



PROFESSIONAL BURNOUT IN FEMALE AND MALE PHYSICAL EDUCATION TEACHERS – A FOUR-PHASE TYPOLOGICAL MODEL*

doi: 10.2478/v10038-011-0018-6

MARIA BRUDNIK

Department of Theory and Methodology in Physical Education, University School of Physical Education, Kraków, Poland

ABSTRACT

Purpose. The best-known concept of professional burnout is the Maslach tri-dimensional model. According to the author, a burnout process starts by increased emotional exhaustion, followed by reduced personal accomplishment and, ultimately, depersonalization. Progressing with time, the syndrome is manifested differently in various individuals. Recognizing the tri-dimensionality of the phenomenon, Golembiewski suggests a reverse direction of symptom occurrence and proposes an eight-phase model of the phenomenon intensification. The two different approaches to the dynamics of the burnout process have been called *facing theories*. The problem of *facing theories* has been solved by developing a concept based on data clustering, in consequence, arriving at a typological model where the four-phase model of professional burnout represents a special variant. The premises of the general model are as follows: tri-dimensionality of the syndrome, temporal continuity of the process, macro-path specific for a given profession (a cluster of individual paths), the effect of external factors. **Basic procedures.** The study was carried out between May 2006 and June 2007. The number of PE teachers was $N = 1563$: females $N = 686$ (43.9%); males $N = 877$ (56.1%). *The Maslach Burnout Inventory (MBI)* was employed. Statistical methods: data clustering (K-mean method), U Mann Whitney test. **Main findings.** With the use of the four-phase model, two macro paths illustrating the dynamics of burnout in female and male PE teachers were plotted. The different courses of burnout paths were determined by a significantly higher depersonalization level in men ($p < 0.001$). **Conclusions.** Initially (phase T1), females and males reacted to professional stress with emotional exhaustion (the Maslach's path) or reduced personal accomplishment – in both genders, in phase T1, the path bifurcated. At a high emotional exhaustion level, women began to depersonalize their pupils (phase T2) and get burned out (phase T3; $N = 98$, 14.3%). The second macro-path of female teachers terminated in phase T2. One macro-path of male teachers was identical with the macro-path characteristic of females (T0-T3), while the other illustrated burnout in young male teachers – with reduced personal accomplishment at school (T1), cynicism increased (T2) and the effect was burnout (T3, $N = 99$; 11.3%).

Key words: professional burnout, four-phase typological model, macro-path, PE teacher

Introduction

Teachers tend to burn out while doing their job, a problem which has been studied for many years now. Since the number of researchers who deal with effects of professional stress has increased, they tend to specialize in studying the problems of teachers of different subjects [1, 2]. The first papers on the burnout syndrome in physical education teachers were published in the 1990s [3], and the interest in the issue continues nowadays. During a poster session at the ECSS Congress in 2008, three research reports on the issue [4–6] were presented. In the same year, a scale to diagnose the syndrome in PE teachers in secondary schools and universities [7], as well as Otero López's paper [8] were published. In Poland, the *subject taught* variable was introduced for the first time by Tucholska [9]; she characterized, among

others, a group of PE teachers in comparison to the results of the cross-sectional study. A thorough research on the phenomenon of burnout in PE teachers has been carried out by Brudnik [10–13] and Pec [14, 15].

Irrespectively of the correlated studies which included in the model either factors leading to or protecting against burnout, some longitudinal research was conducted. Its objective was to detect existing regularities when the phenomenon was increasing [3, 16, 17]. Among Polish PE teachers, no longitudinal research has been conducted yet. However, an attempt to describe the syndrome progressing over time has been made by applying the four-phase typological model, worked out on the basis of the two theoretical concepts proposed by Maslach and Golembiewski [11].

Christine Maslach defines the syndrome of burnout as a tri-dimensional phenomenon progressing over time. This is the syndrome of physical and emotional exhaustion which leads to a negative self-evaluation and negative attitude towards work, as well as a lack of interest in problems of the people one is in contact with due to one's professional duties (e.g. patients, customers,

* Research project financed by the fund destined for scientific research in the years 2006–2009 – Nr 2P0 5D 099 30 (part of the research)

or others one is in charge of). Burned out persons are those who, during a measuring session (*Maslach Burn-out Inventory*), obtained above average results [18] in each of the three dimensions of the syndrome – emotional exhaustion (EE), a reduced or even negative sense of personal accomplishment (PA; reverse scale) and a tendency to depersonalise people around them (DP).

