

**ORIGINAL PAPER****Assessment of Burnout Levels among Working Undergraduate Nursing Students in Turkey: Being a Full Time Employee and Student****Neriman Akansel, PhD, RN**

Assistant Professor in Surgical Nursing, Uludag University School of Health, Department of Nursing, Gorukle Campus, Bursa, Turkey

**Gülseren Çitak Tunc, MSc, RN**

Lecturer in Psychiatric Nursing, Uludag University School of Health, Department of Nursing, Gorukle Campus, Bursa, Turkey

**Aysel Ozdemir, MSc, RN**

Lecturer in Public Health Nursing, Uludag University School of Health, Department of Nursing, Gorukle Campus, Bursa, Turkey

**Zuhal Tugutlu, BSc, RN**

Lecturer, Uludag University School of Health, Department of Nursing, Gorukle Campus, Bursa, Turkey

**Correspondence:** Neriman Akansel, PhD, RN, Uludag University School of Health, Department of Nursing, Gorukle Campus, Bursa, Turkey e-mail nakansel@uludag.edu.tr**Abstract**

**Background:** Burnout originates in social work environment which causes numerous health problems in people.  
**Objective:** The purpose of this research was to determine the burnout levels of working undergraduate students who actually work as health care staff at hospitals and attending full time education in School of Health in North West region of Turkey.

**Results:** More than half of the students (56.6 %) were satisfied by working and studying at the same time. Majority of the students (84.8 %) reported that they like their profession. We found that, years in profession and income levels did not affect emotional exhaustion ( $p>0.05$ ), whilst having negative feelings about profession increased emotional exhaustion among working students ( $p<0.01$ ).

**Conclusion:** Being a student and working at the same time as health care staff is a cause of burnout among students. Adding assertiveness, positive thinking, development of self-control to nursing curricula may help overwhelmed and burnout students to get along with problems they face.

**Key words:** Nursing students, burnout**Introduction**

According to the classical theory of Maslach, burnout is a physical, emotional and mental exhaustion syndrome which derives from chronic physical exhaustion, feelings of helplessness and hopelessness, development of negative attitudes towards the profession, the life and other people (Maslach and Jackson, 1986). Burnout is a fuzzy concept, however it simply means exhaustion and it is not the same as being depressed or overworked. It is subtle process in which individual is gradually caught in a state of mental fatigue and it is completely drained of all energy

(Espeland, 2006). However, it is also important to realize that burnout problems do not originate in people, but in social work environment. The range of possible interactions between personal and workplace sources of distress is considerable but under-researched (Jones and Johnston, 2003). Nurses are considered to be particularly susceptible to burnout (Molaoğlu et al, 2003; Riding et al, 1995). Nursing provides a wide range of potential workplace stressors as it is a profession that requires a high level of skill, team working in a variety of situations, provision of 24 hour delivery of care what is often referred to as "emotional labor" (Phillips, 1996). More recent

research shows that stress and burnout contribute significantly to physical and mental illness (Scheufeli and Greenglass, 2001). Tiredness, insomnia, dizziness, backaches, other muscle aches, head ache, low self esteem, problems relating to others, compulsive activities, and aggression are some of the signs of burnout (Çam,1995; Espeland, 2006).Occupational stress in nursing students was reported by Parkers (1982) and related to perceived work environment. Jones and Johnson (1999) demonstrated significant levels of stress among nursing students which exceeds stress in senior medical students and the general population. Howard (2002) reported that, the impact of undertaking nursing education on student's life outside the institution is something that should also be included in future research. According to Espeland (2006), getting promoted in nursing career can prevent burnout. Potential ways of getting promoted in career include taking responsibilities, developing an area of expertise, sharing knowledge and information with others, or pursuing an advanced degree. There are numerous studies done on burnout levels of health care staff and especially nurses (Chen and Mc Murray, 2001; Demerouti et al. 2000; Demir, Ulusoy and Ulusoy 2003). However there are few studies done on stress levels and burnout levels of nursing students during clinical placements (Jones and Johnson ,1999; Parkers, 1982). No studies could be found that focus on burnout levels of nursing students who actually work as nurses and continue in nursing programs to earn advanced degree in nursing.

