

## **Activities based on yoga techniques in psychiatric treatment in Poland in a historical context**

Agnieszka Żok<sup>1,2</sup>, Joanna Zapała<sup>3</sup>, Ewa Baum<sup>1,2</sup>

<sup>1</sup>Department of Social Sciences and Humanities, Poznan University of Medical Sciences

<sup>2</sup>Division of Philosophy of Medicine and Bioethics, Poznan University of Medical Sciences

<sup>3</sup>SWPS University in Poznan

### **Summary**

The aim of this article is to analyze the use of methods related to yoga for mental health protection and treatment of psychiatric disorders. The article is dominated by a historical perspective. It covers the achievements of the precursors of the use of yoga techniques in health promotion and treatment. Contemporary biomedical analyses confirm the health-promoting function of yoga but make much less reference to aspects related to spirituality and its importance for mental health. Due to the growing awareness of the impact of lifestyle, stress reduction and the importance of moderate physical effort on health, relaxation-motor techniques can complement therapies used in many psychiatric disorders. Analyzed historical articles confirm the positive influence of exercises based on yoga techniques on mental health. Research on the influence of yoga on the human psyche needs to be deepened, none of the presented analyses showed negative side effects of supplementing standard therapies with exercises based on different forms of yoga.

To investigate the aim of the research, a historical-comparative method and discourse analysis were used. A review of the content related to the history of yoga in Poland was carried out in the context of applying exercises based on yoga technique in psychiatry. In subsequent stages of the work, the obtained content was embedded in the medical, cultural and historical context and a critical analysis was made.

**Key words:** yoga, psychiatry, quality of life

## Introduction

Contemporary psychiatric research confirms the positive influence of dynamic yoga (*hatha yoga*)<sup>1</sup> and its related practices of meditation or *pranayama*<sup>2</sup> on health. According to research, yoga practice helps treat depression [1-6], insomnia [3, 6], and other psychosomatic disorders [2, 7, 8]. Although the mechanisms of observed mental improvement are not yet fully understood, yoga techniques can be used as a supplement to therapy.

The practice of yoga is deeply rooted in India's culture, which has one of the oldest medical traditions in the world. Developing in the Vedic period (from the second millennium to the sixth century BC), Ayurvedic medicine is based on *dosha*<sup>3</sup> balance [9]. If there is an imbalance and one of the doshas prevails, one should seek to regain balance through the practice of *pranayama* or *shatkarma* [10]. Although there are even records of surgery in Ayurvedic books [10], it is primarily focused on building a healthy metabolic system and maintaining good digestion and excretion [11]. Ayurveda also focuses on exercise, yoga, meditation [12], and hygiene (regular bathing, brushing teeth, scraping the tongue, skincare, eye washing and rinsing the nose and sinuses) [13]. Ayurvedic medicine is still a functioning way of treating patients in India today [14]. In the West, this approach to health has been widespread since the 1960s. Nowadays, Ayurveda's therapeutic substances are meticulously studied, which allows to objectively determine their effectiveness. As an example, we can mention *ashwagandha*, which improves the quality of sleep and quality of life in older adults [15].

The aim of this article is to analyze the use of methods related to yoga for mental health protection and treatment of psychiatric disorders. Based on source materials, the use of yoga techniques in enhancing treatment of mental disorders in Poland was reconstructed. This data was constituted within the cultural context that distinguishes yoga practice from other physical activities. Also, the historical materials have been referred to contemporary scientific research on the possibilities of using yoga techniques in psychiatry.

### The importance of spiritual practices and quality of life

Improving the quality of life of individuals and entire communities is one of the most critical tasks facing the world of science. The concept of quality of life was

<sup>1</sup> The concept of *hatha yoga* refers to all styles of dynamic yoga. In Sanskrit, it means combining solar energy (*ha*) with lunar energy (*tha*).

<sup>2</sup> *Prāṇāyāma* is the practice of breath control in yoga. In modern yoga as an exercise, it consists of synchronizing the breath with the movements between *asanas*, but it can also be an independent breathing exercise, usually practiced after *asanas*. The authors of the quoted articles do not point to specific breathing exercises performed with patients. However, it can be assumed that these are basic *prāṇāyāma*, such as *nadi shodana*, *sheetali*, *seetkari* or *bhramari*. It is also necessary to introduce breath retention (*kumbhaka*) with great caution for beginners. Breath retention (esp. after exhalation) can cause anxiety.

