

Maria Brudnik-Dąbrowska
Czesław Noworol*

Coping with Stress and Burnout in the Physical Education Teaching Profession

ABSTRACT

The article describes a study of coping strategies of Physical Education (PE) teachers and their role in the process of burning out. It highlights the role of gender differences in coping strategies.

Female PE teachers apply mostly coping strategies like *Fighting*, *Social support*, *wishful thinking*, *alleviation of outcomes*, and *Assuming responsibility*, actions following the plan. They use the least likely *Distancing*.

Male PE teachers frequently use the strategies *Concentration on the task*, actions following the plan, and *Fighting*. Successively, they use *Accepting responsibility*, and the least likely *Reduction of tension*.

Some strategies derived in the research effectively cope with burnout in the PE teaching occupation and others are ineffective and may even lead to a depersonalized treatment of students.

KEYWORDS: *burnout; coping strategies; PE teachers; gender.*

* Correspondence regarding the paper should be sent to: Maria Brudnik-Dąbrowska (ORCID: 0000-0003-2746-5636), Department of Humanities, Faculty of Physical Education & Sport, University of Physical Education in Kraków; e-mail: brudnik.dabrowska@gmail.com; or Czesław Noworol (ORCID: 0000-0003-4957-3865), Faculty of Management and Social Communication, Institute of Economy, Finances and Management (Chair of Strategic Management), Jagiellonian University; e-mail: czeslaw.noworol@uj.edu.pl.

INTRODUCTION

The teaching profession is regarded stressful with various occupational stress factors occurring in school environment (Boyle et al., 1995; Kyriacou, 1998). The key factors are related to the teacher's perception that they could not cope with demands placed on them in the teaching setting (Chang, 2009; Collie et al., 2012). Many authors focus on working with the ever more requiring individual approach youngsters, facing a negative atmosphere among fellow teachers, collaborating with parents who have high social expectations, which causes a considerable strain, like distress, frustration, fear, anger, annoyance or apathy (Skaalvik, 2007, 2009). Travers and Cooper (1993) found that lack of social recognition, isolation, fear of violence, lack of classroom control and role ambiguity result also in stress of teachers. Thus, the teachers' work requires special, mainly interpersonal predispositions, which should present attitudes compatible with professional ethics; teachers should be ready to tirelessly and not irritably support and motivate their students, upgrade their knowledge and develop professional competences (Kyriacou, 1998, 2001).

Too many students in classes, the necessity to do lots of paperwork, additional duties, the requirement of continuous vocational development, never-ending teaching syllabuses, legal regulations and fast social changes – all lead to increasing stress. Low salaries make men teachers seek extra jobs, while women teachers are burdened with household duties in parallel with their work at school. Additional stressful factors are: high workload and time pressure, educational reforms, external evaluations of schools, pursuing further education, and managing students' behavior and tutoring (Chan, et al. 2010).

Horenstein (2006) highlights the professional stressors depending on the education specificity and classifies them into

three categories: external, internal and task-related ones. External stressors appear when there is a discrepancy between the supplied effort and the gained compensations (esteem, respect, salary, perspectives to be promoted, job stability). Internal stressors are represented by the following: schedule, work environment, professional travels, insufficiency of the human and material resources, evaluation of the professional efficiency, relationships with colleagues. Task-related stressors refer to: psychological exigencies (pupils with a precarious situation, maltreated pupils, diseases, and delinquency), adaptation to pupils' level, indiscipline during the classes, pupils' unsatisfied needs, inclusive education. (Stănescua et al., 2012, p. 219)

As regards the principal goal of physical education, teachers are expected to support the physical development of children, instill in them love for physical activity, prepare them for physical recreation and healthy lifestyles. In parallel with burdens caused by mental stress, PE teachers are exposed to physical stress (noise, dust) and necessity to adopt to seasonal weather changes during outdoor classes. The character and location of lessons, demonstrating movements and using voice in sport facilities, organizing recreational events in schools, coaching teams representing the school in competitions, make the PE teacher's work exhausting and an overwhelming effort.

Specific stress, inherent in the teaching profession, combined with a deficit of resources, i.e., ability to cope with it, result in growth of professional burnout syndrome (Maslach & Jackson, 1981; Maslach, 1993, 2006; Noworol et al., 1993; Schaufeli & Enzmann, 1998). Burnt-out teachers lose their professional, mainly social, competences that determine possible adequate reactions to a given social situation, including the ability to control and influence pupils. In case of ineffective coping, teachers disillusioned with the school reality, often leave the profession or distance them-

selves from their duties (Friedman, 2000; Schwarzer et al., 2000; Hughes, 2001; Hakanen et al., 2006). The other studies indicate the insufficient academic formation to cope against the shock of the school reality as the main cause of leaving the profession by burnt-out PE teachers (Santini & Molina Neto, 2005; Both & do Nascimento, 2009).

The basis of physical education is body movement, which requires different methods of work adjusted to a specific character of PE teacher and their students. Lessons are given in sports facilities, in open areas, often outside the school. Small schools employ a single PE teacher, which in the case of having to cope with subject-related difficulties may evoke a feeling of loneliness and lack of understanding, threatening with burnout (Abel & Sevell, 1999). A negative consequence of civilizational changes is a decreased interest of students in physical activities and decreasing level of physical fitness combined with a tendency towards overweight, which makes PE classes harder to organize. Especially adolescent girls try to avoid physical effort. Low culture of some students together with a failing discipline at school and insufficient reaction of their caregivers lead to behaviour problems. Disobedience, cheekiness, inadequate physical condition of students are risk factors. There are also problems with effective motivation for class work, and the low status of a particular school makes it difficult to enforce educational requirements.

Females experience stress somewhat more strongly, which was suggested by the majority of research (Matud, 2004). However, gender does not differentiate the stress level of PE teachers in each and every case, and a different structure or different dynamics of stressors decisive in strain on PE teachers was also observed (Al-Mohannadi & Capel, 2007; Stănescua et al., 2012; Chaplain, 2008). The principal source of stress of PE teachers in Qatar (Al-Mohannadi & Capel, 2007) and Great Britain (Chaplain, 2008) was students' behavior. The main stressor in males was the low status of their subject while females were more stressed out by

a high workload and highly responsible work (Al-Mohannadi & Capel, 2007). The gender variable differentiated also stressors in Romanian PE teachers, except for salary and social recognition (Stănescu et al., 2012). Lithuanian female teachers felt tension at work because of other teachers, the negative attitude towards PE, and, in contrast, low salaries caused more stress to male than female teachers (Stočkus & Adaškevičienė, 2013). Polish female PE teachers experienced higher average level of work stress than males and more strain in high workload periods (Brudnik, 2005; Kuśnierz, 2010).