Looking for the possible applications in burnout prevention, Noworol and Marek [19] assumed that representatives of each professional group, due to the specific stress resulting from the character of workload and job environment, burn out individually. Based on Maslach's theoretical assumptions, Noworol proposed a general theoretical Phase Model, which through the introduction of time dimension allowed for the construction of four-dimensional space, "where the burnout process is a certain stochastic function characteristic of each person representing a given profession." [20, p. 30].

$$[1] \quad O_{nz} = F_z(EE, PA, DP, t, p),$$

where:

F_z – function describing the course of burnout process;

O_{nz} – person No. n representing a profession from group Z ;

EE, PA, DP – variables of burnout syndrome;

t – time;

p – probability (after: [20, p. 30]).

The stochastic function F_z is characteristic of a given group of professions Z . According to Noworol, by applying function F_z , it is possible to determine exactly the course of burnout in representatives of different professions.

Figure 1 shows graphically the ways of burning out in relation to a group of professions, where the curved lines indicate a stochastic process of burnout of a given person in a given profession (micro path). The curves which indicate the burnout process in qualified staff of different groups of professions (macro path) result from the bundle of micro paths of representatives of a given profession. It should be noted that the process does not develop in a linear way. The wavy graphs indicate the evolution of the syndrome as a resultant of external factors occurring on the career path and coping processes conditioned by the individual resources. In this approach, the burnout process is a consequence of professional stress.

The stochastic process expressed by the formula [1] has no major significance, either for the explanation of burnout or its prevention. In the attempt to construct a model which has a practical application both from

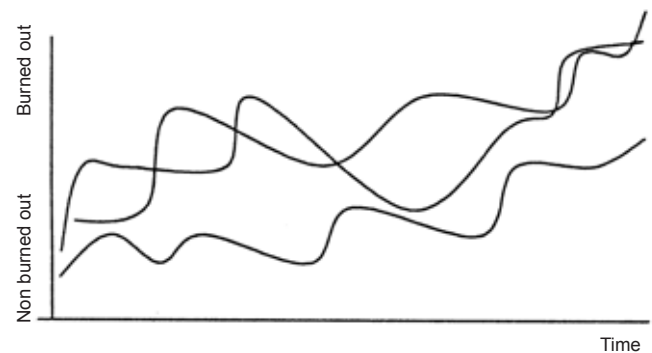


Figure 1. Graphic visualization of the general stochastic model of the professional burnout syndrome; horizontal axis – work time t , vertical axis – burnout level [20, p. 30]

cognitive and utilitarian points of view, the projection of a general model – in any point of time – was done onto the tri-dimensional space of Maslach's model $W = (EE, PA, DP)$ [20].

Maslach claims that the burnout process begins from increased emotional exhaustion, which is followed by reduced personal accomplishment. As a consequence of increased mental exhaustion and disillusionment with one's career, a progressive process of depersonalization begins, which means distancing oneself from the specific stress that is caused by another person and his/her problems and in this way leading to burnout [21].

Emotional exhaustion → *negative sense of personal accomplishment* → *depersonalization*

Robert Golembiewski, in making use of Maslach's theory suggests a reverse sequence of the appearance of symptoms, which means an opposite direction of the course of burnout paths. According to him, depersonalization, also perceived as an effect of stress causing the lowering of the sensitivity threshold and, in consequence, the occurrence of dissociating behaviours, is the factor which occurs first. As a result of people distancing themselves from someone, with whom they are in a professional relationship and who is suffering from burnout, the affected individual experiences a reduction in the self-esteem and self-evaluation of his professional accomplishments. As a result of the growing – through an increase in other symptoms – syndrome, the employee begins to react in the emotional sphere, thus burning out emotionally [22].

Depersonalization → *negative sense of personal accomplishment* → *emotional exhaustion*

The burnout process described by Maslach and Golembiewski can be represented as two paths with an

identical sequence of occurring symptoms, but with opposite vectors. Two different approaches to the syndrome evolving with time were called *facing theories* [23]. The concept of *facing theories* was applied to construct a general typological model of burnout in qualified staff.

The general typological model explaining the burnout syndrome was created on the basis of Golembiewski's eight-phase model [19]. A coherent interpretation of apparently contradictory *facing theories*, describing both the phenomenon of burnout in a different way and at the same time the application of the approach in practice, were possible thanks to Noworol's theoretical concept based on data clustering. The method allows for a presentation of the burnout process on a typological model, thus a statistical analysis of the results in each point of time of Noworol's model is based on data clustering [20]. The model can be used to plot a macro path of burnout typical of a given profession or an organization employing qualified staff.

Assumptions of the general typological model of burnout in the qualified staff's careers:

- Tri-dimensionality of the syndrome resulting from the definition adopted by Maslach;
- Continuity of the burnout process over time;
- Macro path of burnout specific for a given profession, which consists of individual paths (micro paths) of representatives of this professional group (Fig. 1);

- Possible influence of external factors which can modify the image of burnout (organizational behaviours, culture, management style, etc.) [20].

