

NOOPSYCHOSOMATIC DISORDERS. EMPIRICAL STUDY AMONG THE STUDENTS OF PEDAGOGY IN POLAND¹

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Abstract

A sense of purpose in life is inextricably linked with a firm conviction of exercising control over it, and having one's priorities set straight. Health in turn, is affected by stress, by salutogenetic factors, as presented by A. Antonovsky. Disturbances of sense of purpose in life result in psychosomatic disorders. Hypothesis: there is a relevant statistical correlation between the level of sense of purpose in life and noopsychosomatic disorders. Methods: 1) Crumbaugh-Maholick Purpose-in-Life Test, 2) K. Mausch Questionnaire of Psychosomatic Ailments. Test group: 683 pedagogy students from the University of Szczecin. There is a relevant statistical correlation between the level of sense of purpose in life and psychosomatic disorders. The research results require comparison with other post-soviet countries, as well as democratic ones.

Keywords: *noopsychosomatic disorders, health psychology, level of sense of life, stress*

Received: 27.1.2008

Accepted: 13.3.2008

The concept of health

Health psychology is a new area that has emerged within psychology only recently. It has involved drawing on findings in clinical psychology, psychosomatic medicine, behavioral medicine and medical psychology. In contrast to the earlier focus on pathological phenomena, i.e. *illnesses* or *disorders*, health psychology concentrates on *health*. The father of health psychology, Joseph Matarazzo, writes that "health psychology is the aggregate of the specific educational, scientific, and professional contributions of the discipline of psychology to the promotion and maintenance of health, the prevention and treatment of illness, the identification of etiological and diagnostic correlates of health, illness, and related dysfunction, and the improvement of the health care system and health policy formation" (Matarazzo, 1980, p.815). Indeed, health psychology draws on and embraces theories, findings and practices of both medical, natural and social sciences (Ryś 2004; Ryś 2006).

In the holistic-functional health model, health is defined as "the process of continuous dynamic balancing of the individual's needs and environmental requirements. What determines the level of health are the resources of man (both inner and accessible from the environment) and the needs, often called stressors (Ryś 2007b).

¹ E. Ryś, K. Mausch: Duchowo – afektywna kondycja studentów pedagogiki. Studium empiryczne pedagogiczno – psychologiczne [Spiritual-affective Condition of Pedagogy Students. Pedagogical-psychological Empirical Study]. *Funded by individual research grant No. N107 010 31/1712.*

In the holistic-functional model, health is viewed as a process and a great role is assigned to the subject's aware activity" (Heszen 2002). The model views a human being as a wholeness, a view which dates back to antiquity. From this holistic concept of man, psychosomatic medicine was born, emphasizing the interdependence of psyche (mind) and body. Similarly, psychoneuroimmunology which examines relationships between psychic and immunological processes emerged (Ader, Felten, Cohen 1991). Both psychosomatic medicine and psychoneuroimmunology have produced a huge body of theoretical publications and have been positively verified in clinical practice. The only way for a human being to realize his biopsychosociospiritual potential is to enter the world of culture understood as the symbolic world of values (Ryś, Mausch, 2007). It is worth noting that behavioral medicine, implementing the holistic-functional model, includes behaviors conducive to health or illness in its research area (Şek 2005).

Noetic dimension of psychosomatic disorders: noopsychosomatics

Traditional clinical and health psychologies treat psychosomatic disorders and illnesses as ailments resulting from personality disturbances and abnormalities in biological, psychological and social spheres. Psychosomatic disorders are interpreted in the context of great schools of psychology e.g.: Psychoanalysis, Behaviorism, Cognitive and Humanistic/Existential Psychology. According to Kazimierz Popielski (1999) however, theoretical analyses and psychotherapeutic practice have not sufficiently emphasized the subjective-personal views on existence, i.e. the existential-intellectual, moral, or **noetic dimension of personality**. Ignoring the value dimension while studying personality and choosing psychological therapy, researchers and therapists fail to recognize basic values in an individual's subjective-personal life and experience. A person who creates oneself mainly in reference to the world of material values, deprives himself of realizing his own humanity (Ryś, Mausch 2006a; Ryś, Mausch 2007). Values shape and guide existence and the world of values and sense guides man in his/her existential being and becoming. A failure to develop a system of values and the ability to appreciate value, or its underdevelopment, result in distorted existence, that is in existential frustration, the feeling of unfulfillment and not using one's potential. Consequences of such a condition are existential vacuum and noogenic neurosis, described by V. Frankl. Popielski attributes noopsychosomatic disorders to noogenic neurosis. While investigating origins of existence-related disorders and ailments, too little attention is paid to nonbiological personality characteristics like human aspirations, longings and feelings that constitute the meta-need of the **sense of life**. The feeling of a sense of life guides one's life, gives motivation, helps establishing goals (short-term, long-term, and metaphysical), shapes needs and biopsychonoetic values. According to V. Frankl (1998), having an anthropological intention, gives a person a chance to achieve a biopsychonoetic balance and to recover and/or maintain the broadly understood *health*.