Teacher reactions against stress generated by improper behavior of students during PE lessons and difficult work conditions were also differentiated by gender. Facing disrespect, females lose the sense of work and self-worth. Student aggression and disobedience increased emotional exhaustion of females, while males distanced themselves from disobedient students (Brudnik, 2008). Moreover, poor facilities (lack of equipment) accelerated the burnout of female PE teachers (Brudnik & Rutkowski, 2010).

COGNITIVE-TRANSACTIONAL CONCEPT OF STRESS AND COPING IN RELATION TO BURNOUT OF PE TEACHERS

The present study is based on the Lazarus and Folkman's (1984) transactional model of stress and coping (Goh et al., 2010). The key premise of the model is that primary appraisal, secondary appraisal and coping strategies mediate the relationship between stressors and the outcomes, which is individual stress. The stress outcomes will then respond to the cognitive appraisal phases for possible further actions (Cooper et al., 2001; Folkman & Lazarus, 1985; Folkman et al., 1986). The relationship is dynamic and more multifaceted (Folkman, 2008; Smith & Kirby, 2001) than primary conceptualized by Lazarus and Folkman (1984), who focused a linear sequence flowing from primary to secondary appraisals

to coping, and potentially to stress outcomes. Cognitive appraisals can influence both stress outcomes which can occur at various phases in the model and coping options.

The concept of mental stress and stress theory have undergone several essential revisions (Lazarus, 1991). "Psychological stress refers to a relationship with the environment that the person appraises as significant for his or her well-being and in which the demands tax or exceed available coping resources (Lazarus & Folkman, 1986, p. 63). This definition focuses on two essential processes, cognitive appraisal and coping, raising the person-environment transaction. An absence or perspective of imbalance between demands and possibilities of their meeting evokes stress, an emotion with predominantly negative connotations. In this understanding, stress is a derivative of a perceived relationship between a person and existing situation.

A stressful transaction, that is, an interaction with the environment involves an emotional process of cognitive evaluation, and coping. If the transaction is appraised as exceeding the coping resources, a stress experience appears. The process of evaluating the situation involves the elements of relationships with the environment that are important for the person's well-being.

The process of coping involves three types of cognitive evaluation: primary, secondary, and repeated appraisal. The primary appraisal is a general form of assessing the event in view of values and aims of actions that discloses three components, goal relevance, goal congruence, and type of ego-involvement. Primary appraisal concerns whether a relation is recognized as stressful in relevance to the individual's well-being.

Following it, the secondary appraisal refers to origins of stress and resources of the individual, starting options for an activity termed coping, directed at changing a stressful situation. The secondary appraisal comprises also three components: blame or credit (who is responsible for a certain event?), coping potential, and future expectations (Lazarus, 1993). Coping is a response to

a given situation, an activity that aims at changing a stress-causing situation and improving a negative emotional state with its properties specific for a stressful situation (Lazarus & Folkman, 1984). Lazarus (1993, p. 237) defines coping as “ongoing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”.

A relatively stable (specific for a given person) tendency determining the course of coping is defined as a coping style. It is determined by the sequence of strategies undertaken in the face of stress, i.e., various behavior forms employed to change a situation or alleviate its effects. Lazarus and Folkman (1984) provided four strategies of coping with stress. These are: searching for information to undertake appropriate actions, performing direct actions to change the situation, avoiding any actions, and intrapsychic processes enabling alleviation of emotions to calm down. Forms of strategies used in stress situations may span a spectrum from actions regarded as adaptive to profoundly pathological including also those, which are difficult to be qualified unambiguously (Łosiak, 2008). In stressful situations, actions are also undertaken with functions showing multidirectional interactions in the coping process, e.g., one strategy can simultaneously exercise both functions instrumental and emotional (self-regulatory).

PROFESSIONAL BURNOUT AS A CONSEQUENCE OF OCCUPATIONAL STRESS

Chronic, specific work-related stress, which cannot be effectively prevented, is regarded as the principal cause of professional burnout (Maslach, 1993). Burnout accompanied by specific changes in a professional’s behavior is defined as “the psychological syndrome of emotional exhaustion, depersonalization and negative sense of self-accomplishment, which may occur in individuals

working with others in a given, defined manner (Maslach, 2006, p. 15). Particular risks are ascribed to professions associated with a high degree of responsibility, requiring numerous contacts with other people and emotional work, including teaching.

The phenomenon of burning out in a profession is characterized by a specific multidimensional structure with many syndromes occurring in various configurations, but the phenomenon is sequential (Noworol & Marek, 1994; Noworol, 2004). The process starts with symptoms characteristic of one syndrome dimension, e.g., emotional exhaustion or negative sense of professional accomplishment or a tendency for depersonalization. The initiated process progresses, as evident from the two remaining dimensions of the syndrome.

Emotional exhaustion (EE) manifests itself as chronic fatigue, lack of mental and physical energy, and awareness of the loss of resources necessary to fulfill one's job role and adapt to the demands of the work environment. An emotionally exhausted individual is unable to continue fulfilling their role, also in private life. Negative professional self-accomplishment (NPA) is associated with a tendency towards negative assessment of one's work, abilities and professional successes. Combined with a sense of failure and insufficient effectiveness, it is a derivative of a loss of sense of tasks being accomplished. Depersonalization (DP) manifests itself through specific behaviors in interpersonal relationships, such as a tendency to limit contact and to treat one's clients in an indifferent, impersonal, instrumental, or cynical manner (Maslach et al., 2001).

COPING WITH STRESS BY TEACHERS

The way how to cope with the psychological stress affects the effects of coping and its consequences, which is not without significance in the case of burning out in the profession (Mearns &

Cain, 2003). The problem of strategy and style of coping with stress in relation to the burnout phenomenon in the teacher's profession have been studied, among others by Antoniou et. al. (2013), Kennedy (2013), Siudem (2011), Gonzáles-Morales et al. (2010), Bağçeci and Hamamci (2012).

Teachers surveyed by Bağçeci and Hamamci (2012) use in the coping process such strategies as self-confident, seeking social support, and optimistic coping strategies in stressful situations. Austin et al. (2005) found that the most common coping strategy in surveyed teachers was planned problem solving, and least frequently, escape avoidance. Teachers who reveal low level of stress used more active coping strategies, e.g. taking physical activity, while those showing high levels of stress often benefitted from passive strategies, e.g. escape, avoidance. According to Chan et al. (2010) teachers from Taiwan use coping strategies such as dream, conversation, self-relaxing, watching television while the least frequently reported activity was doing more exercise or sport.