<sup>3</sup> It is assumed that three doshas exist, each characterized by specific substances: *kapha* (mucus, phlegm), *pitta* (bile, fire), and *vata* (wind, gas). Thanks to the *kriya* (*shatkarma*), it is possible to regulate these substances' excess or deficiency.

introduced to medicine in the 1970s. However, in scientific terminology, it has been functioning to this day, and over the years has not lost its relevance and even gained additional meanings [16]. According to the definition of the World Health Organization (WHO), the concept of quality of life means an individual's perception of his or her position in life in the context of the culture and value systems in which he or she lives, as well as in relation to his or her goals, expectations, standards and interests [17]. The assessment of a patient's quality of life combines different ways of perceiving the patient, diagnoses his or her needs and expectations, and ultimately, facilitates the selection of the best therapy for the patient. It is an integrative and complementary factor in relation to many scientific fields. Moreover, it assumes a subjective and holistic approach to the patient. Mutual interactions in both health and illness are at the center of interest in modern psychosomatic medicine, which is based on a holistic approach to human beings. It assumes that there is an interrelationship between the body and the psyche of a person and that the system always reacts as a whole to various types of life stressors. This approach implies a holistic treatment of the human being from the perspective of multi-faceted care of himself or herself as a patient [18-22]. Numerous studies [23-25] confirm that psychological, social, and spiritual factors have their share in the human being's biological functioning as a biopsychosocial unity.

Contemporary WHO guidelines also refer to six basic dimensions of health quality [26]. These are physical, psychological, autonomous, social, environmental, and spiritual dimensions. The assessment of the quality of life based on these aspects allows us to identify which area causes the greatest discomfort to the patient. One of the primary areas is the spiritual dimension of the patient. Spirituality itself is not a homogeneous term, although it should be noted that it is continuously growing in importance, including in the area of health psychology [20]. It is also important to note that the term spirituality is much more capacious than the concept of religiousness and is often understood in a more multi-faceted and interdisciplinary way. Tanyi Ruth [27] perceives spirituality as an individual search for meaning and purpose in life, which does not necessarily have to be related to religion. The world of spiritual experience can manifest itself through the chosen practices, values, or beliefs that give meaning to life and are a force for inspiration and motivation to achieve full well-being, which makes us feel the driving force and regain peace, hope, and faith. Additionally, we feel the joy and positive energy which make us experience life consciously, along with its imperfections, difficulties, and mortality [27]. Thus, beyond the religious aspect, which for many may be essential in the course of the disease and the period of healing [28, 29], the attending physician should also consider the importance of spiritual life among the patients [30]. Spiritual development can be achieved in many ways and its expression often takes a variety of forms, such as contact with nature, sports, circles of interest, art therapy, volunteering, and meditation with yoga, which is the leading theme of this article. In the East's philosophy, the dualism of the body and soul is not as distinct as in Western thought. The Sanskrit word *yoga*, derived from the morpheme *yuj*, signifies control, connection, and unity [31]. Work on the physi-

cal body should lead to not only strengthening it but, above all, to purifying the mind [31]. Thus, there are common points between the contemporary European concept of quality of life and yoga practice. These assumptions are present in all currents of yoga. However, nowadays, the Iyengar method of yoga is most often used in therapy due to the application of many props (blocks, rollers, straps) that enable people at all levels of fitness to practice [32].

### Yoga – a historical and cultural background

Yoga is nowadays understood as a form of physical activity, and people engaging in this form of exercise expect, above all, an improvement in their mood and physical condition [33]. Many people practicing yoga also choose this type of activity because of the relaxation and unwinding they can experience during exercise. They treat the practice of individual asanas as a form of self-care for their health and longevity. Relaxation of unconsciously tense muscles under stress is manifested in physiological changes that generally reduce the activity of the sympathetic part of the autonomic nervous system responsible for the defensive fight or flight response. This in turn activates the parasympathetic part of the autonomic nervous system, which promotes relaxation, regeneration, and healing. [34-38].

