



Unia Europejska  
Europejski Fundusz Społeczny



**Translation of teaching materials  
was financed by the project  
“The direction of internationalization.  
Integration of the international community of MUB  
and strengthening the ability to support foreigners”**



The program is co-financed by the European Social Fund under the Operational Program Knowledge Education Development, a non-competitive project entitled Improving the competences of the academic staff and the institution's potential in accepting people from abroad - Welcome to Poland implemented as part of the Action specified in the application for co-financing of the project No. POWR.03.03.00-00-PN14/18.

# Mindfulness as a tool for reducing stress among medical students and healthcare professionals

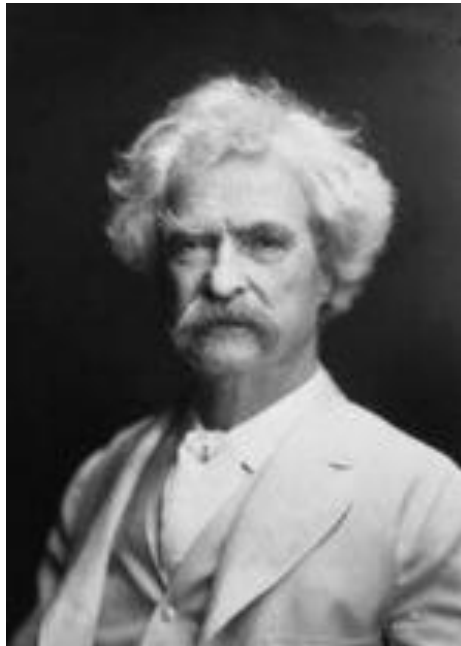
Popular science presentation prepared for the COVID-19 virus epidemic

Author: Professor Włodzimierz Łuczyński  
Head of the Department of Medical Simulation  
Of the Medical University of Białystok

The author of this work is a paediatrician, diabetologist, academic teacher  
References of the cited works are available from the author: [w.luczynski@wp.pl](mailto:w.luczynski@wp.pl)

*Mark Twain:*

*"I've lived through some terrible things in my life, some of which actually happened."*



*“If I Had My Life to Live Over, I'd dare to make more mistakes next time. I'd relax. I would limber up. I would be sillier than I have been this trip. I would take fewer things seriously. I would take more chances. I would take more trips. I would climb more mountains and swim more rivers. I would eat more ice cream and less beans. I would perhaps have more actual troubles but I'd have fewer imaginary ones. (...) I would go to more dances. I would ride more merry-go-rounds. I would pick more daisies.”*

– Nadine Stair, age 85

- The purpose of this presentation is to present examples of the use of one of the effective methods of reducing stress among medical students and doctors, i.e. mindfulness (conscious presence).
- This technique, or rather a way of life, can be useful before, during and after the epidemic 😊.

# Presentation plan

- I. Introduction (Why is it interesting?)
- II. Mindfulness as a tool for reducing stress (What is it?)
- III. Medical students and mindfulness
- IV. Doctors and mindfulness (conscious presence)
- V. Practical tips (How to start mindfulness training?)
- VI. Reservations, difficulties and guidelines for the future

# I. Introduction - justification for the topic

- Healthcare workers face many stressors in their work environment.
- These factors include both those that have always existed in medicine (such as long working hours, night shifts, pain and suffering of patients, caring for patients with life-threatening diseases, etc.) and those that have appeared recently (lack in staff, increase in the number of difficult patients, various forms of financing health care, constantly changing technology and regulations, etc.).
- The new stressor is COVID-19 epidemic.
- Stress will always be present in our work and life (it is part of our way of life in a way).

# I. Introduction - justification for the topic

- Constant stress in health care workers can lead to burnout syndrome, cachexia, depression and aggressive behaviour.
- These factors have a negative impact on the well-being, care and health of our patients.
- An additional element is isolation, social distancing both among students and healthcare professionals.
- It is hard to imagine how a person (student/doctor/nurse) under quarantine feels ("too much free time").
- A completely new phenomenon is hate speech and attacks on healthcare professionals.
- However, the mechanisms of these correlations are not fully understood.