A functional-existential concept of personality reflects the multidimensional and multidirectional character of human needs, aspirations, development and evolution in the noetic, psychological and somatic spheres of existence. The above is the core of the biopsychonoetic model of personality proposed by Popielski. He writes: "The existential approach to the issue of the sense of life is rooted in a very general observation: in one's environment, man is the one who personally, through intentional actions, relates to values

and systems of values, becomes aware of them, values and experiences the consequences of the above as the feeling of the sense of life.” (Popielski, 1999, p.20).

Results of Popielski’s analysis of **noopsychosomatic symptoms**, using the Noopsychosomatic Symptoms Scale, reveal that the following behaviors prevail in a noopsychosomatic crisis situation.

(i) **The noetic dimension** includes:

A deep feeling of boredom, unhappiness and resignation, depression, despondency, fading motivation to live and act. Experiencing helplessness, uncertainty and frustration. Lack of self-confidence, experiencing being lost in life (decreased noetic activity syndrome). Results of empirical studies reveal that there is a “high statistical correlation between the level of the felt sense of life and: 1) a feeling of freedom (Hellwig=0.501) and 2) an attitude to death (Hellwig=0.504)” (Ryś, in print, 2008a).

(ii) **The psychological dimension** includes:

Changing moods, a feeling of exhaustion, fear-reactivity, attention span and memory problems. A sense of weariness and fatigue, difficulties with relaxation and speech fluency, problems with sleeping (and dreams), suicidal thoughts, sexual problems. Various kinds of hyper anxiety and emotional hypersensitivity (psychological dysfunction syndrome).

(iii) **The somatic dimension** includes:

A feeling of general nervous tension, heart rhythm disorders, stomachache, toothache, sore throat, oral or pharyngeal dryness, lack of appetite or excessive appetite (somatoform disorders) (*ibid.*, p.34).

It follows that a noopsychosomatic interpretation of disorders and illnesses complements the traditional approach to psychosomatics. Health disorders and noopsychosomatic ailments can have noetic causes in addition to biopsychosocial ones.

Modern understanding of spirituality

What is spirituality? Emmons (2006) notes that until recently the most suitable adjective describing this notion was the adjective *vague*. Traditionally, the issue has been marginalized by scientific psychology. Owing to the difficulties in defining the problem, serious scientists had approached spirituality with reservation. That is completely understandable. For any scientific discipline to progress, it is fundamental to achieve consensus as far as terminology and measurement methods are concerned. Vague terms and definitions hamper the progress. It is difficult to reach agreement on what spirituality and religiosity are because the perception of religiosity in a wider cultural perspective and in psychology changes along the birth of new spirituality that frequently differs from traditional concepts of religion (Emmons 2006, after Hill 1999). Spirituality is variously understood and measured in different research projects.

Some modern psychologists while using the term spirituality go even a step further. Instead of debating it as a theoretical concept, they describe in detail however pragmatically, how people can experience spirituality, what they say about it and how they act. In this approach, the spirit associated with spirituality is not the Holy Spirit but rather a human spirit, representing the highest human potential. Following Beck (*ibid.*, after Beck 1986), a spiritual person must have 13 characteristics, including: understanding, context awareness and broad perspective, awareness of unity with things, seeing unity in diversity, optimism, and love that characterizes a fully spiritual person.

I. Heszen-Niejodek and E. Gruszczyńska (2004, p.21) point out that from a psychological perspective, the spiritual dimension should be treated as man's attribute that is a theoretical construct on the ontological level and as such spirituality is not directly measurable. Thus spirituality as a psychological construct refers to a particular range of man's functioning that encompasses both observable activities and the inner experience.

It is disputable whether spirituality is something inherent to every human being or whether there can be people wholly deprived of spirituality. Heszen-Niejodek and Gruszczyńska assume that spirituality, like other psychological constructs, is a disposition. It means that in a favorable environment the spiritual factor may develop, otherwise it remains a dormant potential disposition. Spiritual growth can progress continuously during the period of personality formation just like cognitive, emotional, motivational processes, self-knowledge, etc. "Man as a being aspiring (emotionally engaged) to find sense in his/her own life strives to understand themselves" (Ryś, 2006, p.108).

A personality of a well developed spirituality characterizes a person capable of transcendence, sensitive and having well-developed sensibility (higher function). Such a person may experience special life events that are especially conducive to spiritual growth as epidemiologic research and clinical data indicate (Thoresen, Harris 2002). These include critical, dangerous and life-threatening situations. Spiritual development of patients suffering from cancer is characterized by a stronger feeling of closeness with other people, recapitulation of their life, strong self-reliance, affirmation of life and courage in the face of death (Heszen, Sęk 2007).