Although the modern practice of yoga, based on exercises, is quite far from its original form, some assumptions have remained unchanged. And although the current practice of asanas does not have to be closely related to spirituality or religiousness, historically, it was thanks to yoga that man could gain freedom by liberating himself from the *samsara* circle [39]<sup>4</sup>. The main theoretical assumptions of yoga come from the turn of the era, where the oldest are the Vedas (1700-1000 B.C.). These practices were very different from contemporary imaginings, and the critical concept of asana for 20<sup>th</sup> century yoga at the time meant as much as a comfortable position for meditation [39], in which one could spend a lot of time. Contemporary currents of hatha yoga devote a lot of attention to physical practices. These active positions appeared in various yoga systems as ancillary to *pranayama* (breathing exercises – breath is seen as life energy) and *dharana* (concentration). Focusing on the positions could only begin in the twenties or thirties of the 20<sup>th</sup> century [40], when yoga became of interest to wider groups of people from the West. One of the pioneers of modern yoga was Tirumalai Krishnamacharya<sup>5</sup> (1888-1989). Tadeusz Pasek justifies his interest in yoga practices in the West after World War II due to the increasing number of mental and nervous diseases caused by stress related to the war and occupation of Poland. In 1977, during the International Congress of Psychosomatic Medicine in Kyoto, a Symposium on

<sup>4</sup> In the tradition of Hinduism, Jainism, and Buddhism, *samsara* means an endless cycle of birth, death and rebirth. It is strongly linked to the concept of incarnation. Yoga as a means of liberation appears in the Upanishads, it is understood here as a method of restraining the senses and calming the mind. The acts (*karma*) of a yogi are to be free from attachment to their fruits.

<sup>5</sup> The contemporary Vinyasa Krama technique is based on the teaching of Sri Krishnamacharya.

“Yoga and Psychosomatic Medicine” was held, during which the International Scientific Group for Yoga Adaptation was established [41]. At the same time, non-academic centers of yoga in the West were developing very rapidly.

### Precursors of yoga therapy on Polish land

Theoretical studies on yoga appeared in Poland under Russian, Prussian and Austrian occupation in the second half of the 19<sup>th</sup> century. Yoga, which was then reaching the West, was already in its modern form<sup>6</sup>. However, it should be remembered that until the first half of the 20<sup>th</sup> century, yoga in Poland was strongly connected to the esoteric movements. The Eastern practices of movement and breathing were of interest to Wincenty Lutosławski, who became famous in international philosophy for his book *The Origin and Growth of Plato's Logic*. In this work, he not only chronologically organized Plato's literature but also introduced the notion of stylometry, which he used to analyze the Greek philosopher's oeuvre. The inspiration by Platonic ethics and the approach to treat philosophy as a spiritual practice to help achieve freedom helped Lutosławski discover Eastern philosophy and yoga.

The reason why Lutosławski studied texts related to yoga was his illness. Initially, Lutosławski was critical of Eastern thought. For instance, after the deliberations of the World's Parliament of Religions in Chicago in 1893, where he listened to, among others, Vivekananda's lecture, he stated that it was impossible to communicate between fundamentally different people from the West and East, which he referred to as “sectarians” [42]. A few years later, when the philosopher was in poor health and all therapies proved ineffective, he decided to find a cure for his illness independently. Based on his knowledge from books, Lutosławski began practicing “rhythmic breathing,” but unfortunately, without proper knowledge and with excessive practice, his health declined even further. Only a trip to Kosovo and moderation in practice helped him recover. Lutosławski noted that due to proper breathing, he ultimately regained his physical and mental health. In the letters to his psychologist, Lutosławski referred to, among others, a book by the once-criticized Vivekananda [42]. Impressed by the effectiveness of Eastern methods of working with the body and mind, he included these methods in the program of national education, which was to contribute to the rebirth of the Polish nation. Lutosławski further described his observations in *Rozwój potęgi woli* (The Development of the Power of Will), considered the first Polish handbook on yoga (1904). Despite his criticism of Hinduism in the book, Lutosławski mentions the assumptions characteristic of yoga's Vedic roots as prerequisites of effective practice. The book also describes the precept of purity, typical of Ayurvedic techniques of Kriya Yoga, asceticism<sup>7</sup>, and above all, ahimsa, which means not hurting living beings in

<sup>6</sup> Originally, yoga was a form of liberation from samsara, and asana was the term for a comfortable meditation position.