In Turkey the level of education and the nature of training programs for nurses have gone through substantial changes over the years (Aksayan and Çimete, 2000). Because of that, today there are students who actually work as nurses in health care after getting a vocational school diploma and study at the universities to receive an undergraduate degree in nursing. Until now, numerous changes have been done on nursing education in terms of education period, schools and degrees received by the graduates of these schools. Three types of educational programs have been used since 1920 such as, high school diploma, associate degree and baccalaureate program in nursing. The nursing programs that offered a 2-year associate degree were in effect from 1985 to 1996. Four year high school graduates who received titles as a "nurse" have been working in health care. At the same time, some graduates of these schools enroll in nursing

programs to receive an undergraduate degree. These students mostly work at night shifts or on weekends to be able to attend full time nursing education at the universities. Working undergraduate health college students are facing a lot of problems caused by night-shift working and work overload. Besides these, they also have sleep problems, problems with their managers at their work places and difficulties in completing their educational requirements.

### Methods

This research was a cross sectional and descriptive study. Data were collected during Fall term in 2005. This study investigated the burnout levels among students who work in health care and study in nursing programs to receive baccalaureate degree (BS) in nursing.

### Sample

No research sample was chosen. All of the full time undergraduate students (100%, n=46) who work in health care facilities and study in baccalaureate program in Health College at North West region of Turkey were included.

### Ethics

Approval was obtained from school administration. The students were told about the aim of this study before the data collection forms were given to them. The students' privacy was respected.

### Instrument

Students were asked to complete a demographic data form which was designed especially for this study (21 questions) The form included questions about age, gender, income levels, students' perceptions of working and studying at the same time, attitudes towards their profession, places of work and their working conditions. Turkish version of Maslach Burnout Inventory (MBI, 22 items) was used to determine students' burnout levels. MBI consisted of three sub scales: Emotional Exhaustion (EE), Depersonalization (DP) and Personal Accomplishment (PA). High EE and DP levels and low PA are considered to indicate burnout.

### Data Analysis

SPSS (11.0) was used for statistical analysis. Demographic variables of the undergraduate students were given in numbers and percentages. Kruskal Wallis and Mann Whitney U tests were used to determine the effects of demographic variables on students' burnout levels.

## Results

### Demographic Data

More than half of the working students were males (67.4%, n=31), while 32.6 % of them were females. A small group of the students (15.2 %, n=7) were married. Most of the students (78.3 %, n=36) enrolled in the health officer program while 21.7 % of them were in the nursing program. The average student age was 22 years. Majority of the students (84.8 %, n= 39) reported that they like their profession. More than half of the students (60.9 %, n= 28), had been working in health care for less than a year, while 39.1% (n=18) of them had been working for 1-4 years. About 80 percent (79.9 %, n=34)) of the students were working in hospitals, 15.2 % of them were working in ambulance service; the rest of them were working in out-patient clinics. While 36.96 % of students had incomes less than their expenditures, 41.3 % of them had incomes more than it. Less than half (39.1%) of the working students prefer to work 08-16 hour shifts during weekend or in weekdays while studying. Some of the students (26.1%) prefer working 24 hour shifts in order to attend school.

### Difficulties Experienced by Students

About 70 % of the students reported having difficulties in school, followed by working life. Most of the students (54.3 %) have difficulties with their managers in their work places. Communication problems with co-workers and patients' relatives and difficulties with patient care were the widely acknowledged problems by students. More than half of the students (56.6 %) were satisfied by working and studying at the same time, while 43.4 % of them reported dissatisfaction.

### Emotional Exhaustion (EE) Levels of Students

Gender, marital status, age, years at school, years in profession and income level did not affect EE levels of the working students ( $p>0.05$ ). Students with negative feelings toward their profession had high EE levels ( $p<0.01$ ). Moreover, EE levels were found to be higher in students who work in hospitals than the ones employed in outpatient clinics ( $p<0.05$ ).

### Depersonalization (DP) Levels of Students

Gender, marital status, age, years at school and place of work did not affect students' depersonalization levels. Students who had been working for more than 1-4 years had high DP levels ( $p<0.01$ ), than the students with working experience of less than a year. Moreover, high income levels and negative feelings towards profession increased DP levels of the working undergraduate Health College students. Places of work did not have an effect on DP levels, although DP scores were high in students who were employed in inpatient clinics of the hospitals.

### Personal Accomplishment Levels of Students

None of the demographic variables (gender, marital status, age, years at school, years in profession, income level, feeling about profession, and place of work) were found to be effective on PA levels of the students. Personal accomplishment (PA) levels among 4<sup>th</sup> year students were high, although results were statistically insignificant. Having 1-4 years of working experience, low income and being employed in inpatient clinics increased PA levels of the students. Burnout levels of the undergraduate students were given in Table 1.