Working with young people in various ages need to solve specific problems, which seems to influence a range of coping strategies. The results of Heger's research (2012) suggest that primary school teachers often use strategies such as seeking social support and strategies aimed at self-control, while teachers from high schools prefer policies aimed at problem solving and acceptance of responsibility.

The use of active coping strategies lower the level of Greek teachers' burnout while rational coping strategies are resources that help teachers overcome work-related stressors and burnout. However, avoidance coping predicted high level of stress and burnout (Antoniou et al., 2013).

Siudem (2011) studied the relationship between the style of coping with stress concentrated on emotions in Polish teachers, like loss of subjective involvement, reduced emotional control and professional burnout. Kennedy (2013) analyzed the relationship between individual characteristics of coping and aspects of the

teachers work, found that the emotional coping strategy associated with the personality dimension of extroversion–introversion and work overload contribute also to the burnout syndrome.

The gender's variable plays an ambiguous role in the process of coping. Matud (2004) stated that women suffer more stress than men and their coping style is more emotion-focused than that of men. Gonzáles-Morales et al. (2010) investigate the role of coping (direct action and social support seeking) and its impact on the core dimensions of burnout. They found shared effects of gender in relationship among coping strategies and cynicism as well as exhaustion. Direct action coping was beneficial only to men while social support seeking was detrimental to men and also not beneficial to women.

PURPOSE OF THE PRESENTED STUDY

A long-term response to chronic stressors specific to social service professions is the emergence of burnout syndrome. The basis for its development is a generalized experience of failure in fighting stress. Stress and coping are treated as coexisting phenomena. Presently, researchers pay less attention to stress factors and are more interested in activities undertaken when individuals face a difficult situation. The effects of a stress confrontation are believed to be influenced by human behavior rather than by objective stressor activity (Lazarus & Folkman, 1984). In a stress situation, a man tries to cope with mental strain, employing his unique coping strategies determined by his prior assessment of the stress-generating situation. Cherniss (1981) stated that employees who use ineffective strategies burn out, since they cannot cope with or avoid stress. Chronic stress leads to the appearance and intensification of burnout symptoms.

The majority of PE teachers experience low to moderate stress, as evidenced by studies carried out in this group (Al-Mohannadi

& Capel, 2007; Brudnik, 2005; Fejgin et al., 2005). A moderate level of the burnout syndrome among PE teachers was diagnosed by Kosa (1990) and Fejgin et al. (1995), while a low level was reported by Koustelios and Tsigilis (2005). For example, Spanish teachers studied by Vilorio, Paredes and Paredes (2003) presented 49% of moderate and 10% of high burnout levels. In Singapore, only 3% of subjects showed a high burnout level and the remaining ones demonstrated low and moderate levels, with the same percentages (Smith & Leng, 2003). A moderate burnout level characterized the vast majority (91%) of Turkish PE and sports teachers studied by Özaşker (2012).

The analysis of burnout among PE teachers using structural models (Brouwers, Tomic, & Boluijt, 2011; Carraro, 2008) makes it possible to diagnose interrelationships between the syndrome dimensions. Not always are the three burnout dimensions within the moderate range, as in the group of teacher-coaches from Oregon secondary schools (Kosa, 1990). Dutch teachers are characterized by a moderate EE level, a low DP level, and a high level of personal accomplishment (Brouwers et al., 2011). Over a half of surveyed Australian PE teachers reported moderate to high EE levels and low level of personal accomplishment. The most teachers reported a low DP level. Almost a half of Italian teachers investigated by Carraro (2008) showed moderate and high levels of the three syndrome dimensions.

PE teachers do not experience negative results of specific stress in the same degree as teachers of other subjects do (Brudnik, 2004, 2009; Markelji, 2008). Slovenian PE teachers investigated by Markelji (2008) were less burnt out than general teachers. The differences between them were related to different personal traits and different strategies for coping with stress.

The way of coping with occupational stress determines the consequences of stress for teachers, including the risk of professional burnout. The examination of coping strategies used by Polish PE teachers seems interesting and constitutes the aim of the presented

study. It is an attempt to describe and evaluate the effectiveness of coping methods used by female and male teachers in stressful situations, taking into account the phenomenon of occupational burnout in the profession of physical education teacher, as well as to determine adaptive and non-adaptive strategies in specific coping methods.

SAMPLE AND METHOD

The study was carried out among PE teachers ($N=102$; males, $N=52$; females $N=50$) employed in schools of a province capital city (25.5%), county towns (62.7%), and local communes (11.8%). The participation was voluntary and anonymous.

The examinees were teachers of primary (32.4%), junior high (28.4%), upper secondary schools (28.4%), and general education school complexes (10.8%). All of them had university education and full-time jobs. Three respondents additionally taught some other subjects.

The mean age and job experience were respectively, in women: $M=40.2$ years (25–55 years, $SD=7.23$); job experience, $M=16.8$ years (2–33 years, $SD=8.3$); and in men: $M=39.8$ years (22–60 years, $SD=10.54$); job experience, $M=16.4$ years (1–40 years, $SD=10.85$). The group of teachers with a job experience of 10 to 20 years was dominated by women (42.3%), and males accounted for 32.0%.

Burnout was measured by the Polish adaptation of the *Maslach Burnout Inventory*, MBI (Maslach & Jackson, 1981; Noworol, 1994). It is a self-description questionnaire, composed of 22 test items grouped into subscales that diagnose three syndrome dimensions: emotional exhaustion (EE, 9 items), negative sense of professional accomplishment (NPA, reversed scale of professional accomplishment, 8 items) and depersonalization (DP, 5 items).

To determine the coping strategy of the examined PE teachers, the Polish version of the WCQ (Folkman & Lazarus), developed by Łosiak (1994) was used. The tool is composed of two parts. In part 1, respondents describe initially a stress situation they faced recently. Part 2 includes 66 test items describing cognitive and behavioral actions they use in stress situations. Those are activities concentrating on the problem (mastering the source of stress) and on emotions (regulating negative emotions). To determine the WCQ structure, raw data were subjected to the factor analysis (Varimax rotation with Kaiser normalization), controlling the gender variable. While constructing the scales, the main criterion was the value of factor loadings of the test items (increasing to 0.35, $p < 0.05$). The logical analysis was employed as a supplementary method as it was necessary to transfer a few items to another scales. In consequence, seven WCQ scales for females were delivered along with seven separate scales for males. Thus developed tool enables calculating the factors of seven coping strategies in the respondents.

The material was processed using the Statistica software. The descriptive analysis, ANOVA, MANOVA, Scheffe's post hoc test, multiple regression analysis, and factor analysis to determine the strategies of coping with stress employed by PE teachers, were applied.