<sup>7</sup> Hindu asceticism is different from that associated with medieval Christian asceticism. In this case, it is not about mortifying the body but about working on oneself through meditation and fasting. Even the extreme

any way<sup>8</sup>. Only those who observed these requirements could begin the practice of breathing exercises [43]. The breath was the foundation of Lutosławski's theory. He provided instructions on how one should breathe: how long one should inhale and exhale and how long one should hold the breath. According to the author, the rhythm of breathing should be consistent with the pulse. Another critical issue was rest, which Western civilizations did not know how to take advantage of. Referring to Hindu people's experience, Lutosławski noted that one could not rest without stopping all movement, thought, and feeling. He also proposed rhythmic breathing as treatment and self-healing. By adequately directing the prana (whereby breath is identified with energy), one could treat pain and other ailments. The effectiveness of such therapy depends on the amount of the accumulated prana [43]. Referring to the tradition of Vivekananda and Ramacharaka, Lutosławski completely ignored asanas in his theory [42]. However, it should be remembered that asanas in the context of physical exercise joined the yoga tradition relatively late. Originally, asana meant a comfortable seat (later a position) for meditation [40], and even in this context, Lutosławski did not pay any attention to it.

Knowledge related to yoga started to spread in the interwar period, as evidenced by numerous translations of basic yoga-related texts and Hindu philosophy<sup>9</sup>. The new translations greatly facilitated access to knowledge about philosophy and medicine from India and undoubtedly contributed to the popularization of this thought in Poland. Unfortunately, the development of this branch of science was significantly hampered by the outbreak of World War II.

In later years after WWII, when the interest in yoga increased significantly across the world, the book *Hatha joga dla wszystkich* (Hatha Yoga for Everyone), written by Malina Michalska, was published in Poland. Of note is the fact that it was published in 1972 by a publisher specializing in medical texts (Państwowy Zakład Wydawnictw Lekarskich, PZWL). Michalska, like Lutosławski, became interested in yoga because of her health problems. When the dancer felt the positive effects of yoga practice on

---

Hindu ascetics, the Jains, did not use such radical techniques of mortification of the body. In Hinduism there is no such sharp division between the body and soul. Lutosławski also suggests fasting.

<sup>8</sup> Lutosławski mentions abstinence from killing, envy, hatred, gossip, stealing, and bribery. Interestingly, Lutosławski notes that for Poles, restraint from unfriendly thoughts about other people is the most difficult.

<sup>9</sup> In 1927, *Pantanjali's Yogasutra* translated by Antoni S. Pełkowski appeared in Polish retail.

In the interwar period, the following items were also translated:

*Upaniszady. Wiedza tajemna Wed indyjskich*, transl. S. F. Michalski, Krakow 1913;

*Bhagawadgita*, transl. F. Michalski-Iwieński, Warsaw-Krakow 1921;

Yogi Ramacharaka, *Nauka o oddychaniu*, Cieszyn 1921;

Swami Vivekananda, *Karma-Joga. Filozofia pracy i obowiązku*, Katowice 1923;

Yogi Ramacharaka, *Drogi dojścia Jogów indyjskich*, transl. A. Lange, Warsaw 1923;

Shankaracharya, *Klejnot mądrości wschodu*, transl. J. Świtkowski, Katowice 1924;

Rabindranath Tagore, *Sadhana. Urzeczywistnienie życia*, Warsaw 1924.

her body, she decided to start teaching it. In 1966, her school was included in the prestigious International Yoga Fellowship Movement [44].

*Tadeusz Pasek – yoga at the psychiatric clinic in Poznań*

Noteworthy is also a 1975 publication on yoga by the Head of the Physiology Department of the University of Physical Education in Warsaw, Professor Wiesław Radomski, who taught yoga at the university already in the late 1960s. Among his students was the Supreme Master of Yoga and Tantra, Tadeusz Pasek, who treated yoga as a relaxation-and-concentration-based healing exercise. In the 1970s, he developed sets of relaxation-concentration exercises for patients of the Psychiatry Clinic of the Medical University in Poznań [45, 46]. Pasek understood yoga as a system that unites the body, mind, and spirit. For those who had not achieved a balance of the body, mind, and spirit, Pasek recommended Kriya Yoga [47], a collection of Ayurvedic methods to detoxify the body. Similar recommendations had already been made by Wincenty Lutosławski, who did not use the exact term, but mentioned the thorough external and internal cleansing of the body [43]. In the article *Ocena wpływu ćwiczeń relaksacyjno-koncentrujących wzorowanych na jodze u pacjentów z psychogennymi zaburzeniami psychicznymi* (Evaluation of the Influence of Yoga-based Relaxation-concentration Exercises in Patients with Psychogenic Psychiatric Disorders), Pasek mentions the positive influence of yoga-based relaxation-concentration exercises on patients of the Psychiatric Clinic [45,46].