## Discussion

Working as health care staff and studying to earn an undergraduate degree in Health College is a demanding experience. Workload, insomnia, communication problems with their co-workers and managers, difficulties in completing their responsibilities as students are some of the problems faced by students. It is hard for them to complete the demanding requirements of being both a full time student and a health care worker. Most of the studies were focused on nurses' burnout levels at work. No research could be found on burnout levels of nurses who actually work as health care staff and attend a full time education to earn an advanced degree at the same time. For this reason it was hard to compare our findings to other studies. We mostly discussed the results of our study with previous research done on burnout levels of working nurses.

**Table 1.** Factors affecting students' burnout levels

		Maclach Burnout Inventory Scores		
	n	Emotional Exhaustion $\bar{X} \pm SD$	Depersonalization $\bar{X} \pm SD$	Personal Accomplishment $\bar{X} \pm SD$
<b>Gender</b>				
Female	15	12.80 $\pm$ 5.82	3.86 $\pm$ 2.82	11.93 $\pm$ 5.39
Male	31	12.25 $\pm$ 6.26 U= 216,00, Z= -0.388 <b>p&gt;0.05</b>	4.90 $\pm$ 4.03 <b>U= 203.00, Z= -0695</b> <b>p&gt;0.05</b>	11.29 $\pm$ 4.92 <b>U=219.00, Z= -229.00</b> <b>p&gt;0.05</b>
<b>Mariatal Status</b>				
Married	7	12.28 $\pm$ 7.56	5.28 $\pm$ 2.49	11.00 $\pm$ 5.22
Single	39	12.46 $\pm$ 5.87 U= 135.500, Z= -0.31 <b>p&gt;0.05</b>	4.43 $\pm$ 3.87 U= 98.500, Z= -1.168 <b>p&gt;0.05</b>	11.58 $\pm$ 5.05 U=132.00, Z= 0.138 <b>p&gt;0.05</b>
<b>Age</b>				
20-23 years	30	12.50 $\pm$ 6.56	4.70 $\pm$ 3.90	13.43 $\pm$ 4.69
24 years and over	16	12.31 $\pm$ 5.17 U=239.500, Z= 0.012 <b>p&gt;0.05</b>	4.31 $\pm$ 3.34 U=232.500, Z= 0.174 <b>p&gt;0.05</b>	7.87 $\pm$ 3.42 U=79.000, Z= 3.724 <b>p&gt;0.05</b>
<b>Grade level</b>				
2nd year	4	14.75 $\pm$ 11.61	7.50 $\pm$ 7.32	11.25 $\pm$ 5.73
3rd year	2	4.00 $\pm$ 4.24	1.00 $\pm$ 1.41	7.00 $\pm$ 2.82
4 th year	40	12.62 $\pm$ 5.22 X <sup>2</sup> = 3.892, Sd= 2 <b>p&gt;0.05</b>	4.45 $\pm$ 3.15 X <sup>2</sup> = 3.416, Sd=2, <b>p&gt;0.05</b>	11.75 $\pm$ 5.03 X <sup>2</sup> = 2.080, Sd=2 <b>p&gt;0.05</b>
<b>Working experience</b>				
Less than a year	28	11.50 $\pm$ 5.23	3.25 $\pm$ 2.18	10.82 $\pm$ 4.56
1-4 years	18	11.33 $\pm$ 6.02 U= 210.5, Z=0.937, <b>p&gt;0.05</b>	5.83 $\pm$ 2.92 U=134.500, Z= -2.658, <b>p&lt;0.01</b>	16.50 $\pm$ 4.72 U=214.00, Z= -0.858 <b>p&gt;0.05</b>
<b>Income level</b>				
Less than expenditures	17	11.17 $\pm$ 5.42	3.23 $\pm$ 1.98	11.94 $\pm$ 4.73
Equal to expenditures	10	10.30 $\pm$ 4.13	2.90 $\pm$ 1.91	10.00 $\pm$ 3.05
More than expenditures	19	14.68 $\pm$ 6.91 X <sup>2</sup> = 4.983, Sd=2, <b>p&gt;0.05</b>	6.63 $\pm$ 4.57 X <sup>2</sup> = 8.945, Sd=2, <b>p&lt;0.05</b>	1.89 $\pm$ 6.08 X <sup>2</sup> = 1.071, Sd=2 <b>p&gt;0.05</b>
<b>Feelings towards profession</b>				
Like the profession	39	11.25 $\pm$ 5.46	4.00 $\pm$ 3.25	11.41 $\pm$ 4.96
Dislike the profession	7	19.00 $\pm$ 5.22 U=39.500, Z= -2.97, <b>p&lt;0.01</b>	7.71 $\pm$ 4.60 U= 59.00, Z= 2.382 <b>p&lt;0.05</b>	12.00 $\pm$ 5.74 U= 124.00, Z= -0.383 <b>p&gt; 0.05</b>
<b>Places of work</b>				
Inpatient clinics	34	13.61 $\pm$ 6.12	5.00 $\pm$ 3.59	12.14 $\pm$ 4.89
Outpatient clinics	12	9.08 $\pm$ 4.62 U= 117.500, Z= - 2.170 <b>p&lt;0.05</b>	3.33 $\pm$ 3.82 U=133.000 Z= -1.785 <b>p&gt;0.05</b>	9.66 $\pm$ 5.15 U=147.500 Z=-1417 <b>p&gt;0.05</b>