Thoresen and Friedman (2002) write that a greater spiritual/religious involvement on the part of a patient results in:

- lower incidence of ischemic heart disease and suicide attempts
- lower blood pressure
- lower incidence of cardiac infarcts
- improvement of physical fitness, self-assessment and reduction of anxiety, worries about health in the year following a heart transplant
- reduction of pain sensation in people suffering from cancer
- better perception of one's own physical condition and less frequent use of medical services.

Original research

My research has been carried on a representative sample of 683 pedagogy students at the University of Szczecin. The research question was what relations there are between the felt level of sense of life (Ryś 2007a; Ryś 2008a; Ryś 2008b; Ryś 2008c) and noopsycho-somatic disorders in the sample examined. The main hypothesis was that there is a valid statistical correlation between the level of sense of life and noopsycho-somatic disorders, i.e. an increase in the felt sense of life results in reduced incidence of suffered psychosomatic ailments.

The following research methods were used:

1) Crumbaugh-Maholick's Purpose-in-Life Test (translated into Polish and extended by Płużek).

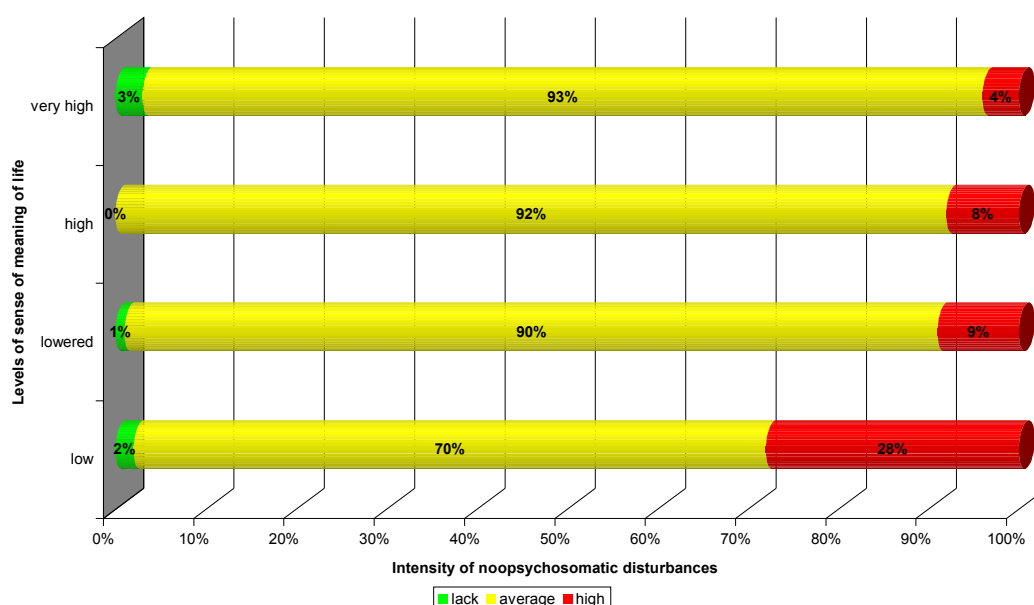
2) Mausach's Questionnaire on Psychosomatic Ailments – Psychosomatic Ailments Lists by K. Mausach (includes 38 kinds of psychosomatic ailments).

The test and questionnaire were filled in individually by each student. Noopsychosomatic disorders included in the questionnaire were: 1) dissociative disorders, 2) physical pain, 3) physical weakness, 4) sexual disorders, 5) neurotic depressive disorders, 6) digestive system disorders, 7) circulatory system disorders.

Research results²

The results demonstrate (fig.1) that persons with a low level of **the felt sense of a purpose in life or the sense of meaning of life** suffer 28% of noopsychosomatic disorders on a high level (acute), 70% on an average level and 2% on a low level. Persons with a very high level of the felt sense of life suffer 4% of noopsychosomatic disorders on a high level, 93% on an average level and 3% on a low level.

Fig.1. Sense of meaning of life and noopsychosomatic disturbances



It follows that individuals with a generally high number of noopsychosomatic disorders suffer **77% of neurotic-depressive disorders** on a high level (fig.2). In the case of the reported average number of noopsychosomatic ailments, neurotic depressive disorders constitute **21%**. Persons with a low level of noopsychosomatic disorders suffered **1%** of neurotic depressive disorders on a high level and 90% on a low level.

The results reveal that **48%** of persons with a high level of neurotic depressive disorders experienced physical pain (fig.3). The same refers to 24% of persons with an average level of complaints and 6% with a reported low level of neurotic-depressive disorders.

Furthermore, a low level of neurotic depressive disorders corresponds to 11% of respondents experiencing physical weakness on a high level. A high level of neurotic depressive disorders has been found in 58% of persons complaining about physical weakness on a high level (fig.4)

² Programs for statistical calculations were developed by B. Gębski, Ph.D. from the Institute of Sociological Research Methods and Techniques of the University of Szczecin. Programs in C++ language were compiled with the aid of BORLAND compiler. The calculations were conducted using PC IBM Pentium IV 4.5.