A particular case of a typological model is a four-phase model of burnout (Fig. 2). In this approach the burnout syndrome was presented as a process progressing over time and comprising four main stages. These are: phase T0 – non-burned out, the successive two complex phases T1 and T2 showing various stages, intermediate phases of the syndrome, and phase T3 – burned out.

The process of burning out can have different courses, which means that it is specific for a given person (micro path) or professional group (macro path) (Fig. 1). On the basis of the four-phase typological model, *facing theories* are explained through two separate paths characteristic of two families of professions. Maslach's path describes the burnout process in social professions, for example, a physician, nurse, or teacher, whereas Golembiewski's path explains an increase in the syndrome mainly in managerial professions [20, 23] (Fig. 2).

Based on the results of the research carried out among Polish physical education teachers, it has not been possible to plot, using the four-phase typological model, a complete macro path showing the burnout process in teachers of this subject. Phase T2 adopted after Noworol's model [11] requires further explanation.

The aim of the study is to plot a macro path of burnout in both female and male physical education teach-

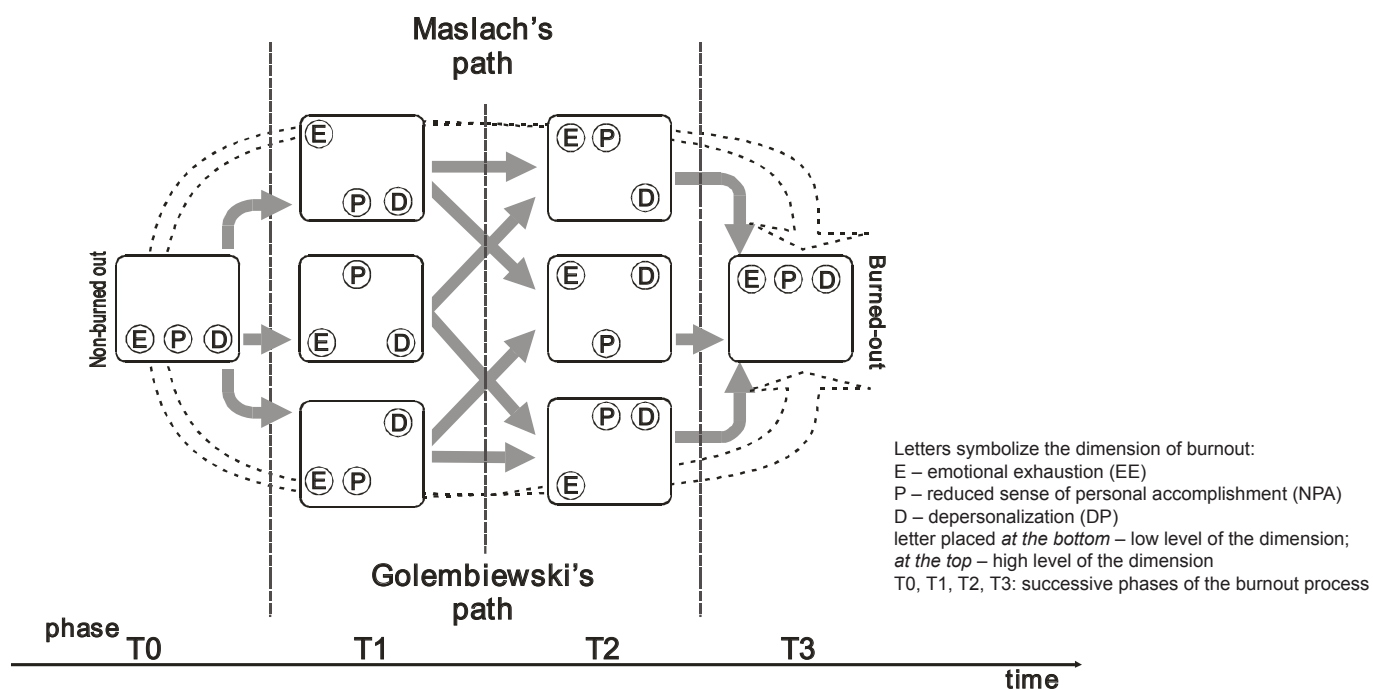


Figure 2. Structure of the four-phase typological model of professional burnout with the plotted Maslach's and Golembiewski's paths [23, p. 58]

ers. A hypothesis has been advanced that the course of the macro path of burnout in the subjects is in line with Maslach's emotional path which explains the burnout phenomenon in social professions.