RESULTS

Burnout syndrome in the profession of PE teachers

Descriptive analyses of the three burnout syndrome dimensions in the investigated PE teachers are listed in Table 1. At the syndrome structural level, burnout is differentiated by the gender variable. Males show a significantly higher tendency to DP ($F=9.252$, $p=0.003$), which was also obtained in earlier results (Wontorczyk & Brudnik, 2013; Fejgin et al., 2005). Referring the results

to provisional norms for the professional group of Polish PE teachers (females: EE = 12.7, NPA = 11.1, DP = 3.0; males: EE = 12.7, NPA = 11.3, DP = 4.00) one can say that women present a slightly lower level emotional exhaustion (EE = 12.1). Men are slightly more satisfied with their accomplishments in school work and at the same time less emotionally exhausted, but characterized by clearly increased depersonalization (EE = 11.42, NPA = 10.8, DP = 5.42; see Table 1).

Table 1. Statistical description of burnout dimensions in PE teachers by gender.

Burnout dimensions	Gender	<i>N</i>	<i>M</i>	<i>SD</i>	min	max	<i>F</i>	<i>p</i>
EE	F	52	12.11	0.88	1	41	0.146	ns
	M	50	11.42	1.14	0	46		
NPA	F	52	11.31	0.80	0	26	0.130	ns
	M	50	10.80	0.97	0	29		
DP	F	52	2.98	0.56	0	11	9.252	0.003
	M	50	5.42	1.01	0	19		

Note. *N* = 102, EE = emotional exhaustion, NPA = negative sense of professional accomplishment, DP = depersonalization, ns = nonsignificant.

Coping with stress in PE teachers

According to Lazarus (1993), facing life stress in a given type of a stressful situation, men and women demonstrate a similar coping pattern. However, the scales and coping strategies of the investigated females and males differ in their contents. Among test items fulfilling the buffer role, only four items are common.

Seven WCQ adapted scales including 57 items with the 9 items fulfilling the buffer role possess the satisfactory internal consistency in females; Cronbach's α (Table 2) is from 0.83 (I.F) to 0.54 (VI.F).

Table 2. Statistical description of WCQ adapted scale.

Scale no.	Mean		SD		Cronbach's alpha		% of variance explained	
	F	M	F	M	F	M	F	M
I.	1.84	1.39	0.53	0.64	0.83	0.77	68.7	60.2
II.	1.70	2.37	0.48	0.58	0.60	0.71	34.2	51.5
III.	1.11	0.98	0.58	0.58	0.73	0.76	54.5	58.7
IV.	1.36	1.31	0.72	0.54	0.75	0.82	55.1	67.6
V.	1.30	1.23	0.57	0.56	0.79	0.81	62.6	67.1
VI.	1.35	1.98	0.50	0.61	0.54	0.76	29.0	52.2
VII.	1.88	1.72	0.63	0.53	0.79	0.60	55.5	37.2

Note. Coping strategies of female ($N=52$) and male PE teachers ($N=50$).

Seven WCQ adapted scales including 55 items with the 11 items fulfilling the buffer role, possess the satisfactory internal consistency in males; Cronbach's α (Table 2) is within the range of 0.82 (IV.M) to 0.60 (VII.M). The complex structure of the scales suggests coexistence of coping strategies in the respondents.

Coping strategies among female PE teachers

The sample test items and factor loadings are as follows.

- I.F: *Social support, wishful thinking, alleviation of outcomes*
Item 31: "I tried to talk to someone who could do something [...] in this matter" (0.558)
Item 57: "I dreamed, imagined myself being in a better situation" (0.555)
Item 25: "I did something to defuse the problem" (0.396)
- II.F: *Assuming responsibility, actions following the plan*
Item 12: "I became resigned to my fate, sometimes I am simply out of luck" (0.745)
Item 26: "I acted following the prepared plan" (0.597)
- III.F: *Distancing*

Item 4: "I felt everything was going to change, the only thing left to do was [...] waiting" (0.684)

- IV.F: *Reduction of tension*

Item 17: "I showed my anger to the person that caused the problem" (0.792)

- V.F: *Personal development, change, spiritual strengthening*

Item 23: "I changed for the better as a human being" (0.590)

Item 60: "I prayed" (0.574)

- VI.F: *Rationalization*

Item 35: "I acted in such a way that others could not know how badly things were developing" (0.584)

- VII.F: *Fighting*

Item 5: "Through various efforts and compromises, I tried to gain some advantage from the situation" (0.584)

Coping strategies among male PE teachers

Sample test items and factor loadings are as follows.

- I.M: *Change, personal development*

Item 38: "I discovered a new what is important in life" (0.699)

- II.M: *Concentration on the task, actions following the plan*

Item 2: "I tried to analyze the problem in very many ways" (0.698)

- III.M: *Reduction of tension*

Item 17: "I showed my anger to the person that caused the problem" (0.749)

- IV.M: *Fantasizing, alleviation of outcomes, resignation*

Item 59: "I fantasized or dreamed about how it all could change" (0.805)

Item 15: "I tried to focus attention on the positive aspect of the situation" (0.522)

Item 61: "I was prepared for the worst" (0.401)

- V.M: *Change of perspective, self-comforting, social support*

Item 64: "I tried to look at the problem from the viewpoint of someone else" (0.807)

Item 19: "I kept repeating to myself something that helped to improve my frame of mind" (0.575)

Item 47: "I involved others in my problem" (0.396)

- VI.M: *Fighting*

Item 46: "I stubbornly continued my actions and fought for what I wanted" (0.769)

- VII.M: *Assuming responsibility*

Item 29: "I realized I got into the troubles all by myself" (0.604)

When facing stress, female PE teachers most commonly employ the following strategies: *Fighting* (VII.F, $M=1.88$), *Social support*, *wishful thinking*, *alleviation of efforts* (I.F, $M=1.84$) and *Assuming responsibility, actions following the plan* (II.F, $M=1.70$). It seems that women are engaged in work rather emotionally, which shows the least frequently employed coping strategy *Distancing* (III.F, $M=1.11$). It is interesting that men do not exert this coping strategies except fighting (Table 2).

Of the seven defined strategies of coping, male PE teachers the most frequently employ three strategies targeting problem management. These are *Concentration on the task, actions following the plan* (II.M, $M=2.37$), *Fighting* (VI.M, $M=1.98$) and *Assuming responsibility* (VII.M, $M=1.72$). The essence of the above strategies is rational, planned acting in a difficult situation (II.M) and consistent attempts at reaching the goal and receive benefits achievable in a given situation (VI.M), and accepting work duties (VII.M).