Another relation revealed by the research is that persons with a very high and high level of the sense of a purpose in life (fig. 5-6) have very few noopsychosomatic disorders on a high level of intensity (from 3% to 17%, e.g. physical pain, physical weakness, neurotic-depressive disorders). Psychosomatic disorders prevailing in this group of people were of low (dissociative 85%) and average intensity (digestive system disorders 57%).

Fig.2. Noopsychosomatic disturbances and neurotic-depressive disturbances

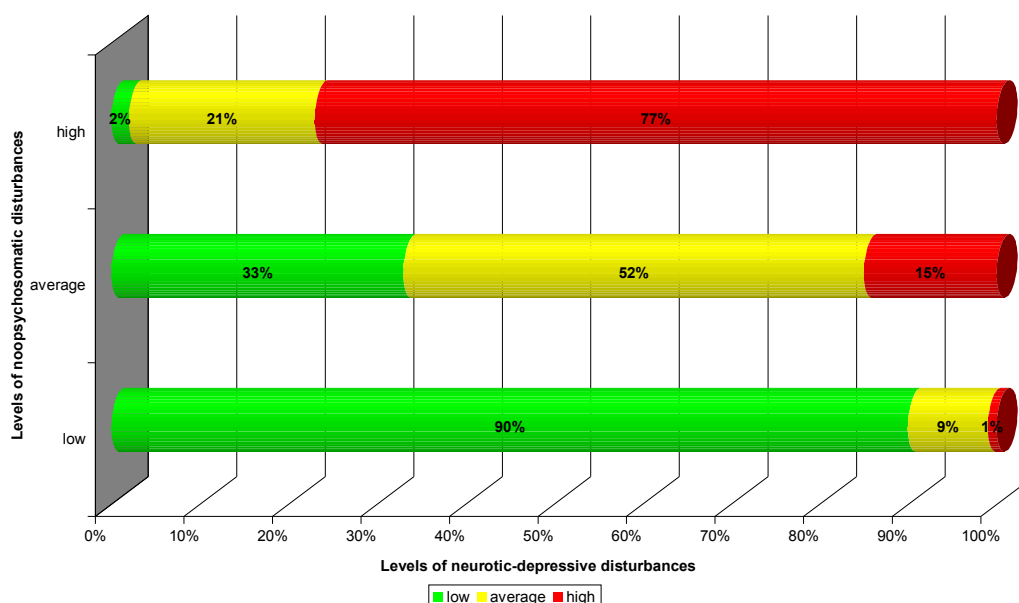


Fig.3. Neurotic-depressive disturbances and physical pain

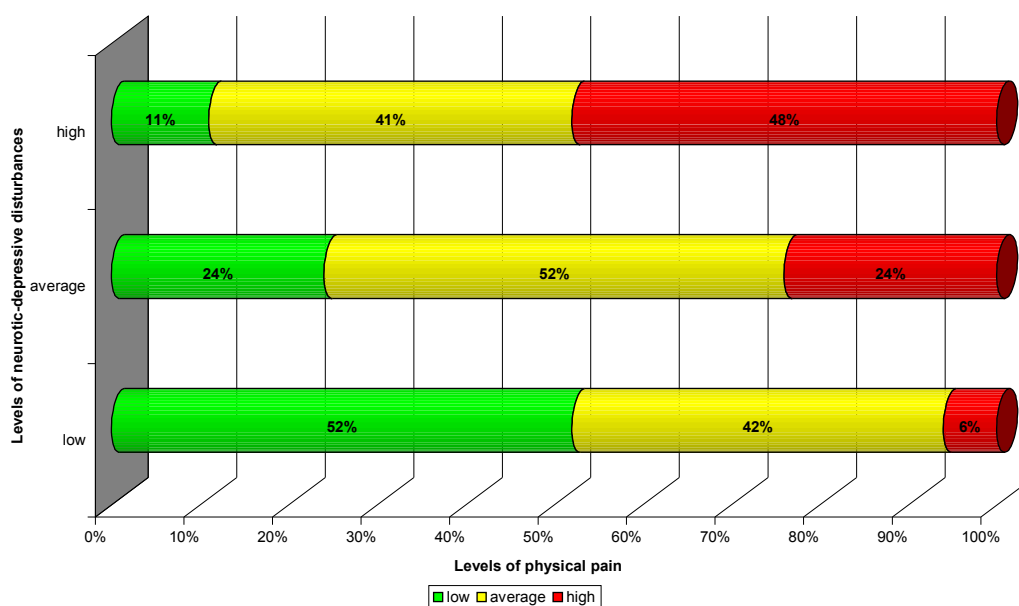


Fig.4. Neurotic-depressive disturbances and physical weakness

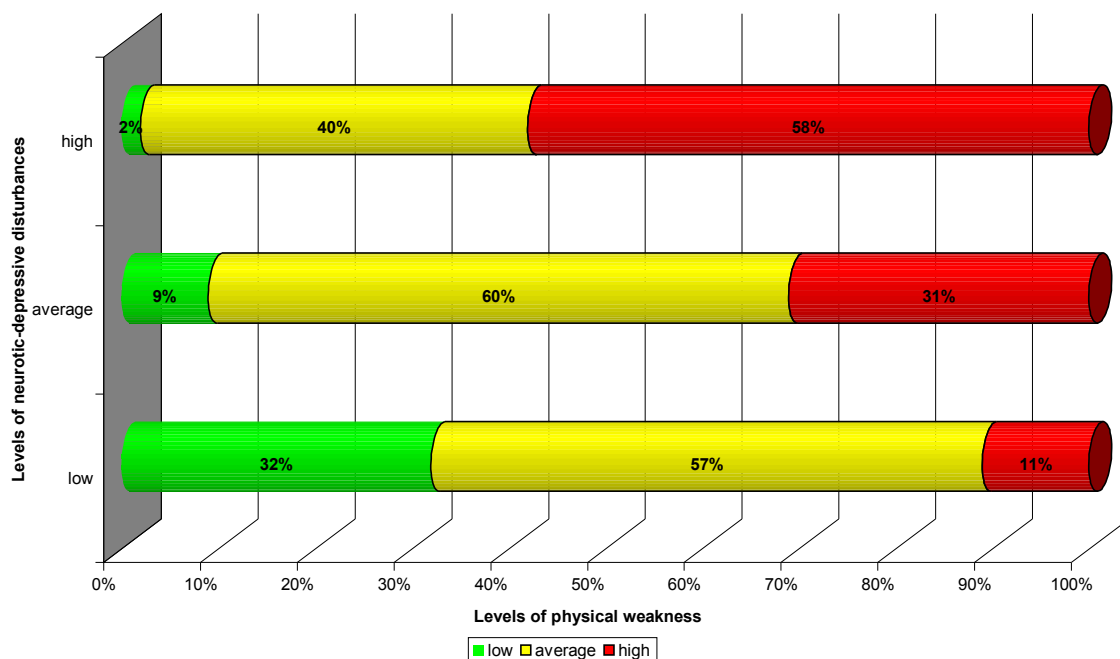


Fig.5. Very high level of sense of meaning of life and noopsychosomatic disturbances

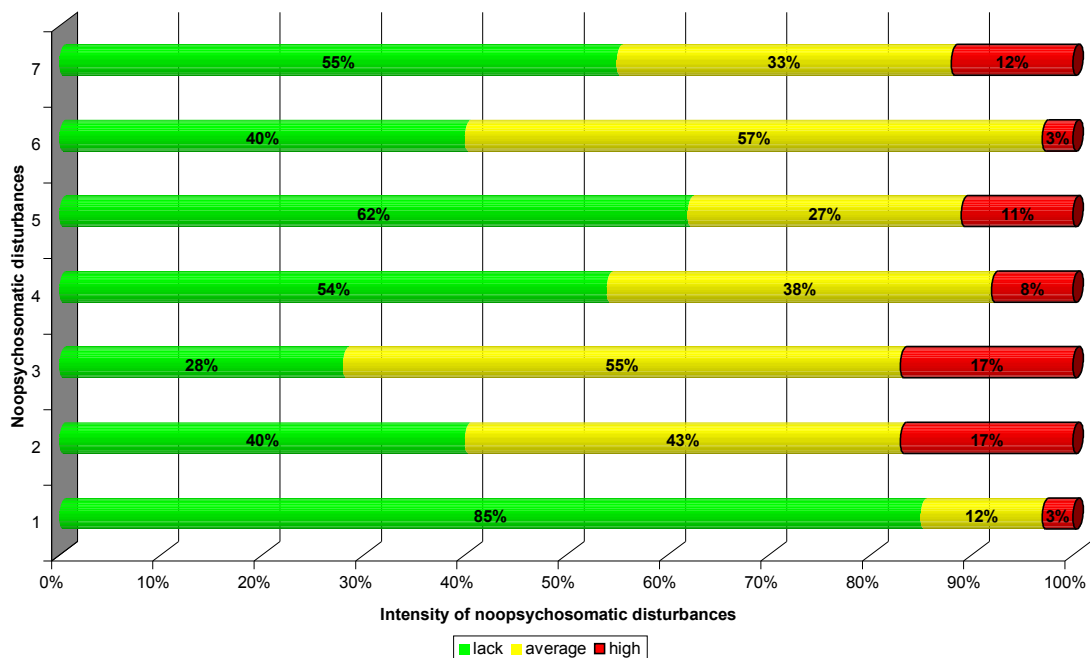
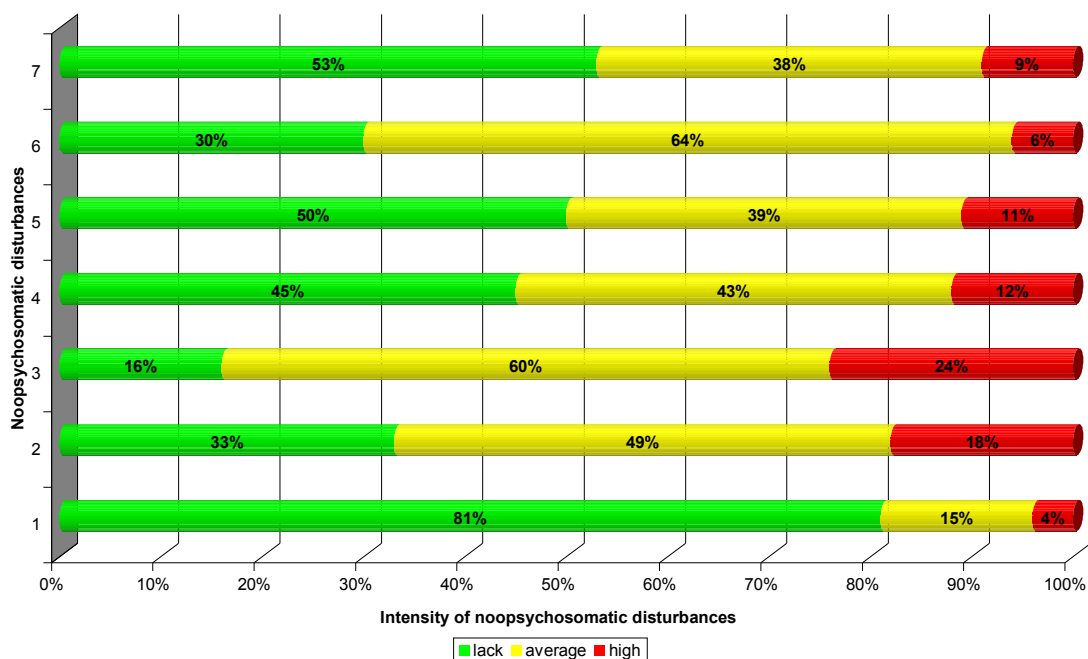