Material and methods

A diagnostic survey among female and male PE teachers ($N = 1563$) employed in primary schools (grades IV–VI), lower, and upper secondary schools was carried out between May 2006 and June 2007 using a random sample selection. The geographical area covered by the research comprised three regions: Opole, Greater Poland, and the Subcarpathian region; i.e. their main cities, province towns and districts.

For the diagnosis of burnout, the *Maslach Burnout Inventory (MBI)* questionnaire adapted to Polish conditions was used (Noworol 1993, typescript). The MBI questionnaire was used to determine the burnout level as a consequence of chronic emotional stress at work. It consisted of 22 statements grouped into three subscales: emotional exhaustion EE – 9 items; sense of personal accomplishment PA (reverse scale NPA) – 8 items; depersonalisation DP – 5 items. Each subject rates the statements on a seven-point scale determining frequency of occurrence of a given state. The scale ranges from 0 – *never*, to the value 6 – *every day*; intermediate values of frequency are: *once/a few times a year, month, week*. The material was worked out with the use of data clustering (Mc Quin K-mean method) and U Mann Whitney test. Calculations were done by M. Rutkowski, GEM Kraków.

Results

The number of the physical education teachers involved in the survey was: $N = 1563$ including $N = 686$ women (43.9%), and $N = 877$ men (56.1%); respondents from the Opole region: $N = 584$ (37.3%), Greater Poland: $N = 448$ (28.7%) and the Subcarpathian region: $N = 531$ (34.0%). Teachers working in regional capitals, province towns and districts were respectively $N = 367$ – 23.5%; $N = 915$ – 58.5% and $N = 281$ – 14.0% of the sample. The mean age of the subjects was 38.1 years (women: 38.4 years; men: 37.9 years), mean work experience at school was 13.9 years (women: 14.5 years; men: 13.4 years) (Tab. 1, 2).

The variable of gender determines the structure of burnout in PE teachers. Men more often have a tendency to distance themselves and to treat pupils as objects (DP) (U Mann Whitney test: $Z = -4.910$; $p < 0.001$). In the case of the other two dimensions of the syndrome

(EE, NPA), no statistically significant differences were observed.

Before analysing the burnout process, six homogeneous clusters were differentiated in both female and male groups. Each cluster included subjects who had similar values of the three dimensions of the syndrome: emotional exhaustion (EE), a negative sense of personal accomplishment (NPA) and excessive tendency to depersonalisation (DP) (Tab. 1, 2).

- A. Non burned out PE teachers – low mean values of dimensions EE, NPA, DP:
 - women: cluster V ($N = 223$; 32.5%);
 - men: cluster VI ($N = 218$; 24.9%);
- B. PE teachers in intermediate phases of burnout (various patterns of burnout consistent with A and C):
 - women: cluster: I, II, IV ($N = 355$; 51.8%);
 - men: cluster: II, III, IV, V ($N = 560$; 63.8%);
- C. Burned out PE teachers – high mean values of dimensions EE, NPA, DP:
 - women: cluster: III, VI ($N = 108$; 15.7%);
 - men: cluster I ($N = 99$; 11.3%).

By means of the four-phase model of qualified staff's burnout (Fig. 2), macro paths showing the dynamics of the syndrome in female PE teachers were plotted (Fig. 3), whereas Figure 4 shows the phenomenon in male subjects. In both cases, based on the data obtained, two paths of burnout were drawn.

The starting point of the macro path in female PE teachers (phase T0) is cluster V ($N = 223$; 32.5%; $age_M = 38.3$) including respondents who are satisfied with their profession (low mean values of dimensions EE, NDP, DP). The first phase of the syndrome (T1) is represented by clusters IV and II that split in phase T1 of the macro path, which suggests a possibility of two patterns in the case of female burnout (Tab. 1, Fig. 3).

Cluster II, explaining phase T1 of the first macro path of female burnout, includes women ($N = 187$; 27.3%; $age_M = 39.2$) who, in accordance with Maslach's concept, in the face of professional stress react with mental tension leading to emotional exhaustion ($EE_M = 14.30$). These are female teachers who, regardless of the feeling of tension, have a good contact with their charges and

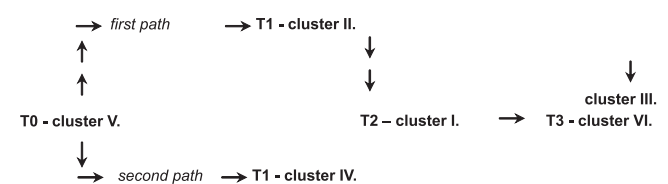


Figure 3. Macro paths of professional burnout in female PE teachers ($N = 686$) plotted on the four-phase typological model

Table 1. Professional burnout in female PE teachers (women $N = 686$); data clustering