In this study two questions were investigated:  
 1. What are the difficulties experienced by students who are actually employed as a health care staff?  
 2. Does working and studying at the same time cause burnout among undergraduate health college students?

### **Effects of socio-demographic variables on students' burnout levels**

We found that gender, marital status, age and years at school did not affect burnout levels of the students ( $p>0.05$ ). Chen et al. (2001) found in a hospital based study that the younger nurses (20-29 years) are the most prone to EE. Our result was also similar to a previous research conducted in Turkey by Mollaoğlu et al. (2003). They reported that age and marital status did not affect burnout levels of working nurses. In another study it was found that age and gender did not affect burnout levels of last year medical school students (Erol et al., 2005). Problems related to others can result from emotional exhaustion which makes communicating with families, friends and coworkers difficult. This can be an explanation to our results where we found that more than half of our students (54.3 %) have difficulties with their managers at their work places. Communication problems with coworkers and patients' relatives and problems with patient care activities were the most frequently defined problems that cause stress on students while working. Moreover, 69.6 % of the students reported having difficulties at school (passing exams, completing assessments, completing clinical requirements etc.) followed by working life. These problems limit academical achievements of working students during nursing education. Academic issues of working students deserve further research. These full-time students and full-time workers take classes after long working hours at demanding clinical settings have little time and almost no energy to study the new material. This problem was also noted by Lee-Hsieh et al. (2003) who studied the clinical competence of RN-to-BSN Taiwanese students.

### **Effects of work experiences on students' burnout levels**

In our study, years in profession did not have any effect on EE and PA levels ( $p>0.05$ ). On the other hand, DP levels increased as professional experience increases, especially in those students with more than a year experience in profession ( $p<0.01$ ). Mollaoğlu et al. (2003) reported that nurses who had worked for more than ten years

had higher DP levels than those who were new in profession. Uğurlu and Polat (2000) found 1-5 years of working experience causes burnout among nurses. They also report that increase in working experience increases PA levels among nurses. In our study, students with 1-4 years of working experiences had high PA levels than the students with working experiences of less than a year although results were statistically insignificant. Increased experience in work may lead to high PA, being able to handle difficult positions may become easier with experience and this increases self-esteem.

### **Effect of income levels of students' on burnout levels**

There are some studies that report low income level causes burnout in workplace (Mollaoğlu et al., 2003). According to the results of our study, high income levels increased DP levels of the working students. Although it was statistically insignificant, students with high incomes had high EE scores than the others. This can be explained by having higher income brings higher expectations and demands.

### **Effects of attitudes of students towards their profession on their burnout levels**

We may not be able to change situations in the work environment but we always have control over our thinking. Negative thinkers have a cannot-do attitude, and positive thinkers have a can-do attitude (Espeland, 2006). Nurses who unwillingly choose nursing as a career tend to have burnout (Mollaoğlu et al, 2003). In our study, we observed that disliking the professions increased EE levels of working students ( $p<0.01$ ). Moreover, DP levels were found significantly high in students who did not like their profession ( $p<0.05$ ). These results also bring up several questions, such as: "Why these students who dislike their profession continue on their education in nursing?" "Do these students have a negative effect on their peers at clinical assignments during nursing education?"