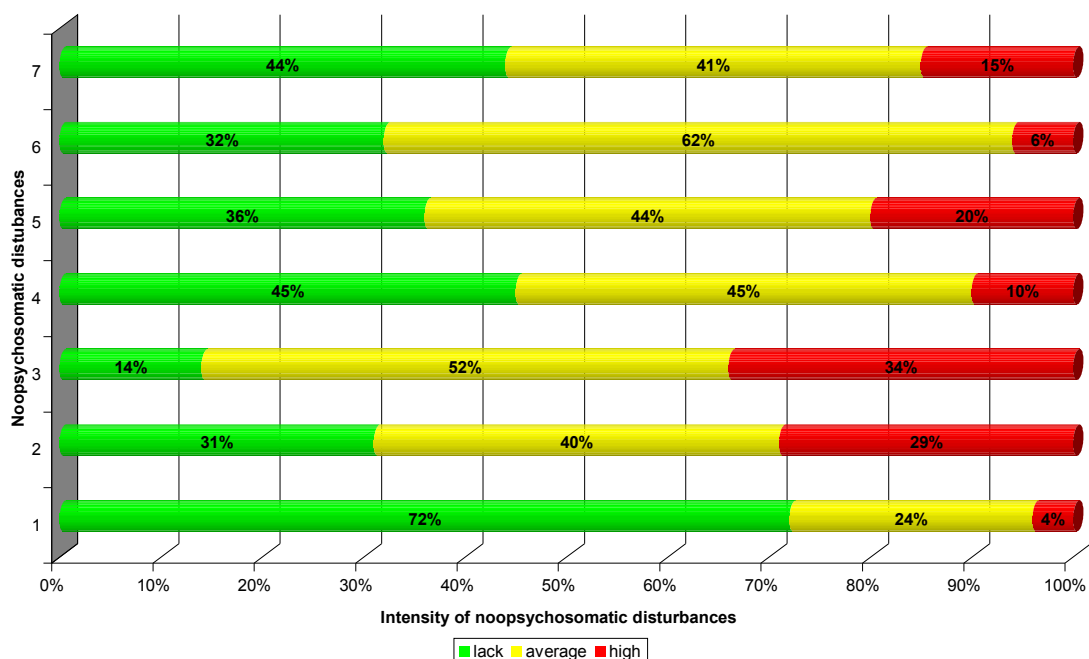
Fig.6. High level of sense of meaning of life and noopsychosomatic disturbances



1. conversion disturbances, 2. physical pain, 3. physical weakness, 4. sexual disturbances, 5. neurotic – depressive disturbances, 6. disturbances of digestive system, 7. disturbances of blood circulation system.

