workers, and patients was related to lower levels of emotional exhaustion and depersonalization, and higher levels of personal accomplishment. Research has also found an association between high emotional demands and high burnout levels. An example of current research being focused on in Sweden is addressing which role performance-based self-esteem plays in burnout (Sundin, Hochwälder, Bildt & Lisspers, 2006).

Even though there has been some research conducted internationally regarding burnout, according to Halbesleben & Buckley (2004) there is a general need for an increase in cross-national research on burnout. Since the 1990's there has been an improvement within this field, especially with the translation of the MBI, however cross-cultural research on burnout is still comparatively new and more research is needed in order to get a better comprehension regarding the burnout situation across different countries and nationalities.

Looking at previous studies on burnout, the researchers have looked at burnout in comparison to for example **work factors** (see for example Addington-Hall & Karlsen, 2005; Belicki & Woolcott, 1996; Burke & Richardsen,1996; Gabris & Ihrke, 1996; Halbesleben & Buckley, 2004; Low, Cravens, Grant &

Moncrief, 2001; Maslach, Schaufeli & Leiter, 2001; Sethi, Barrier & King, 1999), **social support** (see for example Baruch-Feldman, Brondolo, Ben-Dayan & Schwarz, 2002; Burke & Richardson, 2000, in Halbesleben & Buckley, 2004; Chang, Hancock, Johnson, Daly & Jackson, 2005; Deelstra, Peeters, Schaufeli, Stroebe, Zijlstra & van Doornen, 2003; Dein & Abbas, 2005; Lambert & Lambert, 2001; Schaufeli & Greenglass, 2001), **personality** (see for example Bakker & Schaufeli, 2000; Buhler & Land, 2003; Colbert, Mount, Harter, Witt & Barrick, 2004; Ghorpade, Lackritz & Singh, 2007; Hobfoll, 2001; McVicar, 2003; Mount, Johnson, Ilies & Barrick, 2002, in Ghorpade, Lackritz & Singh, 2007; Zellars, Perrewe, & Hochwärter, 2000), and **demographic variables** (see for example Aries & Ritter, 1999; Cordes & Dougherty, 1993; Dillon & Tanner, 1995; Friedman & Farber, 1992; Jackson, 1993; Stundin-Huard & Fahy, 1999; Tyler & Ellison, 1994).

An area which has not been in focus of the burnout research is the area of life satisfaction. According to Lee, Hwang, Kim & Daly (2004) when it comes to research done in the field of burnout and life satisfaction, not much attention has been paid to nurses and their life satisfaction. However it would be important to conduct research in this area since nurses' life satisfaction could influence their performance at work and their maintenance of their jobs. In very general terms it can be said that life satisfaction has been positively associated with job satisfaction and that life satisfaction has been negatively associated with burnout.

The purpose of this study was to look at the differences in burnout among Swedish and Hungarian emergency nurses, and to see to which extent demographic variables, work-related factors, social support, personality, and life satisfaction, could be related to burnout in the two samples. Also, this study intended to look into if some of these factors might serve as protective factors against burnout and give suggestions for burnout prevention. The present study was conducted in order to contribute with information about the situation related to burnout for nurses working at emergency wards in Hungary and Sweden. According to Halbesleben & Buckley (2004) there is not enough cross national studies in the field of burnout and this study hopes to contribute to this gap in the literature by looking at burnout in Hungary and Sweden. This study cannot generalize its findings to the general emergency nursing population in Sweden and Hungary; however it can point out nation-based differences in burnout and the factors influencing it. The reason why nurses were chosen as the study population in this study was because according to Allen & Mellor (2002) nurses have especially been documented as suffering from poor health outcomes in relation to work-related stress due to the characteristics of their jobs. This study wanted to see if the Hungarian and Swedish nurses would report work-related stress and if they would also report poor health outcomes, i.e., burnout in connection to this. The reason why especially emergency nurses were chosen was because as Escriba-Aguir et al. (2006) has pointed out that nurses working in emergency wards are facing a number of psychosocial risk factors due to the nature of their work, which may have a negative effect on their health. This study wanted to see if this holds true for the