The author and his colleagues [45, 46, 48] define yoga as an “Indian hygienic and therapeutic system whose main purpose is to guide the way to maintain the mental-physical balance of the body, and to cope when internal and external factors disturb this balance” [45, p. 365]. The set of yoga-based relaxation-concentration exercises, which Pasek developed with a team from the Department and Clinic of Psychiatry of the Medical University, had beneficial effects observed in healthy people and patients with neurotic disorders, endogenous depressions, psychosomatic disorders, and multiple sclerosis. The study involved 55 patients aged from 16 to 57 years. The patients exercised for 45 minutes, twice a week, for four to five weeks [45, 37]. The exercises were based on Sivananda’s philosophy of yoga. An essential part of therapy was also breathing exercises, whose explicit goal is to maintain the respiratory system’s efficiency, increase the vital capacity of the lungs and develop the ability to use proper breathing techniques during physical activity [49]. According to Pasek, such exercises are distinguished from other sport exercises by a conscious connection between the mental factor and the reactions of the system in response to a stimulus in the form of physical work. The aim of relaxation-concentration exercises is to strive for physical and mental fitness of the body. However, physical fitness is not solely understood as efficiency, but as the proper functioning of all internal organs and systems and immunity. The author combines this Ayurvedic assumption with the WHO definition of health as the fullness of perfect, lasting mental, physical and social well-being [49].

Based on the Zerssen scale, the impact of exercise on patients' general well-being, mood, and psychomotor activity was determined. The conclusions drawn from the study indicate that the performed exercises had a positive effect on all of the mentioned areas. A more significant improvement of the examined parameters was noted in the patients who had negatively assessed their mood and well-being before the exercises. By applying the Wilcoxon test, the researchers checked the influence of the placebo effect on the test results and found that this effect did not play a significant role in assessing the impact of exercise on patients [45]. However, Pasek notes that the effectiveness of the yoga exercises themselves depends on the observance of specific hygiene rules such as proper diet and proper functioning of the digestive system [45, 46, 49]. Pasek also noted that yoga therapy should be selected individually for each patient, taking into account various contraindications, and should be based on cooperation between a doctor and a yoga specialist [47].

Until the 1960s, knowledge about the pro-health effects of yoga was mainly empirical. Today, more and more scientific studies confirm the positive impact of yoga practices on health. Studies show that yoga and its related practices can have a positive effect on the health of patients treated not only for psychiatric illnesses [50] but also for neurological [51, 52] and oncological diseases [53, 54]. Most researchers do not clearly define the style of yoga that they use for therapeutic purposes. However, it can be concluded that they are primarily based on yoga according to the Iyengar method, commonly called hatha yoga or vinyasa. These styles pay a great deal of attention to safety and the adjustment of the practice to the student's needs and abilities. Vinyasa additionally pays excellent attention to the combination of movement and breath.

Scientists from the University of Groningen have further explored the use of techniques based on yoga practice in anxiety disorders [55]. They attempted to answer whether hatha yoga (dynamic yoga) is an effective method of treating acute, chronic, and/or treatment-resistant mood and anxiety disorders. They conducted research based on a meta-analysis of data from databases archiving scientific articles. The results obtained did not show any significant influence of hatha yoga on depressive symptoms compared to routine treatment. However, a comparison of yoga practice with the control group receiving psychoeducation showed that hatha yoga led to reduced depressive symptoms [55]. Nevertheless, it should be taken into account that Tadeusz Pasek did not treat the relaxation-concentration exercises as a method of treating depression or neuroses, but only a technique supporting patients' recovery. The Dutch results are also in opposition to earlier studies. The analyses of Balasubramaniam et al. [56] indicate the effectiveness of yoga used as an additional treatment in neuropsychiatry.