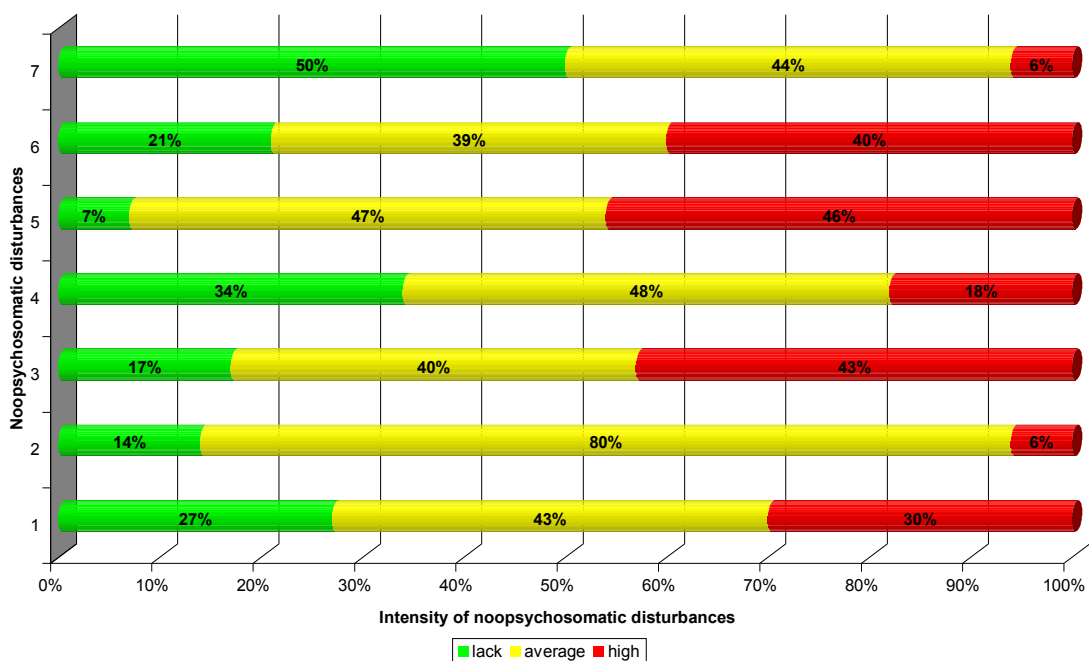
Finally, the research results indicate that persons with a lowered and low level of the sense of purpose in life (fig.7-8) complain about a relatively large number of psychosomatic disorders of high intensity (from 6% to 46%). The prevailing disturbances found are: neurotic-depressive disorders (46%), physical weakness (43%), digestive system disorders (40%). Also a considerable number of psychosomatic disorders of average intensity (from 39% to 80% - physical pain) has been reported.

Fig.7. Lowered level of sense of meaning of life and noopsychosomatic disturbances



1. conversion disturbances, 2. physical pain , 3. physical weakness, 4. sexual disturbances, 5. neurotic – depressive disturbances, 6. disturbances of digestive system, 7. disturbances of blood circulation system.

Fig.8. Low level of sense of meaning of life and noopsychosomatic disturbances



Results summary

The research results demonstrate that there is an important statistical correlation between the felt intensity of noopsychosomatic disorders and the felt level of the sense of a purpose in life, i.e. the higher the intensity of noopsychosomatic disorders, the lower the level of the sense of a meaning of life (98% of disturbances of a high or average level of intensity, Fig. 1). A high level of noopsychosomatic disorders is accompanied by:

- physical weakness (98% - high to average level, Fig. 4)
- neurotic depressive disorders (98% - high to average level, Fig. 2)
- physical pain (89% - high to average level, Fig. 3)
- digestive system disorders (56%)

A high level of neurotic-depressive disorders correlates with a high level of felt physical pain. An increase in the intensity of noopsychosomatic disorders correlates positively with higher incidence of digestive system disorders. There is a high correlation between neurotic-depressive disorders and physical weakness. A very high level of the sense of a purpose in life is characterized by: (i) a low intensity of psychosomatic disorders (from 3% to 17%), (ii) the least frequent being: dissociative disorders (3%) and digestive system disorders (3%), (iii) the most frequent ailments are physical weakness (17%) and physical pain (17%).

A low (pathological) level of the sense of life is accompanied by: (i) a high level of psychosomatic disorders (from 10% to 48%), (ii) the least frequent of which are circulatory system disorders (6%) and physical pain (6%), (iii) the most frequently occurring disturbances are neurotic-depressive disorders (46%), physical weakness (43%) and digestive system disorders (40%).