Clusters	Professional burnout in female PE teachers $N = 686$						Age	Work experience
	dimensions	M	Me	SD	min	max	M	M
Cluster I $N = 53$ 7.7%	EE	28.06	26.00	5.976	21	45	41.7	18.6
	NPA	8.21	8.00	3.543	0	15		
	DP	5.30	5.00	3.630	0	14		
Cluster II $N = 187$ 27.3%	EE	14.30	14.00	3.282	8	21	39.2	15.2
	NPA	8.30	9.00	3.651	0	14		
	DP	2.84	2.00	3.026	0	18		
Cluster III $N = 75$ 10.9%	EE	18.79	19.00	3.168	13	25	36.2	12.4
	NPA	20.01	19.00	4.431	13	32		
	DP	5.00	4.00	4.255	0	17		
Cluster IV $N = 115$ 16.8%	EE	7.90	9.00	3.286	0	14	37.7	12.4
	NPA	19.51	19.00	4.847	13	35		
	DP	2.53	2.00	2.667	0	13		
Cluster V $N = 223$ 32.5%	EE	5.25	6.00	3.038	0	11	38.3	14.6
	NPA	5.61	6.00	3.622	0	13		
	DP	1.78	1.00	2.508	0	12		
Cluster VI $N = 33$ 4.8%	EE	32.94	32.00	4.657	26	43	39.5	15.3
	NPA	19.21	19.00	3.935	11	30		
	DP	6.12	4.00	5.165	0	18		
Total $N = 686$ 100%	EE	12.73	11.00	8.787	0	45	38.4	14.5
	NPA	11.10	10.00	7.206	0	35		
	DP	3.03	2.00	3.429	0	18		

Table 2. Professional burnout in male PE teachers (men $N = 877$); data clustering

Clusters	Professional burnout in male PE teachers, $N = 877$						Age	Work experience
	dimensions	M	Me	SD	min	max	M	M
Cluster I $N = 99$ 11.3%	EE	20.72	20.00	4.061	14	32	37.5	13.1
	NPA	19.34	19.00	4.457	12	36		
	DP	7.25	7.00	4.402	0	19		
Cluster II $N = 157$ 17.9%	EE	16.31	16.00	3.821	10	28	39.6	15.5
	NPA	6.08	6.00	3.456	0	13		
	DP	4.09	4.00	3.356	0	18		
Cluster III $N = 86$ 9.8%	EE	9.44	9.00	3.664	2	18	36.0	11.3
	NPA	25.21	24.50	4.999	19	40		
	DP	4.27	4.00	3.418	0	15		
Cluster IV $N = 238$ 27.1%	EE	8.83	9.00	3.745	0	17	36.6	11.9
	NPA	13.29	13.00	2.693	8	19		
	DE	3.15	2.50	2.864	0	14		
Cluster V $N = 79$ 9.0%	EE	31.73	31.00	5.257	23	47	40.9	17.0
	NPA	11.06	11.00	5.575	0	26		
	DP	8.35	7.00	5.916	0	26		
Cluster VI $N = 218$ 24.9%	EE	5.07	5.00	3.188	0	12	37.9	13.3
	NPA	3.75	4.00	2.799	0	10		
	DP	1.70	1.00	2.569	0	12		
Total $N = 877$ 100%	EE	12.70	11.00	8.739	0	47	37.9	13.4
	NPA	11.28	10.00	7.740	0	40		
	DP	4.00	3.00	4.087	0	26		

a sense of fulfilment at work. In phase T2, a macro path which originally followed Maslach's path is the first to change direction. The increasing emotional exhaustion ($EE_{M=28.06}$) releases, as a mechanism of defence, de-personalising behaviours ($DP_{M=5.39}$). Cluster I, representing phase T2 of the syndrome, includes mentally tired female teachers who more and more often underestimate their pupils' problems, although they are still professionally active and happy about their pedagogical accomplishments ($N = 53$; 7.7%; $age_M = 41.7$). The last link of the process – phase T3 – is cluster VI ($N = 33$; 4.8%; $age_M = 39.5$) which includes burned out women: Female teachers emotionally exhausted to a considerable extent ($EE_{M=32.94}$), discouraged and tired of work at school ($NPA_M = 19.21$), and perceiving their pupils, who they liked some time ago as a source of problems ($DP_{M=6.12}$) (Tab. 1, Fig. 3).

The other macro path of burnout in female PE teachers plotted on the four-phase typological model finishes in phase T1. Cluster IV ($N = 115$; 16.8%; $age_M = 37.7$) represents the process of increasing discontent in female subjects and gradual loss of job satisfaction ($NPA_M = 19.51$); the mean values of the other two dimensions of the syndrome (EE, DP) remain below the mean value (Tab. 1, Fig. 3).