In the analyses conducted by Cramer et al. [57], a small positive effect of yoga as the only treatment for anxiety disorders and depression was shown. The use of yoga as a supplement to treatment has significantly better effects. The researchers concluded that yoga could be an effective and safe intervention for people with elevated levels of anxiety. Additionally, they concluded that yoga's therapeutic practice does not increase



patients' number of injuries. All researchers clearly indicate [50-57] that more studies are necessary to verify these conclusions. Although the clinical data indicate improved patient outcomes, the underlying cause of this effect is not yet known.

### Conclusion

Due to the growing awareness of the impact of lifestyle, stress reduction, and moderate physical activity on health, relaxation-motor techniques can complement the therapies used in most mental illnesses. Although research on the influence of yoga on the human psyche needs to be deepened, none of the presented analyses has shown negative adverse effects of supplementing standard therapies with exercises based on different forms of yoga.

### References

1. La Torre G, Raffone A, Peruzzo M, Calabrese L, Cocchiara RA, D'Egidio V et al. *Yoga and mindfulness as a tool for influencing affectivity, anxiety, mental health, and stress among healthcare workers: Results of a single-arm, clinical trial*. J. Clin. Med. 2020 Apr 7; 9(4): 1037. Doi: 10.3390/jcm9041037.
2. Zalta AK, Pinkerton LM, Valdespino-Hayden Z, Smith DL, Burgess HJ, Held P et al. *Examining insomnia during intensive treatment for veterans with posttraumatic stress disorder: Does it improve and does it predict treatment outcomes?* J. Trauma Stress 2020 Aug; 33(4): 521-527. Doi: 10.1002/jts.22505.
3. Saeed SA, Antonacci DJ, Bloch RM. *Exercise, yoga, and meditation for depressive and anxiety disorders*. Am. Fam. Physician 2010 Apr 15; 81(8): 981-986.
4. Scott TM, Gerbarg PL, Silveri MM, Nielsen GH, Owen L, Nyer M et al. *Psychological function, Iyengar yoga, and coherent breathing: A randomized controlled dosing study*. Journal of Psychiatric Practice 2019; 25(6): 437-450. Doi: 10.1097/PRA.0000000000000435.
5. Palmer P, Anderson EZ, Zucker L, Kofman Y, Daneault JF. *Yoga as an intervention for the reduction of symptoms of anxiety and depression in children and adolescents: A systematic review*. Frontiers in Pediatrics 2020; 8: 78. Doi:10.3389/fped.2020.00078.
6. Wang WL, Chen KH, Pan YC, Yang SZ, Chan YY. *The effect of yoga on sleep quality and insomnia in women with sleep problems: A systematic review and meta-analysis*. BCM Psychiatry 2020; 20: 195. Doi: 10.1186/s12888-020-02566-4.
7. Varambally S, Gangadhar BN. *Current status of yoga in mental health services*. International Review of Psychiatry 2016; 28: 233-235. Doi:10.3109/09540261.2016.1159950.
8. Meister K, Becker S. *Yoga bei psychischen Störungen*. Der Nervenarzt. 2018; 89: 994-998.
9. Periyasamy G, Sheikh N, Anugula S, Vuskamalla J, Harish R, Ritu R et al. *Genome-wide analysis correlates Ayurveda Prakriti*. Nature Scientific Reports 2015; (15786): 5. Doi:10.1038/srep15786.
10. Sharma PV. *History of medicine in India*. New Delhi: Indian National Science Academy; 1992.
11. Chopra AS. *Āyurveda*. In: Helaine S. ed. *Medicine across cultures: history and practice of medicine in non-western cultures*. New York: Springer; 2003. P. 75-83.

