

Doctoral (PhD) thesis

**The characteristics of nurses ' and caregivers' behaviour in different  
clinical settings with special attention to burnout syndrome**

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## INTRODUCTION

During the past thirty years numerous studies dealt with the development, prevention and treatment of the burnout phenomenon (Pines, 1986; Duquette et al 1994; Gunderson,2001).

On the basis of the metaanalysis (Aiken et al, 2001) of 43,000 nurses practicing in 700 hospitals in USA, Canada, England and Scotland the following findings are revealed:

- 30-40% of nurses has high scores of burnout
- according to 60-70% of nurses there is a nurse-shortage leading to overload
- less than 50% of nurses are satisfied with managerial concern
- 20-30% of nurses plan to leave the job in a year.

These data originate from countries with leading economic power and enviable health care. The surveys show that nurses of these countries are not in a better situation than their colleagues in Hungary as our national studies reveal similar results (Pálfi 2003; Pikó, & Piczil, 2003; Hegedűs et al, 2004; Pikó, 2005; Hegedűs & Riskó, 2006).

Due to the above picture ‘exhaustion and turning grey’ fade of nursing profession do not seem to be a unique Hungarian phenomenon but more or less is a process present worldwide (Sabo, 2006). Without treatment it becomes impossible for nurses to overcome stressors which may result in development of burnout syndrome (Cubrillo-Turek, 2006).

Burnout syndrome was introduced into health sociology-psychology- and medical literature by Freudenberger, (1974) as a condition of “emotional and mental fatigue due to chronic emotional loading and stress-induced conditions’ (Fekete, 1991; Gundersen, 2001).Central motives are the negative attitude towards oneself, job and life as well as loss of idealism, energy and determination.

Question is focused on institutional background of problems (Cooper & Marshal, 1976; Price & Bergen, 1976), institutional structures ( Steffen & Bailey, 1997) and on the organization itself ( Duxbury & Armstrong, 1984), as well as on unique characteristics of employees and

their attitudes towards their roles (Vachon, 1987; Maloney, 1982; Pines & Kanner, 1982; Lazarus & Folkman, 1984; Peteet et al, 1989; Fong, 1993).

Objectives of this study:

- to explore and recognize the occurrence and frequency of burnout syndrome among health care professionals.

- to reveal connection between burnout and socio-demographic factors (sex, age, qualification, time spent in health care, post, marital status, taking extra jobs, satisfaction with waging, idea of career change/idea of leaving career)

- to explore personality factors and their correlation in the background of the phenomenon, with the test - examining psychological functionality of the personality - already standardized in Hungary and scored by Dysfunctional Attitude Scale, using the trustworthy source ( Kopp, 1994).

- to examine job related stress effects and factors with influence on them in different health care situations. To explore the importance of severity of patients' condition as a work-problem in intensive care, active and chronic wards.

## METHODS

Model was constructed in our project to demonstrate factors affecting the development of burnout syndrome (Fig.1.).