While analysing burnout in female PE teachers, cluster III ($N = 75$; 10.9%; $age_M = 36.2$) draws particular attention as it – together with VI – explains the final stage, i.e. phase F3, plotted on the model of the macro path for female burnout. The cluster comprises entirely burned out female teachers (age categories: 23–29 years: 18.7%; 30–39 years: 48% of subjects), which suggests that these women – while burning out – took the shortest emotional direction as per Maslach's path. Female respondents deprived of defensive mechanisms, such as the ability to maintain distance from difficult pupils (or superiors), have to face school difficulties which in their opinion are impossible to overcome. These are persons who at the beginning of their career came across particular difficulties or took up the job not because they wanted to become teachers, but because there were no other possible professional career options (Tab. 1, Fig. 3) [24, p. 20].

Successively, two macro paths explaining burnout in male PE teachers were plotted on the four-phase typological model, which is shown in Figure 4. Phase T1, like in the case of women, is explained by two clusters.

The two paths which are sequences of four clusters terminate in cluster I ($N = 99$) which comprises burned out teachers (phase T3).

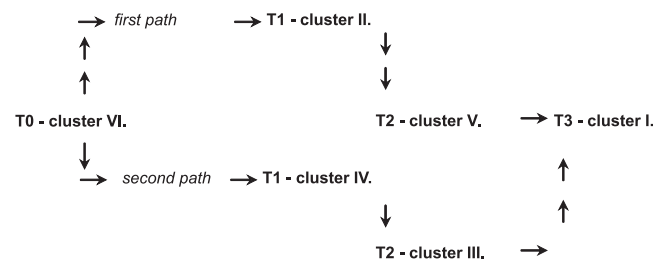


Figure 4. Macro paths of professional burnout in male PE teachers ($N = 877$) plotted on the four-phase typological model

(Fig. 3). Male teachers included in cluster II ($N = 157$; 17.9%; $age_M = 39.6$) while burning out – phase T1 – react to professional stress with emotional tension ($EE_{M=16.31}$) (Tab. 2, Fig. 4). Phase T2 is explained by cluster V ($N = 79$; 9.0%; $age_M = 40.9$) – a picture of increasing emotional exhaustion ($EE_{M=31.73}$) accompanied by a constant intermediate level of job satisfaction ($DP_{M=8.35}$). As a result of increasing disillusionment of working with youth, male teachers burn out – phase T3 (cluster I; $N = 99$; 11.3%; $age_M = 37.5$) (Tab. 2, Fig. 4).

The other macro path of burnout in male PE teachers consists of a sequence of clusters which shows the way followed by burned out teachers whose first reaction to occupational stress is disillusionment and a sense of dissatisfaction at work (phase T1).

The first signals of unfulfilled expectations of respondents disappointed with school reality ($NPA_M = 13.29$) occurred among teachers included in cluster IV ($N = 238$; 27.1%; $age_M = 36.6$). A successive phase of burnout T2 is illustrated by cluster III ($N = 86$; 9.8%; $age_M = 36.0$) – teachers have no signs of mental exhaustion, but their increasing discouragement towards pedagogical work is followed by cynicism and a considerable tendency to treat pupils as objects ($NPA_M = 25.21$; $DP_M = 4.27$) (Tab. 2, Fig. 4).

The macro path seems to be characteristic of young men, which is indicated by the mean age of male PE teachers burning out according to the following pattern: cluster IV, (T1) $age_M = 36.6$ (age category 23–29 years: 29.0%; 30–39 years: 38.7% of subjects); cluster III, (T2) $age_M = 36.0$ (age category 23–29 years: 33.7%; 30–39 years: 34.9%) (Fig. 3). The position of cluster III in phase T2 of Golembiewski's path indicates a considerable rate of increase in psychophysical exhaustion and, in consequence, an immediate occurrence of all the symptoms of the syndrome (cluster I; $N = 99$; 11.3%; $age_M = 37.5$) (Tab. 2, Fig. 4).

To sum up, the burnout process in male PE teachers can follow one of two courses, i.e. the above defined macro paths (patterns), thus cluster I ($N = 99$) includes

the burned out men who ended up there after having covered two different macro paths (Fig. 4).

Discussion

The burnout syndrome progresses with time, which is one of the assumptions of the four-phase typological model of burnout in qualified staff, however, it should be emphasized that this research is not a longitudinal study.

Due to the results obtained, it was possible to plot the independent macro paths of burnout in the professional group of physical education teachers, illustrating different courses of the process in female and male teachers. The different courses of macro paths for women ($N = 686$) and men ($N = 877$) were determined by a greater tendency of male PE teachers to treat pupils as objects ($p < 0.001$) and, as one can suppose, another way of coping with difficult situations occurring during school work.