# I. Introduction - justification for the topic

- On the other hand, the modern working environment of doctors rewards efficiency, speed and productivity, both for family doctors and specialists.
- These requirements lead to partially automatic responses, learned in in frequently repeated cases, symptoms and conditions. However, these automatisms can be dangerously careless, leading to stereotypy, monotony, inefficiency and lower quality of medical services.
- During the epidemic, these phenomena are even more pronounced due to understaffing.
- The same mechanisms may also apply to the patients.

# I. Introduction - justification for the topic

- In the medical culture, we pay too little attention to the well-being of medical students and healthcare professionals.
- Despite the growing awareness that self-care and self-awareness are key competencies among students and healthcare professionals, little attention is paid to these issues during education process.
- Self-acceptance is the foundation of any kind of care for another human being.
- These features should be considered at least partially modifiable, so it is worth paying attention to their development both in students and in young and experienced doctors.

# I. Introduction - justification for the topic

- For some time, attempts have been made to prevent burnout syndrome through an individual and systemic approach.
- Both the reduction and organization of work and the training of the mind/body may be beneficial in this area.
- General recommendations on this issue are needed for doctors, nurses and students.
- Perhaps an intervention with a relatively low cost, set in real time, based on the student-medical community will lead to an improvement in the quality of life and a reduction in occupational burnout, which in turn will give better health care to our society.
- Perhaps such an intervention can be carried out by each of us before, during or after the epidemic  
😊

# I. Introduction summary

- Medical students and healthcare professionals are not only exposed to the omnipresent stress associated with the amount of work, study and activity, but also to the culture of perfectionism that surrounds us all.
- It seems that in the era of the epidemic, all these factors work with increased strength.
- So we need tools to take a step back, put our actions in perspective, strike a balance between work, study and rest, and set priorities for maintaining mental health, well-being and effectively helping your patients.

## II. Mindfulness as a tool for reducing stress

- Mindfulness is the process of intentionally paying attention to experiencing the present moment with curiosity, openness and acceptance of each experience without judgment.
- This is done by developing an attitude of acceptance, clarity, non-judgment, patience, honesty, unexpectedness, loving kindness, concern and compassion for the current situation.
- This experience allows you to switch from the usual mode of automatically responding to someone's action to a mode of more attentive response, which leads to a greater understanding of yourself and the world around you.
- The mindfulness technique helps you avoid “autopilot” that can end up looping you into repetitive negative thoughts about yourself in the past and future.

## II. Mindfulness as a tool for reducing stress

- The classic Mindfulness-Based Stress Reduction (MBSR) program for adults who struggle with stress and its health consequences improves well-being and reduces stress and its symptoms.
- Mindfulness features correlate with lower levels of stress, depression and anxiety, and mindfulness training leads to improved well-being, less stress, conscious use of methods of coping with stress, and the ability to see a given situation more clearly and respond to stimuli more effectively.
- All of these features have the potential to have a positive impact on healthcare work.

## II. Mindfulness as a tool for reducing stress

- The use of mindfulness in medicine and psychotherapy has accelerated significantly in recent years. In the USA, over 250 medical centres use mindfulness trainings.
- One of the important elements of mindfulness is also loving kindness meditation, which consists in developing a state of unconditional kindness to all people. This can be an extremely useful skill in working with a patient, but also in activities as a part of medical team.
- Let us be honest - loving kindness is useful everywhere and always, particularly during the epidemic. 😊

## II. Mindfulness - summary



*Do you know why your dog is happier than you?*

I pay attention to the world around me or in me without judgment.



### III. Mindfulness and medical students

- Medical universities are constantly raising the level of education and requirements for both people admitted to studies and their graduates.
- Standardized exams and new classes are being introduced, the number of hours of classes is constantly increasing.
- As a result, one should think, that the level of professionalism of young doctors is increasing.
- Students however indicate, that they are too burdened with a large number of classes, constant stress and competition.
- This can lead to the emergence of burnout syndrome and the effect of reducing integration with the patient.