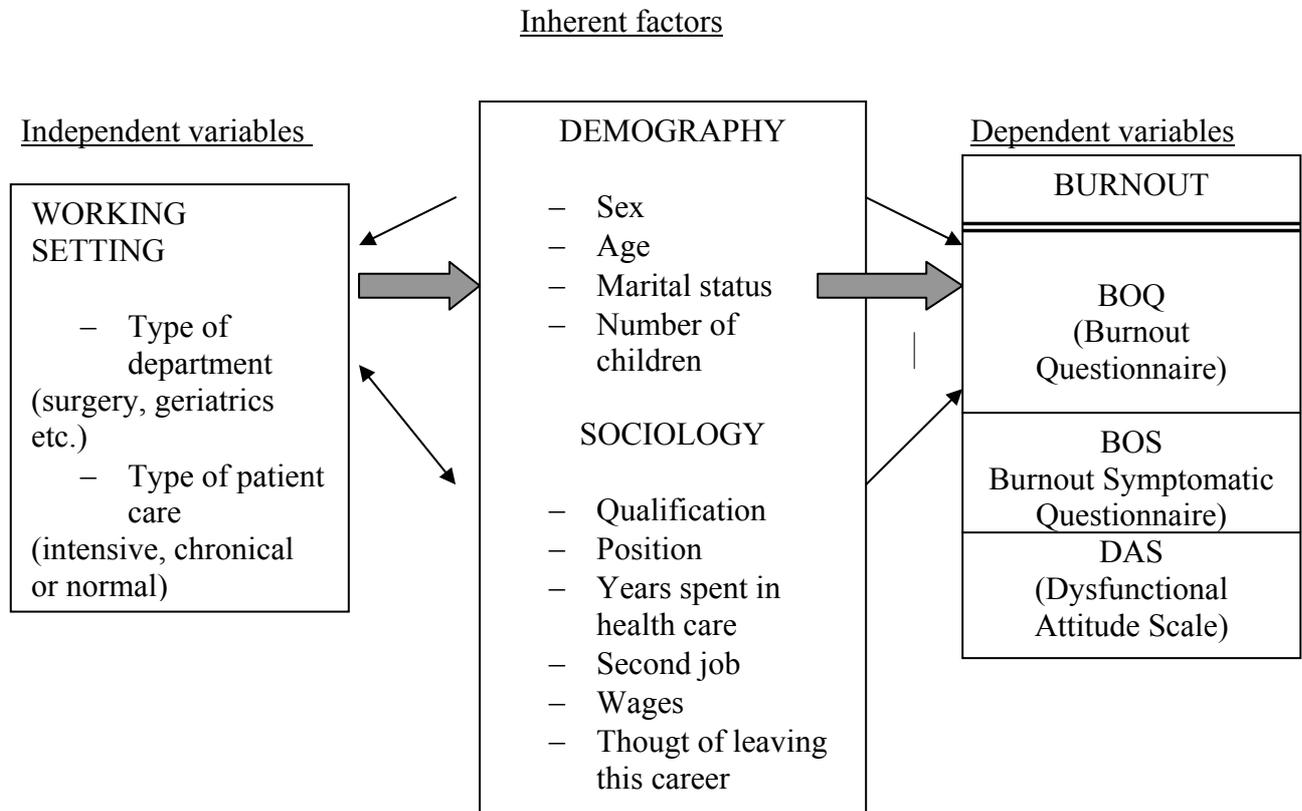


Figure 1. The Model of Factors Affecting the Development of Burnout Syndrome  
(Source: Pálfi. 2001.)

Dependent variable is burnout itself. To determine burnout we used:

1. Burnout Questionnaire adapted from Herbert J. Freudenberger and Geraldine Richelson (1980), hereinafter BOQ.
2. Individual Burnout Symptomatic Questionnaire by Steven H. Appelbaum (1980). Questions related to physical and psychological symptoms of burnout are answered, hereinafter BOS.
3. Dysfunctional Attitude Scale (Weissman and Beck, 1979; Burns, 1980), where 7 scales of values were examined. Maria Kopp (1994) translated and certified/standardized the scales in Hungary. This is an important validity test in the survey. The scale focuses

depression and maladaptive self-attitudes which intervene between the depressive structure of personality and symptom-focused scaling.

-Independent variable is the environment of employment including types of department/word and form of health care.

-Contributing factors are divided into two main groups:

- Demographic factors including: sex, age, marital status and number of children.

- Sociological variables including: qualification, post, years spent in health care, fact of second job: waging and idea of leaving/changing the profession.

Data sources: compound, size and selection of research samples

The study conducted in 2000/2001 with 805 participants (sample 2) was preceded by a presurvey ( pilot study) completed in 1998 (sample 1) involving 232 individuals. The survey was completed by individuals working in in-patient departments meeting patients during medical treatment (doctors, nurses, assistants, administrators) by anonymous, self completed questionnaire. The participants completed a cross-sectional survey.