The two strategies that are the least frequently employed by male responders are *Change of perspective, self-comforting, social support* (V.M, $M=1.23$) and *Reduction of tension* (III.M, $M=0.98$). Change of perspective is a strategy allowing a given situation to be viewed from a distance, from the position of another person, and performance of re-evaluations of the goals. Such activities as self-comforting along with an attempt at improving one's frame of mind and seeking social support as complement of this method of coping (V.M). Male PE teachers reduce tension (III.M) by various

means, showing their anger, undertaking replacement actions, and also accepting the situation (Table 2).

Effectiveness of coping strategies employed by PE teachers against burnout

Chronic work stress that is unmodified by preventive actions is counted among major causes of professional burnout (Maslach, 1993). The response to prolonged imbalance between work demands and one's abilities of coping them consists in increasing emotional exhaustion, believed to be the axial dimension of the syndrome. The remaining dimensions of the progressive phenomenon, i.e., decreased professional accomplishment and a tendency for depersonalization are consecutive, coexisting signs of a fully symptomatic burnout syndrome.

The analysis of the effectiveness of coping strategies employed by PE teachers in the context of burnout was performed at the structural level of the syndrome, taking into account the gender variable. The results are presented in Tables 3 and 4.

Table 3. Relationships between coping strategies and burnout dimensions by multiple regression in female PE teachers.

Burnout dimensions	Coping strategies of female PE teachers	Regression coefficients		Sig-nificance level p
		b	β	
EE $R^2=0.364$ $F=4.291$ $p=0.002$	IV.F Reduction of tension	0.703	0.576	0.001
	II.F Assuming responsibility, actions following the plan	-0.443	-0.313	0.030
	I.F Social support, wishful thinking, alleviation of outcomes	-0.388	-0.258	0.061
	VII.F Fighting	0.351	0.251	0.085
	V.F Personal development, change, spiritual strengthening	-0.284	-0.183	0.169
	III.F Distancing	-0.201	-0.133	0.286

NPA $R^2=0.234$ $F=3.589$ $p=0.012$	IV.F Reduction of tension	0.314	0.283	0.041
	II.F Assuming responsibility, actions following the plan	-0.231	-0.296	0.133
	VII.F Fighting	-0.206	-0.162	0.289
	V.F Personal development, change, spiritual strengthening	-0.138	-0.194	0,309
DP $R^2=0.135$ $F=2.505$ $p=0.064$	IV.F Reduction of tension	0.184	0.240	0.110
	I.F Social support, wishful thinking, alleviation of outcomes	-0.209	-0.221	0.135
	VII.F Fighting	-0.167	-0.190	0.181

Note. Burnout in female physical education teachers ($N=52$); magnitude of the explained variances by employed the coping strategies as referred to syndrome dimensions (ascending regression analysis). EE = emotional exhaustion, NPA = negative sense of professional achievements, DP = depersonalization.

Six of seven defined coping strategies employed by female PE teachers play a role in EE dimension of women's burnout (Table 3). Two of them, *Reduction of tension* (IV.F), *Assuming responsibility, actions following the plan* (II.F), feature in the model significantly ($p < 0.05$), while four other insignificantly: *Social support, wishful thinking, alleviation of efforts* (I.F), *Fighting* (VII.F), *Personal development, change, spiritual strengthening* (V.F), and *Distancing* (III.F). They reveal, however, their role together with the other variables. The total magnitude of the explained variance is 36.4% ($R^2=0.364$, $F=4.291$, $p=0.002$; see Table 3).

In the regression model, the syndrome dimension of NPA in female PE teachers is explained by four coping strategies. Only one strategy, *Reduction of tension* (IV.F), influences the NPA statistically significantly ($p < 0.05$). The other three, *Assuming responsibility, actions following the plan* (II.F), *Fighting* (VII.F), and *Personal development, change, spiritual strengthening* (V.F), are included in the regression model as supporting variables. The total magnitude of the explained variance for all four coping strategies is 23.4% ($R^2=0.234$, $F=3.589$, $p=0.012$; see Table 3).

A tendency towards excessive DP is explained by the three separately insignificant coping strategies of female teachers. The total magnitude of the explained variance is 13.5% ($R^2=0.135$, $F=2.505$, $p=0.07$; see Table 3). It seems to be interesting that *Reduction of tension* (IV.F) increases DP while *Social support, wishful thinking, alleviation of efforts* (I.F) and *Fighting* (VII.F) decreases it.

The coping strategy that seems to be decisive in female burnout is *Reduction of tension* (IV.F; see Table 3). The strategy reveals predominantly in manifesting emotions by venting anger. Thus, it equals with loss of self-control, which significantly increases emotional exhaustion (EE , $\beta=0.576$, $p=0.001$) and facilitates doubts in one's professional competences ($\beta=0.283$, $p=0.041$). Moreover, in relation to the DP, it can result in a weak tendency to treat students instrumentally ($\beta=0.240$, $p=0.11$). This is a totally ineffective strategy, which causes burning out in female PE teachers.

Another coping strategy that is significant in terms of female burnout is acting following the plan, associated with assuming responsibility for the situation (II.F; see Table 3). The strategy plays an adaptive role and allows an effective alleviation of stress while working with students. It is directed against undertaking chaotic actions in face of an external attribution and together with evaluating the source of demands reduces the imbalance resulting in stress and therefore significantly diminishes EE ($\beta=-0.313$, $p=0.03$). The strategy confirms also its adaptive role against the NPA ($\beta=-0.296$, $p=0.133$). Sense of responsibility and consistent, planned acting when facing stress allow female PE teachers to maintain their sense of effectiveness while working at school.

Fighting (VII.F, Table 3) is a strategy that is not significant in the regression model alone, but when combined with the remaining variables explaining the three burnout dimensions in female PE teachers, it plays an ambiguous role. Striving to cope with the problem or achieving a compromise through fighting intensify EE ($\beta=0.251$, $p=0.085$), which shows that this strategy is also ineffective. At the same time, doubling the efforts and looking for

various solutions through fighting allow female PE teachers to somehow maintain the feeling of sense in their work ($\beta = -0.162$, $p = 0.289$). Fighting seems also to protect against a tendency towards DP ($\beta = -0.19$, $p = 0.181$).

The essence of another coping strategy, which is somewhat significant in the regression model, is receiving social support and self-consolation through wishful thinking and actions aimed at alleviating the outcomes of stressful events (I.F, Table 3). It seems to protect female teachers against an increase of EE ($\beta = -0.258$, $p = 0.061$) and a tendency towards DP ($\beta = -0.221$, $p = 0.135$).

The strategy of *Personal development, change, spiritual strengthening* (V.F; see Table 3), insignificant in the regression model, plays an adaptive role with respect to EE and NPA. This type of coping tones down tension evoked by stress, which result in EE ($\beta = -0.183$, $p = 0.169$). Perceiving positive consequences of negative events allow finding sense in stressful experiences, which with support given by religion maintains the sense of work importance in teaching vocation, decreasing NPA ($\beta = -0.194$, $p = 0.309$).