### III. Mindfulness and medical students

- Despite the awareness that medical studies are very stressful and the impact of stress on mental and physical health, there are no established methods of reconciling intensive learning, interest in scientific research and the ability to take care of oneself and one's spiritual (mental) development.
- More experienced doctors become interested in building a relationship with the patient and derive joy from it, but this effect can be moved to earlier years, still during medical education. This requires a change of thinking and approach to learning medicine, a conscious desire to build a relationship with the patient and learning how to do it.
- This path will lead to the concept of care with establishing relationships, self-awareness and mindfulness as the basis of medical education.

### III. Mindfulness and medical students

- Medical universities, apart from accreditation organizations, should develop programs supporting the preservation of mental health and well-being of their graduates.
- Strategies are needed to help both students and staff in maintaining resilience and well-being in their professional and personal lives, so that they can share their knowledge and skills for as long as possible.
- Such strategies are already being introduced, mostly in a pilot or facultative form, but not only. Examples include programs at American universities such as Resilience and wellbeing for health professionals, Mind-Body Medicine Skills (MBMS) or Mindful resilience. Long-term follow-up of their results will certainly be crucial.

### III. Mindfulness and medical students

- The promotion of self-awareness and focus on mind-body skills among medical students has been introduced long time ago, but the results of these studies are still insufficient, they do not qualify large groups, they do not assess long-term effects, they do not examine the relationship to learning and further work as a doctor.
- Perhaps mindfulness will expand the teacher-student relationship for the benefit of both parties? My personal experience clearly confirms this.
- Certainly, being a good teacher and being mindful/aware have many things in common 😊

### III. Mindfulness and medical students

- Mindfulness effects such as increased empathy, reduced anxiety and stress, improved self-regulation (i.e. the ability to effectively manage one's thoughts and actions to complete a task) can be especially useful for medical students who are overloaded with classes, need to remember a lot of information in a short time, and are constantly being tested.
- A meta-analysis of 19 studies on the use of mindfulness in medical students showed that mindfulness-based interventions reduced stress, anxiety, depression, improved mindfulness, well-being, self-esteem and empathy.
- According to the authors of this analysis, mindfulness training can be relatively easily adapted and integrated with modern medical teaching.

### III. Mindfulness and medical students

- Similarly, MBSR training reduced tension, anxiety, and improved mood in second-year medical students compared to attending complementary medicine seminars.
- Medical and psychology students felt a shift towards decreased reactivity, increased curiosity, affect tolerance, patience, and self-acceptance.
- There is evidence that mindfulness meditation reduces serum cortisol levels in medical students.

### III. Mindfulness and medical students

- On the other hand, students who chose emergency medicine as their future specialization and underwent a mindfulness course during summer internships, noted changes in their behaviour and emotions lasting up to 6 months after the intervention.
- Despite the small size of the group (20 students), this may indicate the possibility of preventing burnout syndrome in future emergency medicine physicians.

### III. Mindfulness and medical students

- In the only known long-term observation, 6 years of 288 Norwegian students of medicine and psychology, positive effects were shown in terms of well-being and coping with problems with both the task approach and the method of avoidance. These effects were noted despite the relatively low percentage of students regularly conducting formal meditation practice, which proves that mindfulness works not as a state, but as a feature, and the importance of informal practices in shaping the attitude of mindfulness on a daily basis.
- Medical school students in Malaysia found the mindfulness-based stress management (MBSM/Mindful-Gym) program to be useful in helping patients.
- Mindfulness not only reduces stress in medical students, but also allows them to face being a doctor with hope and confidence.



### III. Mindfulness and students - summary

- There is a need to take care of the mental health and well-being of medical students.
- Perhaps mindfulness will become one of the ways to improve the quality of mental life, stress resistance and empathy of medical students.
- During the epidemic, but also after, mindfulness is a tool that medical students can use to maintain mental balance in a difficult situation (staying at home, online classes, sense of loss, low mood, fears for the future, health, family)

## IV Mindfulness and doctors

- Mindfulness can become the missing link between evidence-based medicine and relationship-based care.
- Perhaps the classic, routine diagnostic and therapeutic process, which does not always bring the desired effect, should be enriched with awareness of inhibitors and facilitating rationality in decision-making.
- Learning to think critically, develop/train the mind, use processes such as reflection and mindfulness can lead to more creativity and innovation in diagnosing and treating patients.