The participants of (sample 1) were nurses chosen randomly.

Distribution of questionnaires was planned to be proportional among intensive care, long-term care and active wards. From 250 distributed questionnaires 232 (92, 80%) could be evaluated. Surveyed population in 2000/2001 (nurses and caregivers) was also questioned by anonymous, self-completed method, 'sample 2'.

Health care and social care institutions were chosen as locations for the survey in and around Baja and Pecs.

During the survey (2000/2001)1052 questionnaires were distributed and 934 were returned. Incomplete questionnaires were left out of evaluation, in this way 805 questionnaires (76, 52%) were processed.

## RESULTS

### Results of burnout questionnaire.

Our burnout questionnaire focused on behaviour patterns in particular situation of individuals suffering from burnout syndrome.

<b>Grades</b>	<b>1998/1999</b>		<b>2000/2001</b>	
	<b>N = 232</b>		<b>N = 805</b>	
	person	%	person	%
<b>Feels very good</b>	77	33,2	237	29,4
<b>Things needed to pay attention to</b>	69	29,8	244	30,3
<b>Being in danger</b>	62	26,7	273	33,9
<b>Being in the state of Burnout</b>	23	9,9	44	5,5
<b>Needs cure</b>	1	0,4	7	0,9
<b>Total</b>	232	100	805	100

Table 1. Grades of burnout intensity in the studied population.

Although the burnout questionnaire has already been controlled we also performed the internal validity examination.

Cronbach-alpha index was used during in both samples for internal validity examinations. The results are within close range: alpha index of burnout test of the pre-study in 1999 (sample 1) was 0, 8761 while in 2000 (sample 2) it showed the value of 0, 8768.

The results proved that each question of the questionnaire fitted well into the scale.

Almost one third of surveyed individuals are endangered regarding burnout, 5,5 % shows sings of burnout and about 1% is in such a severe condition where cure is needed. It is worth taking into consideration how much suffering and personal tragedy can be found in the background.

The total scores of the questionnaire were compared with socio-demographic data such as age, post and work relationships. Socio-demographic data were also compared with one another regarding correlation.

Comparison showed that the total scores of burnout questionnaire were not correlated with age, post or work relationships.

The same findings were concluded in the survey (Payne, 2000; Iacovidis & Fountoulaki, 2003). Linear regression models were applied to examine personal data and burnout total scales as a function correlation among random variables. Independent variables of regression equation are personal particulars while dependent variables are the total scales of the burnout test.

The 1998/99 the pre-survey ('sample-1') included far less questions on personal data which are essential to examine burnout.

Among studied personal data only sex shows correlation with total scores of burnout questionnaire, therefore age, work relationship or post cannot be used as independent variables of the regression equation. In the surveyed population males represented 16,4% while females 79,7%. Due to this disproportion not considerable conclusion can be drawn on sex roles in burnout.

Partly due to this conclusion in the detailed survey of 805 individuals (sample2) besides personal variables other data with supposed influence on burnout degree were questioned. On the one hand the survey of 805 individuals (sample 2) confirms the data of pre-survey where none of the socio-demographic factors had a significant effect on burnout degrees. On the other hand Maddi & Kobasa, 1984; Duquette, 1995 proved in their studies that socio-demographic factors influence the degree of burnout. Thus among others age, sex, post as well as number of years in work had an influence on burnout, except for the number of children of surveyed population.. However Jones & Johnston (2000) described age as an influential factor.

On the other hand the survey revealed that workplace characteristics, type of care in the ward, second job and the idea of leaving the career show significant correlation with burnout.

- Type of care:

Based on distribution of the burnout scale the surveyed population was divided into different health care settings.