12. Prakash B, Anweshak D, Richa Y, Aniruddh PB. *Ayurvedic concepts related to psychotherapy*. Indian Journal of Psychiatry 2013; 55(6): 310–314.
13. Underwood EA, Rhodes P. *History of medicine*. *Encyclopedia Britannica 2020*. In: <https://www.britannica.com/science/history-of-medicine>.
14. Smith FM, Wujastyk D. *Modern and global Ayurveda: Pluralism and paradigms*. New York: SUNY Press; 2008. P. 1–28.
15. Kelgane SB, Salve J, Sampara P, Debnath K. *Efficacy and tolerability of Ashwagandha root extract in the elderly for improvement of general well-being and sleep: A prospective, randomized, double-blind, placebo-controlled study*. Cureus 2020; 12(2): e7083. Doi: 10.7759/cureus.7083.
16. Turska W, Skowron A. *Metodyka oceny jakości życia*. Farm. Pol. 2009; 65(8): 572–580.
17. WHOQOL Group. *Study protocol for the World Health Organization project to develop a quality of life assessment instrument (WHOQOL)*. Qual. Life Res. 1993; 2: 153–159.
18. Heszen-Celińska I, Sęk H. *Psychologia zdrowia*. Warszawa: Wydawnictwo Naukowe PWN; 2020.
19. Heszen-Niejodek I, Gruszczynska E. *Wymiar duchowy człowieka, jego znaczenie w psychologii zdrowia i jego pomiar*. Przegląd Psychologiczny 2004; 47(1): 15–31.
20. Tylka J. *Psychosomatyka: Wybrane zagadnienia z teorii i praktyki*. Warszawa: Wydawnictwo Uniwersytetu Kardynała Stefana Wyszyńskiego; 2000.
21. Heszen-Niejodek I, Wrześniewski K. *Udział psychologii w rozwiązywaniu problemów zdrowia somatycznego*. In: Strelau J. ed. *Psychologia. Podręcznik akademicki*. Gdańsk: Gdańskie Wydawnictwo Psychologiczne; 2020. P. 450–464.
22. Schier K. *Dokąd zmierza współczesna medycyna psychosomatyczna?* Nowiny psychologiczne 2001; 4: 91–93.
23. Popielski K. *Noopsychosomatyka: Propozycja nowego podejścia diagnostyczno-terapeutycznego*. Przegląd Psychologiczny 1999; 42(4): 17–41.
24. Scheridan C, Radmacher SA. *Psychologia zdrowia: Wyzwanie dla biomedycznego modelu zdrowia*. Warszawa: Instytut Psychologii Zdrowia; 1998.
25. Wrześniewski K. *Medycyna psychosomatyczna, medycyna behawioralna, psychologia medyczna, psychologia zdrowia – czyli psychologia chorego somatycznie*. Nowiny Psychologiczne 1998; 4: 25–37.
26. World Health Organization. Division of Mental Health and Prevention of Substance Abuse. *WHOQOL: Measuring quality of life*. World Health Organization. 1997.
27. Tanyi RA. *Towards clarification of the meaning of spirituality*. J. Adv. Nurs. 2002 Sep; 39(5): 500–509.
28. Jaksz-Recmanik E, Zalewska-Puchała J. *Zachowania zdrowotne uwarunkowane religijnie na przykładzie wyznawców Kościoła Adwentystów Dnia Siódmego*. Problemy Pielęgniarstwa 2014; 22(4): 533–538.
29. Hummer RA, Rogers RG, Nam CB, Ellison CG. *Religious involvement and U.S. adult morality*. Demography 1999; 36(2): 273–285.
30. Hight AE. *Spirituality and medical practice: Using the HOPE questions as a practical tool for spiritual assessment*. Am. Fam. Physician 2001; 63: 81–88.
31. Eliade M. *Joga. Nieśmiertelność i wolność*. Warszawa: Państwowe Wydawnictwo Naukowe; 1984.
32. Wörle L, Pfeiff E. *Joga jako terapia. Podstawy i zmodyfikowane ćwiczenia podstawowe*. Wrocław: Edra Urban & Partner; 2018.