## IV Mindfulness and doctors

- In the observation of 12 young doctors (average age 27.6 years), mindfulness and self-compassion traits correlated positively with calm, compassionate patient care and a sense of mental health. On the other hand, chronic stress strongly correlated inversely with these features.
- According to the authors of this report, it remains to be determined which type of training is most effective in improving mindfulness and self-compassion among physicians.
- It is difficult to "sign up for a mindfulness course" during the epidemic.

## IV Mindfulness and doctors

- Conducting a full, 8-week mindfulness course for doctors working in a hospital or university seems to be a very time-consuming and expensive task. Therefore, we are looking for simpler solutions that work just as effectively.
- A very interesting experiment was carried out at the Medical University of Wisconsin, in which leaders were prepared and trained to promote the concept of mindfulness among health professionals.
- The effects exceeded the expectations of the initiators and the investment. Five hospital ward leaders not only recognized the value of mindfulness, but also expanded mindfulness activity among colleagues, students, and patients in Wisconsin and beyond.
- Spreading the idea of mindfulness in the medical world at a low cost seems to be a great idea.

## IV Mindfulness and doctors

- In a similar program led by a colleague with experience in mindfulness training, paediatric residents experienced positive course outcomes despite completing an average of 4 out of 8 online modules and an average of 2 out of 4 face-to-face sessions. The long-term effects (after 6 months) in this study included a reduction in burnout symptoms and an increase in mindfulness.
- Participants of the course indicated that the instructor helped them introduce new skills to the everyday life of the resident.
- In a study of medical staff at the University of Galveston, the effect of MBSR on perceived stress and well-being was maintained and stable for a year of follow-up after the end of the intervention

## IV Mindfulness and doctors

- It is very difficult to check whether mindfulness affects the quality of patient care. This requires randomized, long-term clinical trials. One of the mindfulness courses resulted in the reduction of stress, anxiety and the features of professional burnout syndrome. As a qualitative effect, a positive impact on the quality of patient care and plans to use this technique both in work on oneself and with patients was reported.
- Residents after the MBSR course indicated, that it leads to increased conscious presence and self-reflection at work and, what is very important, self-acceptance and acceptance of one's own limitations.
- In addition, mindfulness led to improved stress resistance and better prioritization and boundary setting.
- Additionally, residents asked for help more often and seemed more open to receive feedback on their actions.
- Each of us can check whether mindfulness helps in caring for our patients 😊

## IV Mindfulness and doctors

- Doctors who completed the 52-hour mindful communication program experienced three aspects of its performance:
  - 1) sharing experiences from medical practice reduced the feeling of isolation
  - 2) mindfulness skills improved the ability to focus and listen to the patient's problems with an adequate response
  - 3) the development of self-awareness was a positive experience, but the participants did not always allow themselves to focus on their own development

The latter conclusion is extremely interesting and most up-to-date in the era of epidemics - "I don't have time for my spiritual / mental development" "It's better to do something more urgent"

## IV Mindfulness and doctors

- A very interesting observation was made when looking for relation between mindfulness, quality of life and the quality of patient care (from the doctor's perspective) among American oncologists.
- In this group of doctors, mindfulness influenced life satisfaction and more optimal patient care. Mindfulness improved the relation between oncologists' problems with sleep and patient care.
- Doctors may also pass on the skills acquired during mindfulness courses to their patients, especially those with chronic, psychosomatic or life-threatening diseases.
- Certainly, the above data indicate the positive impact of mindfulness therapy on the mental health of doctors.



## V. How to start mindfulness training?

My proposal:

- Buy a book with meditations (e.g. Mindfulness for Beginners, or similar e.g. Kabat-Zinna, read by Małgorzata Braunek)
- Read, but most of all practice meditations, even very short ones from audio files
- I recommend the raisin exercise as first
- Listen to meditation / mindfulness practice from YouTube (choose something that suits you)
- Try to be mindful during the day (if only for a moment😊)
- Take a slow, long walk, observe what you encounter, without judging, watch the escapes of the mind
- Implement your own development plan (books, meditations, daily mindfulness)
- When the distancing ends - join a mindfulness group (MBSR course or informal group)