N = 805 Degrees of Burnout intensity	Workers in Intensive Care		Workers Departments active Care		at with Workers at Chronic Department	
	Person	%	Person	%	Person	%
Feels very good	114	30,5	28	18,1	95	34,4
Things needed to pay attention to	113	30,2	55	35,5	76	27,6
Be in danger	107	28,6	71	45,8	95	34,4
Be in the state of Burnout	35	9,4	1	0,6	8	2,9
Needs cure	5	1,3	0	0	2	0,7
<b>Total</b>	374	100	155	100	276	100

Table2. Degrees of Burnout intensity in departments with different forms of care 2000/2001

The percentage of each burnout stage reveals that nurses working in intensive care units show higher degree of burnout. The total rate of being in the state of burnout and need cure/treatment among nurses of intensive care units is 10,7% (40 persons) while this rate among nurses of chronic departments is 3,6 % (10 persons). The surveys among nurses of intensive care units proved that hard work, permanent stressful situation, death and fact of dying represent significant factors in burnout of nurses (Power & Sharp, 1988; Bauser, 1992; Buran, 1992; Smochek, 1993; Morisette, 1993; Schaefer & Moos, 1993; Duguet et al, 1999; Decker, 1997; Pálfi, 2001a, 2001b, 2003).

Employees of intensive care units are exposed to significant physical and mental burden/load and stressful situation during their work.

It is also proved by Goodfellow et al (1977) Gladys et.al, (2002) who studied stress burden on nurses working in intensive care units and other wards. The most significant stress-sources were the characteristics of their jobs and the severity of patients condition (Kelly & Cross, 1985; Boumans & Landeweerd, 1994; Hays et.al, 2006).

In cares of employees of chronic departments (geriatric and nursing wards, oncology,) depressive and emotionally exhaustive problems of patients (dying, inert, mentally seriously retarded patients) can also be essential factors in burnout..

These jobs more often generate hopelessness, despair than those which aim to achieve a definite goal (Maslach & Pines, 1997; Chung & Corbett, 1988; Toft, 1989; Papadatuou, 1994; Pálfi, 2003; Hegedűs & Riskó, 2006).

Our findings also proved that the rate of nurses of chronic wards who are in the state of burnout or in need of treatment is 3, 6 % (10 persons) the second highest after intensive care units.

- The effects of second job on burnout:

Among the surveyed population (805 persons) 40% of nurses have a second job. Under hard physical and mental stress while nursing patients in a second job -struggling for costs of living- health condition of nurses may be undermined after a while (Bencés, 2006).

20, 7 % of nurses who deal with patients in serious condition have a second or third job (Hegedűs et.al, 2004)

Numerous cases of burnout surveys proved the fact of giving up the profession among nurses. On the basis of Aiken et al , (2001) meta-analysis 20-30% of 43000 surveyed nurses intend to give up their positions in a year in countries with lending economy and developed health care. In our study the significance of giving up the position and total scores of burnout questionnaire were separately evaluated from the significance of care types and secondary jobs.

Findings show that the idea of leaving the career has a close correlation with burnout. Leaving health career currently or in the past characterised 66% of surveyed nurses while 34% stated they had never been concerned with the idea. Cases of nurses from Western Europe and USA proved the same findings, two-thirds indicated that improvement in work conditions, reduction in extra working hours are needed to continue their nursing career (Coombe et.al, 2006). One part of nurses would leave due to physical and mental stress threateing their health (Demerouti, 2000; Pikó, 2002; Mcgrait et.al, 2003; Piczil et.al, 2005; Benczés,2006; Hajagos et.al,2006).

In the survey we intended to assess the relationship between salary satisfaction and degree of burnout. It proved to be impossible as 93 % of total surveyed stated that they were unsatisfied with their salaries while only 7 % showed satisfaction. These figures do not support a thorough study of the problem as there is a significant difference between the numbers of individuals in the two groups. Being unsatisfied with salaries -considered to be excessively low- and lack of financial recognition also prove to be significant stressors in burnout (Masterson-Allen, 1985; Power & Sharp,1998; Seymour & Buscherhof,1991; Pikó & Piczil, 2000; Pálfi, 2002; Piczil et.al, 2005).