Discussion

The results of empirical studies reveal an interdependence of the spiritual condition of an individual and noopsychosomatic disorders suffered. There is a significant statistical correlation between the felt level of the sense of life and noopsychosomatic disorders, i.e. an increase in the level of the sense of life results in a reduced number of suffered psychosomatic ailments. This phenomenon can be referred to as noopsychosomatic (spiritual-psychosomatic) suffering.

A most important finding is that 28% of respondents reporting a low level of the sense of life have experienced noopsychosomatic disturbances on a high level of intensity and 70% experienced an average level of disturbance intensity. Among respondents declaring a very high level of sense of purpose in life, 4% reported psychosomatic disorders on a very high level of intensity and 93% on an average level. Most disorders reported by respondents were neurotic-depressive disorders ("spiritual" in a sense) that resulted in somatic ailments such as physical pain. The intensity of pain increased with the escalation of neurotic depressive symptoms (48% of respondents). A low level of sense of purpose in life positively correlated also with an increase in the subjectively felt physical weakness (13% to 58% of respondents suffering from high intensity of psychosomatic disorders). Respondents declaring a high level of intensity of noopsychosomatic disturbances also suffered from more digestive system disorders than those who declared a low level of noopsychomatic disturbances.

In conclusion, 46% of pedagogy students at the University of Szczecin who participated in the research project felt a low or lowered level of sense of purpose in life (Mausch, Ryś, in print, 2008) and suffer from noopsychosomatic disorders. Therefore, it can be concluded that noetic disturbances (a decrease in the level of sense of purpose in life) are accompanied by somatic and psychological disorders. These results confirm the thesis of biopsychosociospiritual unity of human personality as advocated in the works of V. Frankl and K. Popielski.

Over last decades, the notions of health and well-being or wellness have been discussed not only in medicine but also in other sciences such as psychology, sociology, philosophy and pedagogy. What has changed is the approach to the concept of well-being, both in its subjective personal and objective dimensions. Recently theoretical and research approaches have changed their focus from pathogenetic, i.e. interested in illness only, to salutogenetic that focuses on factors contributing to health (Antonovsky 1984, 1995). Both health and illness perspectives complement each another and thus foster progress of knowledge about man, including investigating conditions necessary to lead a healthy and happy life in both biopsychosocial and spiritual dimensions. Absence of illness symptoms is not the only condition for one's well-being which encloses the capacity to fulfill one's potential, or to professional, family and social development. Also objective social factors (environment, socio-political system, economic situation, etc.), important as they are, are not sufficient to achieve a subjectively perceived state of well-being. The 21st century will probably be the time when science will start to also look for factors conducive to health in its many dimensions, including the subjective psychological and spiritual ones along objective factors conducive to illnesses.

Conclusions

In the light of the research results many questions arise, among them questions about the psychophysical condition of students, young generations, and more generally, about the well-being of modern humanity. How important are different factors affecting health (biological, social and spiritual) in the process of human development? What factors are underestimated and neglected in Poland, Europe and the world? Does the spiritual dimension, which is partly shaped in a planned way and partly develops spontaneously in family, various groups and the society, need special attention and care? How should humanity (regardless of country, socio-political system, religion or history) cooperate in creating comprehensive foundations for adequate shaping of personality and spirituality, health, sense of happiness and self-realization, not forgetting about the standards of humanism, freedom, respect for religious and cultural differences?³

³ The results of empirical studies showed that 22% of teachers (382 persons) and 24% of students (683 persons) participating in the Polish research program felt a low level of sense of purpose in life. By contrast, only 2% of Swedish students exhibited a low level of sense of purpose in life.

Cf. also:

"Zaburzenia poczucia sensu życia w sytuacji zmiany społecznej. Studium empiryczne na przykładzie nauczycieli województwa zachodniopomorskiego" [Sense of Purpose in Life Disorders in Context of Social Change. Empirical Studies Involving Teachers from West Pomerania Voivodeship]. In K. Mausch, E. Ryś 2007, "Patologia społeczna. Wybrane zagadnienia" [Social Pathology. Selected Issues], Szczecin; E. Ryś, K. Mausch, "Duchowo – afektywna kondycja studentów pedagogiki. Studium empiryczne pedagogiczno – psychologiczne" [Spiritual-affective Condition of Pedagogy Students. Pedagogical-psychological Empirical Study], funded by grant no. N107 010 31/1712.

These and other questions call for answers and should be discussed by interdisciplinary and multicultural teams, because each country and each culture have different experience in this area. Poland as a post-communist society now enrooting a democratic system, together with other post-soviet countries like the Czech Republic, Slovakia or the former East Germany undoubtedly have different experiences in the field of spiritual development than the former West Germany, the USA or Great Britain.

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Mausch, K. (2008). Noopsychosomatic disorders. Empirical study among the students of pedagogy in Poland. *E-psychologie* [online]. 2 (2), 25-38 [Retrieval YYYY-MM-DD]. Available on the WWW: <<http://e-psycholog.eu/pdf/karol-mausch.pdf>>. ISSN 1802-8853.