Achieving distance to negative aspects of work enable an increase in the sense of control and thus regulation of emotions. The coping strategy *Distancing* (III.F; see Table 3) undertaking replacement actions or avoiding contacts with other people seems to tone down stress-related tension, thus decreasing EE ($\beta = -0.133$, $p = 0.286$).

Five of seven defined coping strategies against burnout in male PE teachers play a role (Table 4). In the regression model, the syndrome dimension of EE of male PE teachers is somewhat explained by three coping strategies. The total amount of the explained variance is 14.2% ($R^2 = 0.142$, $F = 2.539$, $p = 0.068$; see Table 4). The strategy of Concentrating on the task, actions following the plan (II.M) enters the model in a significant way ($\beta = -0.279$, $p = 0.047$; see Table 4). Each of the two other strategies Fantasizing, alleviation of outcomes, resignation (IV.M) and Assuming responsibility (VII.M) are insignificant.

The syndrome dimension of NPA in male PE teachers is explained in the regression model by three coping strategies. Only one strategy of Change, personal development (I.M) is statistically significant ($\beta=0.546$, $p=0.018$; see Table 4). The remaining two strategies Change of perspective, self-consolation, social support (V.M) and Concentrating on the task, actions following the plan enter the model and explain 16.8% of variance in total with I.M ($R^2=0.168$, $F=3.103$, $p=0.036$; see Table 4).

Table 4. Relationship of coping strategies to the burnout dimensions by multiple regression in male PE teachers.

Burnout dimensions Goodness of fit coefficients	Coping strategies of male pe teachers WCQ scales	Regression coefficients		Sig- nificance level p
		b	β	
EE $R^2=0.142$ $F=2.539$ $p=0.068$	II.M Concentrating on the task, actions following the plan	-0.553	-0.279	0.047
	IV.M Fantasizing, alleviating the outcomes, resignation	0.400	0.190	0.180
	VII.M Assuming responsibility	0.304	0.143	0.313
NPA $R^2=0.168$ $F=3.103$ $p=0.036$	I.M Change, personal development	0.365	0.546	0.018
	V.M Change of perspective, self- comforting, social support	-0.475	-0.276	0.073
	II.M Concentrating on the task, actions following the plan	-0.340	-0.203	0.143
DP $R^2=0.307$ $F=10.430$ $p=0.003$	II.M Concentrating on the task, actions following the plan	-0.963	-0.551	0.001
	I.M Change, personal development	0.196	0.126	0.308

Note. Burnout in male physical education teachers ($N=50$); magnitude of the explained variances by employed coping strategies as referred to syndrome dimensions (ascending regression analysis). EE=emotional exhaustion, NPA=negative sense of professional achievements, DP=depersonalization.

The tendency towards excessive DP of male PE teachers is explained by two strategies. The first *Concentrating on the task, actions following the plan* (II.M) is statistically significant ($\beta = -0.551$, $p < 0.001$). The second *Change, personal development* (I.M) is insignificant in the model, but manifests its role together with the first one. The total amount of the explained variance is almost 31% ($R^2 = 0.307$, $F = 10.430$, $p = 0.036$; see Table 4).

The coping strategy that seems to be decisive against burnout in males is *Concentrating on the task, actions following the plan* (II.M). This coping method allows male PE teachers to effectively manage the source of stress, which poses the problem. The strategy enters the regression model in a significant manner in the case of EE and DP. What is more, the coefficient β in all multiple regressions is negative for each burnout dimension, EE, NPA and DP. Thus, it seems to play a preventive role each time.

The strategy of *Change, personal development* (I.M) explains in a statistically significant way the burnout dimension associated with the loss of sense in working. Furthermore, it increases somehow DP and do not appear in multiple regression of EE. As it turns out, this coping strategy consisting in adopting a different than hitherto life perspective may, when faced with stress, lead to intensification of burnout symptoms in male PE teachers.

Two next strategies of stress management that are insignificant in the multiple regression model of EE, *Fantasizing, alleviating the outcomes, resignation* (IV.M) and *Assuming responsibility* (VII.M) are non-adaptive and may contribute to arising stress and henceforward EE in male PE teachers.

The coping strategy consisting in change of perspective through looking at the problem from a distance, and using social support and self-consolation (V.M) allows male PE teachers to reevaluate their goals, thus protecting them against loss of sense of work and deteriorating tendency in assessing one's achievements as a teacher, and henceforward NPA ($\beta = -0.276$, $p = 0.073$).

CONCLUSIONS

Physical education teachers face various sources of stress that are somewhat common to the teaching position and more specific to the subject. They strive to be the best coaches of their school teams, but they must primarily care about the physical fitness of the majority of their students. Thus, the ambition to take care of students' physical exercise is often ambiguous in everyday school work, especially since the subject of physical education is seen as less important than other subjects.

This specificity of the work cause burning out in the profession alike members of other groups at risk. However, the pattern of burnout (Noworol & Marek, 1994; Noworol, 2004) constitutes in PE teachers a distinctive typology (Brudnik, 2004). Hence, it was interesting to investigate the coping strategies against burnout syndrome in PE teachers involving the gender variable, especially that the review of literature shows ambiguous results.

Coping as a process is a sequence of strategies that fulfil various functions, sometimes common in men and women, and sometimes not. The presented studies show that female PE teachers engage most commonly the coping strategies concentrating on problems like fighting the source of stress or rationalizing it, and concentrating on emotions like distancing the source of stress, letting matters drift, and at the same time undertaking replacement activities and limiting contacts with other persons as well as reducing tension. However, this coping strategy turned out totally ineffective and even increasing burnout in female PE teachers.

Of the seven different coping strategies used by the surveyed PE female and male teachers two ways to cope stress are important in the process of women burning out, and the two other strategies are essential for men, in the adopted model of burnout as proved by regression analyses.

Coping strategy *Reduction of tension* (IV.F) consisting in releasing emotions and showing anger seems to be decisive but totally

ineffective against the burning-out process of the studied PE female teachers. This strategy fulfills non-adaptive role. Releasing feelings in order to reduce tension, equated with the loss of self-control, significantly intensifies women's EE (Table 4), and the emergence of doubts about their professional competences, NPA (Table 4), and can also contribute to the depersonalized treatment of students.

Another coping strategy, essential in the process of women burning out, is *Assuming responsibility, actions following the plan* (II.F), related to the acceptance of responsibility for existing situation with which teacher must deal. The strategy serves an adaptive role, allowing stress reduction while teaching. Planned activity with external attribution (assessment of source of the imbalance between requirements and capabilities), as the coping strategy, reduces somehow the EE (Table 4). A sense of responsibility and systematic, planned actions in the face of stress can facilitate the female teachers to maintain a sense of the effectiveness while working at school.