The macro path of burnout typical of female PE teachers has the following course:

Non burned out teachers T0
 → emotionally exhausted T1
 → emotionally exhausted, and detached
 from professional problems T2
 → burned out teachers T3

whereas in the case of a vast number of young female PE teachers, the first reaction to the stress generated by school work is a loss of job satisfaction (Fig. 3). There is good reason to believe that young female PE teachers who are burning out faster, burn out following Maslach's emotional path.

In the case of male PE teachers, the burnout process can follow one of the two macro paths:

- macro path typical of male PE teachers:

Non burned out teachers T0
 → emotionally exhausted T1
 → emotionally exhausted, and detached
 from professional problems T2
 → burned out teachers T3

- macro path typical of young male PE teachers:

Non burned out teachers T0
 → disappointed with their job T1
 → disappointed and detached
 from professional problems T2
 → burned out teachers T3

Additionally, this study explains the incomplete macro path of burnout in female and male PE teachers plotted on the four-phase typological model ($N = 256$;

women: $N = 144$; men: $N = 112$) [11, p. 13, Fig. 7!]. The macro path indicates phases: T0-T1, signalling the beginning of the burnout process in teachers (phase T1), from a gradual loss of sense of competence and job satisfaction (NPA). Comparing the macro path plotted without taking into consideration the variable of gender ($N = 256$) with the patterns of burnout in women ($N = 686$) and men ($N = 877$) worked out on the basis of the research presented here, it was noted that both in the case of female and male PE teachers, the second macro path (women T0-T1; men T0-T3) representing the form of burnout in younger teachers (Fig. 2, 3) somehow becomes an inherent element of the macro path of PE teachers in view of the identical course of the paths in phase T1.

The results of the research carried out in 2003 revealed a slightly higher level of emotional exhaustion (EE) in women ($p < 0.05$) [11]. More detailed, successive studies showed that women and men react differently to difficult situations taking place while working at school. A female teacher's reaction to childrens' bad behaviour was the gradual loss of a sense of personal accomplishment (NPA); pupils' aggression increased emotional exhaustion (EE) in women. Men, in the face of lack of discipline, had a tendency to depersonalise their pupils (DP) [12]. Poor sports facilities explicitly generated burnout in women (EE, NPA, DP), whereas for male PE teachers the main problem was to work when there were two groups of pupils having lessons simultaneously in the gym (NPA, DP). For women it is important to work in a favourable emotional and social school atmosphere, which includes maintaining good relationships with pupils' parents (NPA) [12]. The presented results indicate that external factors, such as pupils' behaviour, school sports facilities, perceived importance of the subject, and emotional and social atmosphere at school can, in the case of PE teachers, modify the picture of burnout in women and men, determining in this way the course of macro paths of the syndrome.

Other studies dealing with the problems of burnout in the professional group of PE teachers, in spite of the ambiguity of their results, seem to confirm the importance of the variable of gender. Ogul and Tinazci [6], indicating slight differences in burnout in Cypriot female and male PE teachers, noted that women got emotionally exhausted more easily, whereas from the very beginning, men were more at risk from burnout syndrome ($p < 0.05$). The findings of research on stress and burnout in PE teachers carried out by Lee et al. [25] suggest conducting separate analysis for groups of women and men.

On the basis of the results obtained, it is difficult to arrange unequivocally the sequence of clusters in macro

paths representing burnout in Polish female and male teachers of physical education. In spite of that, in both cases typical courses of macro paths were traced; they follow Maslach's emotional path in the first phase of the progressive syndrome. Moreover, other variants of professional burnout were discovered, as well. Another especially interesting finding, apart from distinctive typical macro paths for women and men, is a course of macro paths typical of burnout in young women and young men.

Conclusions

On the basis of the results obtained, the following conclusions have been reached:

1. In the professional group of physical education teachers, the variable of gender differentiates the courses of macro paths of burnout.

2. Typical macro paths of professional burnout in female and male PE teachers follow Maslach's path only in the first phase of the process.