### **Effects of work places on students' burnout levels**

Sherman (2004) identified personal characters such as perfectionism and over-involvement with clients as contributing to compassion fatigue or burnout. Professional burnout can affect those professions in which the close interaction with another person is a key action and condition of work success and development (Çam, 1995;

Tovey and Adams, 1999). Individuals must be supported better, but this is hindered by lack of understanding of how sources of stress vary between different practice areas, lack of understanding of how personal and workplace factors interact (Mc Vicar, 2003). Some studies have shown that burnout is positively correlated with the amount of time nurses spend with their patients (Cronin-Stubs and Brophy, 1985). In some other studies, it was reported that nurses who involved in direct patient care activities had high burnout levels (Demir, 1995; Riding et al., 1995; Uğurlu and Polat, 2000). Students who worked in inpatient clinics had higher EE levels which found statistically significant ( $p < 0.05$ ). The high levels of emotional exhaustion of students who work in inpatient clinics could be explained by the evidence that they had to spend more time with patients during work hours. Individuals who display low levels of hardiness (involvement of daily activities, a sense of control over events etc.) have higher burnout scores particularly on the EE levels (Espeland, 2006). Prolonged shift work has health risks as well since it causes symptoms that correspond closely to those of moderate to mild distress (Efinger et.al., 1995). Shift working; especially night shifts are some of the causes of EE among nurses (Çam, 1991, Ergin, 1993). These can have significant effects on personal and social life. This is also the case in our study, because these undergraduate students have no other choice but to work at night or rotating shifts, which lasts 16 to 24 hours can be really overwhelming for them. Although results revealed statistical insignificance, depersonalization and personal accomplishment levels were found to be higher in those students who work in inpatient clinical areas. Having high DP levels can also be related to work overload and long shifts at their work places. There were several limitations of this study. First limitation is that this study was conducted at only one university in Turkey. Therefore, the results cannot be generalized to all working health college students. Second limitation is that how working burnout undergraduate students' peers get affected by their classmates during their education was not questioned.

### Conclusion

The results of this study suggest that working cause burnout among students and increased burnout levels affect students' working and educational lives. It is expected that burnout

students who work as health care staff during their university education will continue their professional life as burnout individuals. It is obvious that patient care will also be affected because of low performance levels of burnout staff and this can damage the image of nursing as a profession. Burnout and depersonalization will also change students' behaviors towards patients during clinical practices at hospital setting which is part of the nursing education; both of these factors may affect their classmates negatively. Since years of work in profession, income levels of students and dislike the profession cause depersonalization among students, these factors need to be taken in to consideration by nursing educators while communicating with these students. Managers should assume some responsibilities when preparing working schedules as well. Work place preferences of the students should be handled with care to reduce burnout levels. However, we should be careful about negative aspects of the nursing program and working full time as health practitioners on these students. Deary et al.'s (2003) study can be seen as a contribution to making the nursing students experience more positive, rewarding and enjoyable. In addition adding assertiveness, positive thinking, development of self control to nursing curricula may help overwhelmed and burnout students to get along with problems they face.

### REFERENCES:

- Aksayan, S., Çimete, G. (2000). Nursing education and practice in Turkey. *Journal of Nursing Scholarship*, Second Quarter, 211-212.
- Çam, O. (1991). Hemşirelerde tükenmişlik sendromunun araştırılması.(Determinatıyon of burnout among nurses)Ege Üniversitesi Sağlık Bilimleri Enstitüsü (Yayımlanmamış Doktora Tezi), İzmir, 111-113.
- Çam, O. (1995). Tükenmişlik (Burnout), Saray Matbaası, İzmir, 1-16.
- Chen, S.M. and McMurray, A.(2001). Burnout in intensive care nurses. *Journal of Nursing Research*, 9(5), 152-164
- Cronin-Stubbs & Brophy, E.G. (1985). Burnout: Can social support save the psych nurse? *Journal of Psychosocial nursing and Mental Services* 23, 8-13.
- Deary, I.J., Watson, R., Hogston, R. (2003). A longitudinal study of burnout and attrition in nursing students. *Journal of Advanced Nursing*, 43 (1), 71-81.
- Demerouti, E., Bakker, A.B., Nachreiner, F., Schaufeli, W.B. (2000). A model of burnout and life satisfaction among nurses. *Journal of Advanced Nursing*, 32 (2), 454-464.
- Demir, A.(1995). Hemşirelerin tükenmişlik düzeyleri ve tükenmişliği etkileyen bazı faktörlerin incelenmesi (Burnout levels in nurses and determination of factors affecting burnout) Cumhuriyet Üniversitesi Sağlık Bilimleri Enstitüsü, Yayımlanmamış Yüksek Lisans Tezi, Sivas, 35.