present Hungarian and Swedish emergency ward nurses. When it comes to work-related factors, social support, personality factors, and demographic variables the results in the literature regarding these areas in comparison to burnout has been inconclusive and since they have shown mixed results, it was decided to be of focus in this study in order to contribute to the existing literature. The psychological immune system as the personality factor was decided to reflect the personality dimension related to burnout since it is looking specifically at protective personality resources connected to environmental stress and since it has been shown that certain dimensions of personality might play an important part in burnout (Olah, 2005). Also, research in the area of burnout related to psychological immunity is scarce and accordingly this study hopes to contribute to this gap in the research on burnout and psychological immunity as the personality factor. An area which has been neglected in the research on burnout is life satisfaction. This study chose to include this variable as well since according to Lee et al. (2004) nurses' life satisfaction could influence their work performance. Also, research regarding life satisfaction connected to burnout is scarce and therefore there is a gap in the existing literature in connection to this topic. Since the level of life satisfaction has been shown to have a negative influence on burnout (see for example Lee et al., 2004), it was decided to be looked into in detail in this study to see if the same association could be assumed in the present study.

By including contributing factors on burnout like demographic variables, work-related factors, social support, personality factors, and life satisfaction, there is an improvement in the prediction of burnout. Also, by looking at two samples of nurses in two different countries, some important nation-based differences and similarities will be detected in relation to burnout in this sample. Furthermore, the variety of the measured factors possibly influencing burnout will make it possible to more reliably point out which factors might serve as protective factors in connection to burnout in this nation-based sample of emergency nurses and in light of this, give suggestion for burnout prevention.

1.2. HYPOTHESES

The purpose of this study was to look at the differences in burnout among Swedish and Hungarian nurses working at emergency wards in Sweden and Hungary, and to see to which extent demographic variables, work-related factors, social support, personality, and life satisfaction, could be related to burnout in the two samples. This research study was intended to make propositions in variables affecting burnout, and to establish more concretely which factors are significant determinates if and when nurses are experiencing burnout. Also, this study intended to look into if some of the factors might serve as protective factors in burnout, in these nation-based samples of nurses and to give suggestions for burnout prevention. With these purposes in mind, the following hypotheses were checked in this study:

H 1. It is expected that differences in hospital conditions between the two countries will contribute to higher burnout in the Hungarian nurses.

H 2. It is expected that conflicts with the doctors, relationships with the patients, relationship with the patient's relatives, workload and stress related to tasks will result in higher stress for the Hungarian nurses and give higher burnout scores for the Hungarian nurses in relation to these factors. On the other hand, death and dying, problems with the colleagues, work and private life, being unprepared and feeling inexperienced will result in higher stress for the Swedish nurses and give higher burnout scores for the Swedish nurses in relation to these factors.

H 3. It is expected that higher life satisfaction scores will be found in this Swedish sample, and that this will be related to lower burnout scores for the Swedish nurses.

H 4. It is anticipated that the psychological immunity for the Swedish nurses will be higher. It is also expected that the higher psychological immunity will give lower burnout scores for the Swedish nurses.

H 5. It is anticipated that the Hungarian nurses will be married or in a relationship to a higher degree than the Swedish nurses and thus gain more social support from a husband or partner. This higher degree of partner support will be expected to be related to lower burnout in the Hungarian nurses.

H 6. Across the two samples it will be looked at whether lower levels of work stress, higher life satisfaction, higher psychological immunity, or higher levels of social support will serve as the most protective factors against burnout.

H 7. Lower age, not being married, having no children, lower educational level, less years of working as a nurse, and more hours worked per week will be assumed to have a negative influence on burnout scores across the two samples.

2. METHOD

2.1 STUDY POPULATION

The samples in this study were 97 Hungarian (Mean age=36.90, SD=8.34) and 90 Swedish (Mean age=46.78, SD=9.44) emergency nurses.

2.1.1. The Hungarian sample

12 hospitals were contacted via e-mail in the area of Budapest, Hungary. From the eight hospitals which decided to take part in this study (out of the 12), 103 questionnaires (from a total of 150) were returned filled out. From these, six questionnaires had to be excluded due to missing information and thus 97 questionnaires from Hungarian emergency nurses were included in the final statistical analysis. Only Hungarian female nurses and only Hungarian nurses who were qualified nurses (no assistant nurses) were included in this study.