Analysis of Dysfunctional Attitudes Scale Questionnaire:

Dysfunctional Attitudes are severe prediction factors in burnout syndrome. We can emphasize the highly significant correlations between: the need for being appreciated and external acknowledgement, need of achievement and need for being appreciated as well as between perfectionism and need of achievement. Similarly high correlation was noted between external control attitude and need for being appreciated. The need of omnipotence also shows high correlation regarding other dysfunctional attitudes.

The following findings were proved when we compared certain subscales with the results of burnout- and burnout symptomatic questionnaires.

<b>Correlation</b>	<b>Burnout questionnaire</b>	<b>Burnout symptomatic questionnaire</b>	<b>Age</b>	<b>Employment</b>
<b>Need for external acknowledgement</b>	0,188*	0,242***	0,118	0,108
<b>Need for being appreciated</b>	0,161*	0,168*	0,127	0,048
<b>Need for performance</b>	0,125	0,113	0,184**	0,178**
<b>Perfectionism</b>	0,090	0,051	0,075	0,111
<b>Right requirements towards environment</b>	0,133*	0,088	-0,061	-0,088
<b>Need of omnipotence</b>	0,095	0,027	0,007	0,086
<b>External control attitude</b>	0,261***	0,290***	-0,018	-0,034

**Significance: \*\*\* p<0,001, \*\* p<0,01, \* p<0,05**

Table3. Correlation of dysfunctional attitude subscales with personal data and with burnout and burnout symptomatic scales 1998/1999

<b>Correlation</b>	<b>Burnout questionnaire</b>	<b>Burnout symptomatic questionnaire</b>	<b>Age</b>	<b>Employment</b>
<b>Need for external acknowledgement</b>	0,165***	0,153***	0,032	0,030
<b>Need for being appreciated</b>	0,110**	0,166***	0,031	0,032
<b>Need for performance</b>	0,083*	0,101**	0,143***	0,161***
<b>Perfectionism</b>	0,059	0,084*	0,052	0,076*
<b>Right requirements towards environment</b>	0,059	0,026	0,093**	0,080*
<b>Need of omnipotence</b>	0,058	0,043	0,052	0,038
<b>External control attitude</b>	0,256***	0,289***	0,001	0,047

**Significance:\*\*\* p<0,001, \*\* p<0,01, \* p<0,05**

Table4. Correlation of dysfunctional attitude subscales with personal data and with burnout- and burnout symptomatic scales 2000/2001

Findings of 3rd and 4th tables show that the need for external acknowledgement highly correlates with burnout questionnaire and symptom-list. The same can be claimed about the need for being appreciated and external control attitude, as well as about employees who excessively require optimal working conditions. In case of partial realisation of the above mentioned individuals are exposed to a rather high risk of burnout.

Individual/personal variables had no influence on the development of burnout (sex, age, position, years in employment, number of children) rather the environment of workplace affected the surveyed population.

Age and employment show significant correlation with certain factors of DAS.

The following may be concluded concerning BOQ (general value of burnout) and BOS (total mental and physical symptoms) questionnaires:

The need for external acknowledgement shows high significance and correlation to mental, physical and general values of burnout questionnaire.

Similar findings were pointed out concerning the need for being appreciated

In case of need for achievement correlation values are lower but similar picture is outlined.

Regarding perfectionism- no correlation with other factors can be pointed out concerning factors of physical exhaustions of BOS symptoms. Perfectionist approach seems to favour physical exhaustion but mental exhaustion syndrome is not stressed.

Rightful/well-grounded/justified requirements towards environment show no correlation to any of burnout factors. With the knowledge of correlation data this factor seems to be defined mostly by age and years of employment in health care.

Similar conclusion was reached in evaluation the need for omnipotence which is not significant with any of burnout questionnaires (BOQ, BOS)

Regarding external control attitude factor value also a positive correlation can be noticed with internal, external, total BOS as well as total BOQ values.