- Demir, A. Ulusoy, M.,and Ulusoy, M.F. (2003). Investigation of factors influencing burnout levels in the professional and private lives of nurses. *International Journal of Nursing Studies*, 40, 807-827.
- Efinger, J., Nelson, L.C., Star, J.M.W. (1995). Understanding circadian rhythms: a holistic approach to nurse and shift work. *Journal of Holistic Nursing*, 13, 306-322.
- Ergin, C.(1993) Doktor ve hemşirelerde tükenmişlik ve Maslach Tükenmişlik Ölçeğinin uyarlanması ( Burnout among physicians and nurses with Maslach Burnout Inventory). VII. Ulusal Psikoloji Kongresi Bilimsel Çalışmaları, Ankara, 143-154.
- Erol, Ş.Güdük,M., Yağcıbulut, Ö., Uğur, Z.(2005). Hacettepe Üniversitesi Tıp Fakültesi 6.Dönem Öğrencilerinde Tükenmişlik Sendromu ve Etkileyen Faktörler(Burnout among medical school last year students and factors affecting burnout) <http://www.medinfo.hacettepe.edu.tr/tebad>
- Espeland, K.E. (2006).Overcoming burnout: How to revitalize your career *The Journal of Continuing Education for Nursing* , 37(4), 178–184.
- Howard, D. (2002). Changes in nursing students' out of college relationships arising from Diploma to Higher Education. *Active Learning in Higher Education*, 3, 68-87.
- Lee Hsieh-, J., Kao, C., Kuo, C., Tseng, H. (2003). Clinical nursing competence of RN-to-BSN students in a nursing concept –based curriculum in Taiwan. *Journal of Nursing Education*, 42 (12), 536-545.
- Maslach, C., Jackson, S.E.(1986). *Manual Maslach Burnout Inventory*, 2<sup>nd</sup> edition, Consulting Psychologists Press. Palo Alto, CA.
- Mc Vicar, A. (2003). Workplace stress in nursing: a literature review. *Journal of Advanced Nursing* 44(6), 633-642.
- Mollaoğlu,M., Yılmaz, M., Kars, T. (2003). Hemşirelerde Tükenmişlik Sendromu (Burnout syndrome among nurses).*Toplum ve Hekim ( Society and Physician)*, 18 (4), 288-292.
- Jones M.C. and Jonhston D.W.(1999). The derivation of a brief student Nurse Stress Index. *Work and Stress* 13, 162-181.
- Jones M.C. and Jonhston D.W. (2003). A Critical review of the relationship between perceptions of the work environment, coping and mental health in trained nurses and patient outcomes. *Clinical Effectiveness of Nursing* 4, 74-85.
- Parkers K.R.(1982). Occupational stress among student nurses:*Journal of Applied Psychology* 67, 784-796.
- Phillips, S.(1996). Laboring the emotions: expanding the remit of nursing work? *Journal of Advanced Nursing* 24, 139-143.
- Riding R.J., Wheeler, H. (1995). Occupational stress and cognitive styles of nurses. *British Journal of Nurses* 4(2), 223-228.
- Schaufeli W.B. and Greenglass E.B.( 2001). Introduction to special issue on burnout and health. *Psychology and Health* 16, 501-510.
- Sherman D.W. (2004). Nurse's stress and burnout: How to care for yourself when caring for patients and families experiencing life threatening illness. *American Journal of Nursing* 104(5), 48-56.
- Tovey, E., Adams, A.E. (1999). The changing nature of nurses' job satisfaction: an exploration of sources of satisfaction in 1990's. *Journal of Advanced Nursing* 30 (1), 150-158.
- Uğurlu, N., Polat, H. (2000). Hemşirelerin tükenmişlik düzeyleri ile çeşitli değişkenler arasındaki ilişkinin belirlenmesi (Burnout levels among nurses and variables that affect burnout). *Ege Üniversitesi HYO Dergisi* 16 (2-3), 59-73.