2.1.2. The Swedish sample

21 hospitals were contacted via e-mail in the area of south and middle of Sweden. From the 116 questionnaires sent back from the 11 hospitals which decided to take part in this study, 26 questionnaires had to be excluded due to missing information in them. Thus, 90 questionnaires from Swedish emergency nurses were included in the final statistical analysis. Only Swedish female nurses and only Swedish nurses who were qualified nurses (no assistant nurses) were included in this study.

2.2. QUESTIONNAIRES USED IN THE STUDY

The following questionnaires were decided to be used in this study:

- Demographic variables
- Stress scale for Oncology nurses (Meszaros, 2005)
- Satisfaction with Life scale (Diener, Emmons, Larsen & Griffin, 1985; Pavot & Diener, 1993)
- Psychological Immune Competence Inventory (Olah, 1996)
- Multidimensional Scale of Perceived Social Support (Canty-Mitchell & Zimet, 2000; Zimet, Dahlem, Zimet & Farley, 1988)
- Maslach Burnout Inventory – Human Services Survey (Maslach & Jackson, 1986)

3. RESULTS

The internal reliability of the subscales was checked using Cronbach alpha coefficients. It was found that most of the values ranged between 0.60 and 0.95 in both the Hungarian and Swedish sample.

H 1: Emotional exhaustion and depersonalization were higher for the Hungarian nurses ($F=52.143$, $F=20.746$ respectively, in both cases $p<0.01$) while personal accomplishment was higher for the Swedish nurses ($F=35.454$, $p<0.01$). Thus, this hypothesis was supported.

H 2: In every work stress subscales the Hungarian nurses experienced more work stress than the Swedish nurses therefore the summary of work stress was also significantly higher ($F=43.519$, $p<0.01$). Thus, the first part of the second hypothesis was not supported since the Hungarian nurses' experienced higher work-related stress on almost all of the work factors. The second part of this hypothesis was partly supported since the assumed work stress factors for each sample could be significantly related to burnout, however the ones not assumed in the hypothesis could also be significantly related to burnout in each sample.

H 3: Life satisfaction was higher in the Swedish sample and this difference was highly significant ($F=42.878$, $p<0.001$). Thus, the third hypothesis was supported. However, higher life satisfaction scores did not result in lower burnout scores for the Swedish nurses. Thus, the second part of the third hypothesis was not supported.

H 4: The Swedish nurses scored higher on the majority of the 16 subscales and on all the three main factors of the

psychological immunity. Thus, the fourth hypothesis was supported. Higher psychological immunity resulted in lower burnout for the Swedish nurses and thus, the second part of the fourth hypothesis could be supported.

H 5: There were no significant differences between the countries for the subscales of social support (F=1.733, p=0.190) and thus it could not be related to lower burnout in the Hungarian sample. Thus, the fifth hypothesis could not be supported at all.

H 6: In the structural equation model it was shown that higher psychological immunity was the best protective factor against burnout (-0.33). After that it was nationality (-0.26). Low levels of work-related stress, higher life satisfaction and higher social support did not directly serve as a protective factor against burnout.

H 7: Only nationality (Swedish) and marital status (being married) showed to have a significant positive effect on burnout. Age, number of children, educational level, number of years working as a nurse, and number of hours worked per week did not have a significant influence on burnout. Thus, the seventh hypothesis could not be fully supported since the majority of the demographic variables did not have a significant effect on burnout.