References

- Hodge G., Jupp J.J., Taylor A.J., Work stress, distress and burnout in music and mathematics teachers. *Br J Educ Psychol*, 1994, 64 (1), 65–76, doi: 10.1111/j.2044-8279.1994.tb01085.x.
- Allsup R.E., Stress and the music teacher: preventing burnout. *Teaching Music*, 2005, 5, 50–53.
- DePaep J., French R., Lavay B., Burnout symptoms experienced among special Physical Educators: A descriptive longitudinal study. *Adapt Phys Activ Q*, 1985, 3, 189–196.
- Brudnik M., Professional burnout of female and male Physical Education teachers: a four-phase typological model. In: Books of Abstracts, 13th Annual Congress of the ECSS, 9–12 July 2008, Estoril – Portugal. 2008, 622.
- Markelj N., The burnout syndrome in Slovenian PE teachers. In: Books of Abstracts, 13th Annual Congress of the ECSS, 9–12 July 2008, Estoril – Portugal. 2008, 135.
- Ogul A., Tinazci C., Burnout and job satisfaction levels of Physical Education teachers: a gender differences approach. In: Books of Abstracts, 13th Annual Congress of the ECSS, 9–12 July 2008, Estoril – Portugal. 2008, 136.
- Li Guo-Hong, Wang Li-Nan, Development of Job-Burnout Inventory for P.E. Teachers in Universities. *Journal of Beijing Sport University*, 2008, 2, 251–252, EBSCOhost, viewed 15 October 2009, doi: CNKI:SUN:BJTD.0.2008-02-035.
- Otero López J.M., Santiago M.J., Godás A., Castro C., Villardefrancos E., Ponte D., An Integrative Approach to Burnout in Secondary School Teachers: Examining the role of student Disruptive Behaviour and Disciplinary Issues. *Intern J Psychol Ther*, 2008, 8 (2), 259–270.
- Tucholska S., Burnout in teachers [in Polish]. KUL, Lublin 2003.
- Brudnik M., Burnout in physical education teachers. In: Muszkieta R. (ed.) *The Teacher and the Pupil, a Challenge to the Future* [in Polish]. WIGO, Poznań 2003, 29–40.
- Brudnik M., Burnout in Physical Training Teachers a macro-path of professional burnout. *Acta Univ Palacki Olomuc Gym*, 2004, 34, 7–17.
- Brudnik M., Pupils' behaviour during lessons vs. burnout in physical education teachers [in Polish]. *Kultura Fizyczna*, 2008, 7–8, 23–28.
- Brudnik M., Perception of self-efficacy and professional burnout in general education teachers. *Hum Mov*, 2009, 2, 170–175. doi:10.2478/v10038-009-0013-3.
- Pec K., From research on burnout in physical education teachers [in Polish]. *Wych Fiz Zdrow*, 2005, 6–7, 28–33.
- Pec K., From research on physical education teachers burnout. In: Books of Abstracts 12th Annual Congress of the ECSS, 11–14.VII. 2007, Jyväskylä – Finland, 2007 (abstract; electronic version).
- Mays Woods A., Lynn S.K., Through the years: a longitudinal study of physical education teachers from a research-based preparation program. *Res Q Exerc Sport*, 2001, 72, 219–231.
- Miethling W.D., Biographical developments of Physical Education Teachers – focussing on stress situations. *Int J Phys Educ, A Review Publication*, 2007, 44, 12–23.
- Maslach C., Jackson S.E., *The Maslach Burnout Inventory*. 2nd ed. Consulting Psychologists Press, Palo Alto 1986.
- Noworol C., Marek T., Typology of burnout: Methodology modelling of the syndrome. *Pol Psychol Bull*, 1994, 24, 319–326.
- Noworol C., Emotional burnout in top staff in organizations [in Polish]. *Prometeusz. Kwartalnik Naukowy Wyższej Szkoły Społeczno-Ekonomicznej w Warszawie*, 2004, 3, 27–34.
- Maslach C., Jackson S.E., Burnout in organizational settings. *Appl Soc Psychol Ann*, 1984, 5, 133–154.
- Golembiewski R.T., Mauzenrider R.F., *Phases of Burnout: Developments in Concepts and Applications*. Praeger Publishers, New York 1988.
- Noworol C., Managing a burnout or burning out management [in Polish]. In: Borkowski T., Marcinkowski A., Oherow-Urbaniac A. (eds.) *On Management, a Multidisciplinary Approach*. Księgarnia Akademicka, Kraków 2000, 47–62.
- Kosiba G., Job satisfaction of physical education teachers vs. teachers of other subject [in Polish]. *Wych Fiz Zdrow*, 2009, 10, 19–28.
- Lee A., Kang H., Kim S., Occupational Stress and Burnout Among Korean Secondary Physical Education Teachers: Causes and Consequences. *Res Q Exerc Sport*, 2006, Suppl., 62.

Paper received by the Editors: February 28, 2010.

Paper accepted for publication: January 21, 2011.

Correspondence address

Maria Brudnik
Katedra Teorii i Metodyki Wychowania Fizycznego
Akademia Wychowania Fizycznego
al. Jana Pawła II 78
31-571 Kraków, Poland
e-mail: majabru@interia.pl