We can conclude that the excessive need for external acknowledgement and external control attitude moreover the intensive desire for the need for being appreciated show a significant correlation with exhaustion, physical and mental syndrome of burnout.

## CONCLUSION

With the help of the model of influential factors in developing burnout syndrome we determined the dependent and independent variables as well as those factors which play a role in development of the phenomenon ensuring the basis of this study.

The primary objective of the study was to define those personal and environmental factors that seem to be responsible for the development of emotional exhaustion, reduction of personal achievement or the formation of burnout. Other objective of the study was to study the occurrence and frequency of burnout syndrome among health care staff.

Comparing the three types of standardised questions in the questionnaire we can see that each of them can be well used as a source of external validity. The total scores of the tests correlated well with each other in every case. When comparing the total scores and the personal and workplace features of the questionnaire we came to the conclusion that none of the social demographic data are significant in development of burnout. It does not mean that social demographic data have no influence on burnout but none of the personal data proved to be a significant risk factor. Similar conclusion was drawn regarding socio-demographic factors and burnout (Payne, 2000; Iacovidis & Fountoulaki, 2003; Pálfi, 2003).

On the one hand other authors described the influential role of socio demographic factors (Maddi & Kobasa, 1984; Duquette, 1995; Jones & Jonstson, 2000; Bencés, 2006).

Test results rather depend on workplace conditions and types of care in departments/wards. Taking into consideration types of wards and forms of care we can conclude that the rate of burnout and nurses in need for treatment/cure is twice as high among nurses working in intensive care units (10,7%) than among nurses working in chronic wards (3,6%). In case of nurses working in active wards this rate is 0,6%. It is probable that nurses working in intensive care units day by day face situations they cannot solve and to escape from these situations a lot of energy is required and may lead to anxiety (Power & Sharp, 1988; Bauser, 1992; Buran, 1992; Smochek, 1993; Morisette, 1993; Scafer & Moos, 1993; Duquette et al. 1999; Decker, 1997; Pálfi, 2001/a; 2001b. , 2003).

The survey also revealed that 40% of nurses have second jobs. Low salaries may be considered as a significant problem in health care. This fact forces them to undertake a second job (Piczil et al. 2005; Bencés, 2006).

No confirmed correlation could be found between dissatisfaction with salary and burnout rate as 93% of all surveyed claimed that they were unsatisfied with their salaries while only 7% proved to be satisfied. Due to this fact correlation with burnout could not reliably be studied as it was the limit of mathematics and not of the analysis.

The study assumed the influential role of some personality factors (dysfunctional attitudes) in development of burnout.

On the basis of comparison correlation between burnout phenomenon and dysfunctional attitudes was also proved.

This correlation is also confirmed by the fact that individuals show higher burnout scores where more positive attitude is indicated- with stressed/definite incompetence feeling. All this can be due to two mechanisms. On the one hand they may directly and deliberately face the problem rather experiencing their own incompetence/inability on the other hand they are less capable of treating, coping with and working off anxiety.

We can easily understand why this syndrome is regarded to be specific health risk, why it is often associated with/accompanied by depression alcohol and/or drug addiction, increased psychiatric morbidity and finally increased risk of suicide.

Nursing profession bears accumulated risk of burnout. First of all it demands a very serious physical loading/burden especially on those wards where inert patients have to be nursed and moved –these are intensive and chronic care units.

According to European Directives it is the employer's responsibility to protect employees from increased stress.

Main steps of the process:

1. Estimate stress risk, determine affected/concerned individuals.
2. Survey stress provoking factors.
3. Work out solving possibilities, measurements for prevention harm.

Extensive changes become possible however changes of mental hygiene organization require considerable sources. The main point is that with the revision of existing role conditions, proper structure formation/establishment, and introduction of new rules psychosomatic health and positive working conditions can be created.

Adequate training can prevent the development of consequences and ease the fight with stress.