4. DISCUSSION

With regards to **burnout** between the nations it the result was inline with the first hypothesis and explained by looking at the historical background of the two countries. Looking at **burnout and the work-related stress**, the first part of the second hypothesis was not supported but the second part of the second hypothesis was partly supported. Previous research has looked into this area to a high degree and many of the specific work related factors related to burnout in this study, have been looked into and connected to burnout by previous researchers as well. With regards to **burnout and life satisfaction**, the study could confirm the first part of the third hypothesis. The second part of the third hypothesis could not be supported. The minimum previous research in this area has shown that the connection between life satisfaction and burnout has been both confirmed and disconfirmed. Thus the present study's negative result has been shown by previous research as well; however more research in this area is needed in order to reach a higher consensus. When it comes to **burnout and personality**, the first and the second part of the fourth hypothesis was supported. Previous research connecting burnout to psychological immunity has not been found and thus more research is needed in this area. However, the present study also highlighted other personality factors which have been positively and negatively connected to burnout. In the area of **burnout and social support,** the fifth hypothesis could not be supported at all. The fact that social support turned out to be high for both the Swedish and the Hungarian nurses were in itself interesting results. Previous research has to a great extent shown that social support could be related to burnout and thus the finding of the present study was somewhat unexpected. Answering the question **which factors contributed to higher burnout** in this study, the sixth hypothesis showed that higher psychological immunity and Swedish nationality were the best protective factors against burnout. In connection to psychological immunity strong

arguments were made for future researchers to conduct more research in this area. The last hypothesis looked at **burnout and the demographic variables** and this seventh hypothesis could not be supported completely. Younger age, having no children, lower educational level, less years of working as a nurse, and more hours worked per week have been shown to have an influence on burnout in previous researches, but could not be shown to influence burnout in this study.

5. CONCLUSION

The present study contributed with both positive and negative findings in the area of burnout. Some of the findings could be supported by previous research in a certain area and others not. Some of the topics in this study was shown to be somewhat groundbreaking and has not been studied as much as other areas included in the present study. Especially results in connection to psychological immunity and social support were emphasized, and discussed in relation to burnout prevention.

5.1. LIMITATIONS

Due to the small sample size (N=187) in this study the findings cannot be generalized to the Hungarian and Swedish emergency nursing population in general and neither on the general Hungarian or Swedish population.

When looking at the comparisons between the Hungarian and Swedish emergency nurses, it is important to keep in mind the age differences between the two samples.

REFERENCES

Addington-Hall, J. M. & Karlsen, S. (2005). A national survey of health professionals and volunteers working in voluntary hospices in the UK. II. Staff and volunteers' experiences of working in hospices. *Palliative Medicine, 19*, 49-57. Retrieved on November 18, 2007 from doi: 10.1191/0269216305pm931oa

Allen, J. & Mellor, D. (2002). Work Context, Personal Control, and Burnout amongst Nurses. *Western Journal of Nursing Research, 24*(8), 905-917. Retrieved on November 13, 2007 from doi: 10.1177/019394502237701

Aries, M. & Ritter, I. Z. (1999). Nurses with and without burnout: a comparison. Results of a quantitative longitudinal study and a qualitative depth study. *Pflege, 12*(2), 83–88.

Bakker, A. B. & Schaufeli, W. B. (2000). Burnout contagion processes among teachers. *Journal of Applied Social Psychology, 30*, 2289–2308.

Baruch-Feldman, C., Brondolo, E., Ben-Dayan, D. & Schwarz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of Occupational Health Psychology, 7*, 84–93.

Belicki, K. & Woolcott, R. (1996). Employee and patient designed study of burnout and job satisfaction in a chronic care hospital. *Employee Assistance Quarterly*, *12*(1), 37-45.

Buhler, K. E. & Land, T. (2003). Burnout and personality in intensive care: An empirical study. *Hospital Topics*, *81*(4), 5-12.

Burke, R. J. & Richardsen, A. M. (1996). In Brewer, E. W. & Shapard, L. (2004). Employee Burnout: A Meta-Analysis of the Relationship between Age or Years of Experience. *Human Resource Development Review, 3*(2), 102-123.

Burke, R. J. & Richardson, A. M. (2000). In Halbesleben, J. R. B. & Buckley, R. M. (2004). Burnout in Organizational Life. *Journal of Management, 30*(6), 859–879.

Burnard, P., Edwards, D., Fothergill, A., Hannigan, B., Coyle, D. (2000). When the pressure's too much: workplace stress among community mental health nurses. *Nursing Times, 96*(19), 28–30.

Canty-Mitchell, J. & Zimet, G. D. (2000). Psychometric properties of the Multidimensional Scale of Perceived Social Support in urban adolescents. *American Journal of Community Psychology, 28*, 391-400.