Coping Strategy *Concentrating on the task, actions following the plan* (II.M) reduces EE (Table 4) among male PE teachers. This strategy also helps them to keep the sense of working in the PE teaching occupation. It is also the significant strategy to protect the teachers against DP (Table 4).

Coping strategy *Change, personal development* (I.M) is totally ineffective and leads to lowering personal accomplishment and the effectiveness and sense of working with students. It can likewise have a tendency of the PE male teachers to depersonalized treatments of students (Table 4). It seems that those male PE teachers look for the possibilities of personal development outside the school environment.

REFERENCES

- Abel, M. H., & Sevell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *Journal of Educational Research*, 92(5), 287–293.
- Al-Mohannadi, A., & Capel, S. (2007). Stress in physical education teachers in Qatar. *Social Psychology of Education*, 10(1), 55–75.
- Antoniou, A.-S., Ploumpi, A., & Ntalla, M. (2013). Occupational stress and professional burnout in teachers of primary and secondary education: The role of coping strategies. *Psychology*, 4(3A), 349–355.
- Austin, V., Shah, S., and Muncer, S. (2005). Teacher stress and coping strategies used to reduce stress. *Occupational Therapy International*, 12(2), 63–80.
- Bağçeci, B., & Hamamci, Z. (2012). An investigation into the relationship between burnout and coping strategies among teachers in Turkey. *International Journal of Humanities and Social Sciences*, 2(12), 67–72.
- Both, J., & do Nascimento, J. V. (2009). Professional intervention at school's physical education: Considerations about the teaching work. <http://seer.ufrgs.br/Movimento/article/viewFile/3046/5769> [accessed 29 Jan. 2018].
- Boyle, G., Borg, M., & Falzon, J. M. (1995). A structural model of the dimensions of teacher stress. *British Journal of Educational Psychology*, 65(1), 49–67.
- Brouwers, A., Tomic, W., & Boluijt, H. (2011). Job demands, job control, casual support and self-efficacy beliefs as determinants of burnout among physical education teachers. *Europe's Journal of Psychology*, 7(1), 17–39.
- Brudnik, M. (2004). Burnout in physical training teachers a macro-path of professional burnout. *Acta Universitatis Palackianae Olomucensis, Gymnica*, 34(2), 2–17.
- Brudnik, M. (2005). Skala Obciążenia Psychicznego (H. Sęk, M. Brudnik) wersja dla nauczycieli wychowania fizycznego. In R. Bartoszewicz, T. Koszczyz, & A. Nowak (Eds.), *Dydaktyka wychowania fizycznego w świetle współczesnych potrzeb edukacyjnych* (pp. 377–385). Wrocław: AWF.
- Brudnik, M. (2008). Zachowanie uczniów podczas lekcji a wypalanie się nauczycieli wychowania fizycznego. *Kultura Fizyczna*, 7–8, 23–28.
- Brudnik, M. (2009). Perception of self-efficacy and professional burnout in general education teachers. *Human Movement*, 10(2), 170–175.
- Brudnik, M., & Rutkowski, M. (2010). Fizyczne i społeczne środowisko pracy a wypalanie się nauczycielek i nauczycieli wychowania fizycznego. *Wychowanie Fizyczne i Sport*, 54(3), 167–174.
- Carraro, A. (2008). Stress and burnout in physical education teachers: Exploring the determinants. In J. Seghers & H. Vangrunderbeek (Eds.), *Physical education research what's the evidence* (pp. 125–138). Leuven: Acco.

- Chan, A. H., Chen, K., & Chong, E. Y. (2010). Work stress of teachers from primary and secondary schools in Hong Kong. *Proceedings of the International Multi Conference of Engineers and Computer Scientists* (Vol. 3), 17–19 March, Hong Kong.
- Chang, M. L. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychological Review*, 21(3), 193–218.
- Chaplain, R. P. (2008). Stress and psychological distress among trainee secondary teachers in England. *Educational Psychology*, 28(2), 195–209.
- Cherniss, C. (1981). Preventing burnout: From theory to practice. In W. Jones (Ed.), *The burnout syndrome: Current research, theory, interventions* (pp. 172–176). Park Ridge, IL: London House Press.
- Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology*, 104(4), 1189–1204.
- Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. (2001). *Organizational Stress: A Review and Critique of Theory, Research, and Applications*. Thousand Oaks: Sage Publications.
- Fejgin, N., Epharty, N., & Ben-Sira, D. (1995). Work environment and burnout of physical education teachers. *Journal of Teaching in Physical Education*, 15(1), 64–78.
- Fejgin, N., Talmor, R., & Erlich, I. (2005). Inclusion and burnout in physical education. *European Physical Education Review*, 11(1), 29–59.
- Folkman, S. (2008). The case for positive emotions in stress process. *Anxiety Stress Coping*, 21(1), 3–14.
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150–170.
- Folkman, S., Lazarus, R. S., & Dunkel-Schetter, C. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping and encounter outcomes. *Journal of Personality and Social Psychology*, 50, 992–1003.
- Friedman, I. (2000). Burnout in teachers: Shattered dreams of impeccable professional performance. *Psychotherapy in Practice*, 56(5), 595–606.
- Goh, Y.W., Sawang, S., & Oei, T. P. (2010). The Revised Transactional Model (RTM) of occupational stress and coping: An improved process approach. *Australian and New Zealand Journal of Organizational Psychology*, 3(1), 13–20.
- González-Morales, M. G., Rodríguez, I., & Peiró, J. M. (2010). A longitudinal study of coping and gender in a female-dominated occupation: Predicting teachers' burnout. *Journal of Occupational Health Psychology*, 15(1), 29–44.

- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*(6), 495–513.
- Heger, R. (2012). Psychosocial coping strategies of inclusion classroom teachers as they interact with English language students with learning disabilities. *Dissertation Abstracts International. A: The Humanities and Social Sciences, 72*(12-A), 4521.
- Hughes, E. (2001). Deciding to leave but staying: Teachers' burnout, precursors and turnover. *The International Journal of Human Resource Management, 12*(2), 288–298.
- Kennedy, A. (2013). The relationship between personality traits, coping resources, and burnout in north Louisiana secondary teachers. *Dissertation Abstracts International. A: The Humanities and Social Sciences, 73*(10-A) (E).
- Kosa, B. (1990). Teacher-coach burnout and coping strategies. *Physical Educator, 47*(3), 153–158.
- Koustelios, A., & Tsigilis, N. (2005). The relationship between burnout and job satisfaction among physical education teachers: a multivariate approach. *European Physical Education Review, 11*(2), 189–203.
- Kuśnierz, C. (2010). *Główne zagrożenia zdrowia psychicznego nauczycieli wychowania fizycznego*. Opole: Oficyna Wydawnicza Politechniki Opolskiej.
- Kyriacou, C. (1998). Teacher stress: Past and present. In J. Dunham & V. Varma (Eds.), *Stress in teachers: Past, present and future* (pp. 1–13). London: Whurr.
- Kyriacou, C. (2001). Teacher stress: Direction for future research. *Educational Review, 53*(1), 28–35.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosomatic Medicine, 55*, 234–247.
- Lazarus, R. S., & Folkman, S. (1986). Cognitive theories of stress and the issue of circularity. In M. H. Appley & R. Trumbull (Eds.), *Dynamics of Stress. Physiological, Psychological, and Social Perspectives* (pp. 63–80). New York: Plenum.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, Appraisal, and Coping*. New York: Springer.
- Łosiak, W. (1994). Dynamika emocji i radzenia sobie w stresie psychologicznym. Badanie pacjentów chirurgicznych. *Rozprawy habilitacyjne UJ* (p. 273). Kraków: UJ.
- Łosiak, W. (2008). *Psychologia stresu*. Warszawa: Oficyna Wydawnicza ŁOŚGRAF.
- Markelj, N. (2008). The burnout syndrome in Slovenian PE teachers. In J. Cabri, F. Alves & D. Araujo (Eds.), *Books of abstracts. 13th Annual Congress of the European College of Sport Science*. Portugal, Estoril, Faculdade Tecnica de Lisboa, Faculdade de Motoricidade Humana, 9–12 July.

- Maslach, C. (1993). Burnout: A multidimensional perspective. In W. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 19–32). Washington, DC: Taylor & Francis.
- Maslach, C. (2006). Wypalenie – w perspektywie wielowymiarowej. In H. Sęk (Ed.), *Wypalenie zawodowe. Przyczyny i zapobieganie*, trans. Józef Radziecki (pp. 13–31). Warszawa: PWN.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2, 99–113.
- Maslach, C., Schaufeli, W. B., & Leiter M. P. (2001). Job burnout. *Annual Review of Psychology*, 53, 397–422.
- Matud, M. P. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences*, 37(7), 1401–1415.
- Mearns, J., & Cain, J. N. (2003). Relationships between teachers' occupational stress and their burnout and distress: Roles of coping and negative mood regulation expectations. *Anxiety, Stress and Coping*, 16(1), 71–82.
- Noworol, C. (1994). *Kulturowa adaptacja Inwentarza wypalenia zawodowego Maslach, MBI*. Unpublished manuscript. Kraków: Jagiellonian University.
- Noworol, C. (2000). Zarządzanie wypaleniem czy wypalenie zarządzania. In T. Borkowski, A. Marcinkowski, & B. Oherow-Urbaniec (Eds.), *W kregu zarządzania. Spojrzenie multidyscyplinarne* (pp. 45–63). Kraków: Księgarnia Akademicka.
- Noworol, C. (2004). Wypalanie się kadr w organizacjach. *Prometeusz. Kwartalnik Naukowy Wyższej Szkoły Społeczno-Ekonomicznej w Warszawie*, 3, 9–21.
- Noworol, C., & Marek, T. (1994). Typology of burnout: Methodology modeling of the syndrome." *Polish Psychological Bulletin*, 24, 319–326.
- Noworol, C., Żarczyński, Z., Fąfrowicz, M., & Marek, T. (1993). Impact of professional burnout on creativity and innovation. In W. B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional Burnout: Recent Developments in Theory and Research* (pp. 163–175). Taylor & Francis.
- Özaşker, M. (2012). Investigation of burnout levels of Turkish Physical Education and sports teachers in terms of various variables. *Selcuk University Journal of Physical Education and Sport Science* 14 (1): 64–70.
- Santini, J., & Molina Neto, V. (2005). A síndrome do esgotamento profissional em professores de educação física: um estudo na rede municipal de ensino de Porto Alegre. *Revista Brasileira de Educação Física e Esporte*, 19(3), 209–222.
- Schaufeli, W., and Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis*. London: Taylor & Francis.

- Schwarzer, R., Schmitz, G., & Tang, C. (2000). Teacher burnout in Hong Kong and Germany: A cross-cultural validation of the Burnout Inventory. *Anxiety, Stress and Coping*, 13(3), 309–326.
- Siudem, A. (2011). Style radzenia sobie ze stresem a wypalenie zawodowe wśród nauczycieli. In G. E. Kwiatkowska & A. Siudem (Eds.), *Człowiek w środowisku pracy* (pp. 92–103). Lublin: Wydawnictwo UMCS.
- Skaalvik, E. M., & Skaalvik, S. (2007). Dimensions of teacher self-efficacy and relations with strain factors, perceived collective teacher efficacy, and teacher burnout. *Journal of Educational Psychology*, 99(3), 611–625.
- Skaalvik, E. M., & Skaalvik, S. (2009). Does school context matter? Relations with teacher burnout and job satisfaction. *Teaching and Teacher Education*, 25(3), 518–524.
- Smith, C., Kirby, L. D. (2001). Towards delivering on the promise of appraisal theory. In K. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, methods, research* (pp. 121–138). New York: Oxford University Press.
- Smith, D., & Leng, G. W. (2003). Prevalence and sources of burnout in Singapore secondary school physical education teachers. *Journal of Teaching in Physical Education*, 22(2), 203–218.
- Stănescu, M., Vasiliu, A. M., & Stoicescu, M. (2012). Occupational stress in physical education and sport area. *Procedia – Social and Behavioral Sciences*, 33(1), 218–222. Available at: https://www.researchgate.net/publication/257715213_Occupational_stress_in_physical_education_and_sport_area [accessed 3 March 2018].
- Stoćkus, A., & Adaškevičienė, E. (2013). Peculiarities of stressors experienced by physical education teachers at work. *Ugdymas. Kūno Kultūra. Sportas*, 90(3), 62–69.
- Travers, C. J., & Cooper, C. L. (1993). Mental health, job satisfaction and occupational stress among UK teachers. *Work and Stress*, 7(3), 203–219.
- Viloria, H., Paredes, M., & Paredes, L. (2003). Burnout en profesores de educación física. *Revista de Psicología del Deporte*, 12(2), 133–146.
- Wontorczyk, A., & Brudnik, M. (2013). Cechy temperamentu jako predyktory wypalenia zawodowego u nauczycieli wychowania fizycznego. *Psychologia Społeczna*, 8(1), 96–110.