33. Penmanv S, Cohen M, Stevens P, Jackson S. *Yoga in Australia: Results of a national survey*. International Yoga Journal 2012; (5)2: 92–101.
34. Kalat J. *Biologiczne podstawy psychologii*. Warszawa: Wydawnictwo Naukowe PWN; 2017.
35. Porges S. *Teoria poliwalgalna. Przewodnik*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego; 2020.
36. Sapolsky R. *Dlaczego zebry nie mają wrzodów? Psychofizjologia stresu*. Warszawa: Wydawnictwo Naukowe PWN; 2010.
37. Zimbardo P, Johnson R, McCaun V. *Psychologia. Kluczowe koncepcje*. Warszawa: Wydawnictwo Naukowe PWN; 2017.
38. Van Der Kolk B. *The body keeps the score: Brain, mind, and body in the healing of trauma*. London: Penguin Books; 2015.
39. Sachse J. *Bhagawadgita czyli pieśń Pana*. Wrocław: Ossolineum; 1988.
40. Singelton M. *Yoga body: The origins of modern posture practice*. Oxford: Oxford University Press; 2010.
41. Ikemy Y, Ishikawa H. *International College of Psychosomatic Medicine: 4th Congress, Kyoto, September 1977. Psychosomatic medicine: A core approach to clinical medicine education, practice, research and theory*. Basel: Karger; 1979.
42. Świerczowska A. *Joga w Polsce od końca XIX wieku do 1939 roku. Konteksty ezoteryczne i interpretacje*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego; 2019.
43. Lutosławski W. *Rozwój potęgi woli*. Wrocław: Croma; 1994.
44. Kozłowiec I. Ćwirki na dobre życie. *Przestrzeń* 2019; 11: 64–73.
45. Nowakowska C, Fellmann B, Pasek T, Hauser J, Służewska A. *Ocena wpływu ćwiczeń relaksowo-koncentrujących opartych na jodze u pacjentów z psychogennymi zaburzeniami psychicznymi*. Psychiatr. Pol. 1982; 16(5–6): 365–370.
46. Pasek T. Ćwiczenia relaksacyjno-koncentrujące jako jedna z form rehabilitacji chorych psychicznie. *Psychiatr. Pol.* 1982; 16(5–6): 371–375.
47. Pasek T. *Joga – Indyjski system leczniczy*. Warszawa: PZWL; 1970.
48. Grochmal S. *Teoria i metodyka ćwiczeń relaksująco-koncentrujących*. Warszawa: PZWL; 1979.
49. Pasek T. *Ogólnoregeneracyjne i ogólnousprawniające ćwiczenia relaksowo-koncentrujące wzorowane na jodze i zen*. In: Romanowski W, ed. *Teoria i metodyka ćwiczeń relaksowo-koncentrujące*. Warszawa: PZWL; 1973. P. 209–297.
50. Ramajayam G, Sneha K, Shivarama V, Gangadhar BN. *Yoga and physical exercise – A review and comparison*. International Review of Psychiatry 2016. Doi: 10.3109/09540261.2016.1160878.
51. Turhan K, Asiye TO, Pinar Y, Ilknur H, Zaur M, Ozge E et al. *Feasibility of a 6-month yoga program to improve the physical and psychosocial status of persons with multiple sclerosis and their family members*. Explore 2018; 14(1): 36–43. Doi: 10.1016/j.explore.2017.07.006.
52. Telles S, Sayal N, Nacht C, Chopra A, Patel K, Wnuk A et al. *Yoga: Can it be integrated with treatment of neuropathic pain?* Annals of Neurosciences 2019; 26(2): 82–91. Doi: 10.5214/ans.0972.7531.260208.
53. Buric I, Farias M, Jong J, Mee C, Brazil IA. *What is the molecular signature of mind–body interventions? A systematic review of gene expression changes induced by meditation and related practices*. Front. Immunol. 16 June 2017. <https://doi.org/10.3389/fimmu.2017.00670>.
54. Danhauer SC, Addington EL, Sohl JS, Chaul A, Cohen L. *Review of yoga therapy during cancer treatment*. Support Care Cancer 2017; 25(4): 1357–1372. Doi: 10.1007/s00520-016 – 3556-9.

55. Vollbehr NK, Bartels-Velthuis AA, Nauta MH, Castelein S, Steenhuis LA, Rogier HJ, Ostafin BD. *Hatha yoga for acute, chronic and/or treatment-resistant mood and anxiety disorders: A systematic review and meta-analysis*. PLoS One 2018; 13(10). Doi: 10.1371/journal.pone.0204925.
56. Balasubramaniam M, Telles S, Doraiswamy PM. *Yoga on our minds: A systematic review of yoga for neuropsychiatric disorders*. Front. Psychiatry 2012; 3: 117. Doi: 10.3389/fpsy.2012.00117.
57. Cramer H, Lauche R, Anheyer D, Pilkington K, Manincor M, Dobos G et al. *Yoga for anxiety: A systematic review and meta-analysis of randomized controlled trials*. Depression and Anxiety 2018; 35(9): 830-843. Doi: 10.1002/da.22762.

Address: Agnieszka Żok  
Division of Philosophy of Medicine and Bioethics  
Department of Social Sciences and Humanities  
Poznan University of Medical Sciences  
60-806 Poznań, Rokietnicka Street 7  
e-mail: agzok@ump.edu.pl