Chang, E. M., Daly, J., Hancock, K. M., Bidewell, J. W., Johnson, A., Lambert, V. A. & Lambert, C. E. (2006). The relationships among workplace stressors, coping methods, demographic characteristics, and health in Australian nurses. *Journal of Professional Nursing, 22*(1), 30–38.

Chang, E. M., Hancock, K. M., Johnson, A., Daly, J. & Jackson, D. (2005). Role stress and nurses: Review of related factors and strategies for moving forward. *Nursing and Health Sciences, 7*, 57–65.

Colbert, A., Mount, M., Harter, J., Witt, L. & Barrick, M. (2004). Interactive effects of personality and perceptions of the work situation on workplace deviance. *Journal of Applied Psychology, 89*, 1-11.

Cordes, C. L. & Dougherty, T. W. (1993). A review and an integration of research on job burnout. *Academy of Management Review*, *18*, 621-656.

Deelstra, J. T., Peeters, M. C. W., Schaufeli, W. B., Stroebe, W., Zijlstra, F. R. H. & van Doornen, L. P. (2003). Receiving instrumental social support at work: When help is not wanted. *Journal of Applied Psychology, 88*, 324–331.

Dein, S. & Abbas, S. Q. (2005). The stresses of volunteering in a hospice: A qualitative study. *Palliative Medicine, 19*, 58-64. Retrieved on November 13, 2007 from doi: 10.1191/0269216305pm969oa

Diener, E., Emmons, R. A., Larsen, R. J. & Griffin, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment, 49*, 71–75.

Dillon, J. F. & Tanner, G. R. (1995). Dimensions of career burnout among educators. *Journal and Mass Communication Educator*, *50*(2), 4-13.

Edwards, D. & Burnard, P. (2003). A systematic review of stress and stress management interventions for mental health nurses. *Journal of Advanced Nursing, 42*(2), 169–200.

Edwards, D., Hannigan, B., Fothergill, A. & Burnard, P. (2002). Stress management for mental health professionals: A review of effective techniques. *Journal of the International Society for the Investigation of Stress, 18*(5), 203–215.

Escriba-Aguir, V., Martin-Baena, D. & Perez-Hoyos, S. (2006). Psychosocial work environment and burnout among emergency medical and nursing staff. *International Archives of Occupational Environ Health, 80*, 127–133.

Freudenberger, J. H. (1974). Staff burnout. *Journal of Social Issues, 30*, 159–165.

Friedman, I. A. & Farber, B. A. (1992). Professional self-concept as a predictor of teacher burnout. *Journal of Educational Research*, *86*(1), 28-35.

Gabris, G. & Ihrke, D. M. (1996). Burnout in a large federal agency: Phase model implications for how employees perceive leadership credibility. *Public Administration Quarterly*, *20*, 220-249.

Ghorpade, J., Lackritz, J. & Singh, G. (2007). Burnout and Personality: Evidence From Academia. *Journal of Career Assessment, 15*(2), 240-256. Retrieved on November 13, 2007 from doi: 10.1177/1069072706298156

Halbesleben, J. R. B. & Buckley, R. M. (2004). Burnout in Organizational Life. *Journal of Management, 30*(6), 859–879.

Hannigan, B., Edwards, D., Coyle, D., Fothergill, A. & Burnard, P. (2000). Burnout in community mental health nurses: Findings from the all-Wales stress study. *Journal of Psychiatric & Mental Health Nursing, 7*(2), 127–134.

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Review, 50*, 337-421.

Jackson, R. A. (1993). An analysis of burnout among School of Pharmacy faculty. *American Journal of Pharmaceutical Education*, *57*(1), 9-17.

Lambert, V. A. & Lambert, C. E. (2001). Literature review of role stress/strain on nurses: an international perspective. *Nursing and Health Sciences, 3*(3), 161–172.

Lambert, V. A., Lambert, C. E., Itano, J., Inouye, J., Kim, S., Kuniviktikul, W., Sitthimongkol, Y., Pongthavornkamol, K., Gasemgitvattana, S. & Ito, M. (2004). Cross-cultural comparison of workplace stressors, ways of coping and demographic characteristics as predictors of physical and

mental health among hospital nurses in Japan, Thailand, South Korea and the USA (Hawaii). *International Journal of Nursing Studies, 41*, 671–684.

Lee H., Hwang S., Kim J. & Daly B. (2004). Predictors of life satisfaction of Korean nurses. *Journal of Advanced Nursing, 48*(6), 632–641.

Low, G. S., Cravens, D. W., Grant, K. & Moncrief, W. C. (2001). Antecedents and consequences of salesperson burnout. *European Journal of Marketing*, *35*, 587-614.

Maslach, C. (1982). Burnout: a social psychological analysis. In J.W. Jones (ed.), *The burnout syndrome: Current research, theory, interventions* (pp. 30–53). Park Ridge, IL: London House Press.

Maslach, C. (1976). Burned-out. *Human Behavior, 5*, 16–22.

Maslach, C. & Jackson, S. E. (1986). *Maslach Burnout Inventory: Second edition*. Palo Alto, CA: Consulting Psychologists.

Maslach, C., Schaufeli, W. B. & Leiter, M. P.(2001). Job Burnout. *Annual Review of Psychology, 52*, 397–422.

McVicar, A. (2003). Workplace stress in nursing: a literature review. *Journal of Advanced Nursing, 44*, 633–642.

Meszaros, V. (2005). Stress scale for oncology nurses (Stresszor skála onkológiai ápolók számára). Work related stress at the Oncology ward, 2005 Final Thesis (2005-ös szakdolgozat – Munkahelyi stressz az onkológiai osztályon). Budapest, Hungary: University of Eötvös Lorand.

Mount, M., Johnson, E., Ilies, R. & Barrick, M. (2002). In Ghorpade, J., Lackritz, J. & Singh, G. (2007). Burnout and Personality: Evidence from Academia. *Journal of Career Assessment, 15*(2), 240-256.

Olah, A. (2005). Anxiety, Coping, and Flow. Empirical studies in interactional perspective. Hungary: Trefort Press.

Olah, A. (1996). Personality determinants of coping: The Psychological Immune System and its measuring method (A megküzdés személyiségtényezöi: A Pszichológiai Immunrendszer és mérésének módszere). Budapest, Hungary: University of Eötvös Lorand, Department of Personality and Health Psychology.

Pavot, W. & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment, 5*, 164-172.

Piko, B. F. (1999). Work-related stress among nurses: A challenge for health care institutions. *The Journal of the Royal Society for the Promotion of Health, 119*(3), 156-162. Retrieved on September 27, 2007 from doi: 10.1177/146642409911900304

Schaufeli, W. B. & Greenglass, E. R. (2001). Introduction to special issue on burnout and health. *Psychology & Health, 16*, 501–510.

Sethi, V., Barrier, T. & King, R. C. (1999). An examination of the correlates of burnout in information systems professionals. *Information Resources Management Journal*, *12*(3), 5-13.

Sherman, D. W. (2004). Nurses' Stress & Burnout. How to care for yourself when caring for patients and their families experiencing life-threatening illness. *American Journal of Nursing, 104*(5), 48-56.

Stundin-Huard, D. & Fahy, K. (1999). Moral distress, advocacy and burnout: theorizing the relationships. *International. Journal of Nursing Practice, 5*(1), 8–13.

Sundin, L., Hochwälder, J., Bildt, C. & Lisspers, J. (2006). The relationship between different work-related sources of social support and burnout among registered and assistant nurses in Sweden: A questionnaire survey. *International Journal Nursing Studies, 43*, 99–105.

Tyler, P. A. & Ellison, R. N. (1994). Sources of stress and psychological well-being in high-dependency nursing. *Journal of Advanced Nursing, 19*(3), 469–476.

Zellars, K. L., Perrewe, P. L. & Hochwärter, W. A. (2000). Burnout in health care: The role of the five factors of personality. *Journal of Applied Psychology*, *30*, 1570-1598.

Zimet, Dahlem, Zimet & Farley, 1988) Zimet, G. D., Dahlem, N. W., Zimet, S. G. & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment, 52*, 30-41.