## V. How to start mindfulness training?

How can my “mindful” day look like:

- in the morning, after waking up, in a comfortable position for a few minutes I observe my mind and body, I do stretching and/or improving the function of the spine exercise very slowly
- during work/ day:
  - once in a while I try to stop for a few moments to gain some distance from my own thoughts, emotions and body sensations
  - I notice when my thoughts and emotions loop, I don't judge it, I just notice it as it is
- after work, I spend a long time watching my breath (the longer the better 😊)
- at the end of the day I practice mind, body and breath observation, I do stretching exercises; you can also try the "body scan" practice (YouTube), which gives a feeling of relaxation before bedtime
- I remember that there is no such thing as a meditation/practice done incorrectly

## V. How to start mindfulness training?

How to free yourself from the pressure of time in the era of epidemics and more (too little or too much time) - example:

- 1. time is a product of thought** - how we perceive this time and what we do with it determines whether we feel that we have "enough time", "too much time" or "not enough time"
- 2. it is good to in the present tense** - thinking about the past or the future rarely gives us satisfaction
- 3. occasionally you can stay outside of time** - meditation takes us outside the system of time, in longer meditations we do not know how much time has passed, it is a very interesting experience
- 4. simplification of life** - do you have to do what you are doing? Do you need all of that? During the epidemic, it turned out that we need much less than we thought; simplifying life can mean prioritizing things ("important" vs "urgent"). Perhaps sometimes you have to say “no”.

## V. How to start mindfulness training?

What we can feel at the beginning of training:

- feeling of relaxation, especially after the "body scan" practice
- gaining distance from your own thoughts and emotions (especially negative ones): "it's not like I'm failing, it's just that sometimes I think that I'm failing" "my thoughts are not me"
- noticing the workings of the mind ("always creating something", "always running away", "returning to the past or planning the future")
- an attempt to observe your own emotions and to extend the time between the stimulus and the reaction ("here is my strength and my freedom" "I respond to the stimulus after careful consideration, not automatically")
- enjoyment of simple activities (eating, walking, talking)

## VI. Difficulties related to mindfulness and development prospects

- Many authors conclude that it is possible to conduct an MBSR course among healthcare professionals or students.
- Critical analysis of many works indicates that there are many circumstances that make this task difficult.
- A small number of participants, a high rate of resignation from the course, and above all, the lack of continuation of the course or mindfulness practice in the long term after the end of the classes show that being mindful in everyday life, as Kabat-Zinn writes, is simple, but not easy.
- For long-term mindfulness practice, self-discipline and patience are needed, which are lacking even more than usual during the epidemic. On the other hand - we do have more time 😊

## VI. Difficulties related to mindfulness and development prospects

- My experience shows that the number of MBSR participants applying is small, almost everyone completes the course, but weekly practice for the next year or two is continued by no more than a few or a dozen percent of those interested.
- In our opinion, it will also be critical to maintain the acquired approach in further personal and professional life.
- Perhaps tools that remind you of mindfulness (self-discipline) should be used for this purpose?
- Or maybe people for whom mindfulness helps the most to deal with stress will be most likely to continue the practice?
- We also take into account the possibility that some students or healthcare professionals are already at the appropriate level of mindfulness.

## VI. Difficulties related to mindfulness and development prospects

- It is also worth noting that from the review of research, it is much easier to conduct a mindfulness course among students than doctors or nurses. Students are more available than people actively working in the profession.
- However, the results of research on students cannot be fully translated into the real work of doctors, because in the end there are a lot of additional conditions and work environment, families, etc. that affect the possibility of implementing mindfulness assumptions in everyday work with a patient in a hospital or clinic.
- On the other hand, no one will appreciate the influence of mindfulness on well-being, communication with the patient and effective work and rest as healthcare professionals with many years of experience.

## VI. Difficulties related to mindfulness and development prospects

- There is still a lack of long-term, randomized studies evaluating the impact of mindfulness on both the emergence of professional burnout syndrome and the quality of patient care.
- The self-reporting of people for intervention results in difficulties in translating the results to the entire health care population. Similarly, we do not know how people who continue to practice mindfulness differ from those who do not.
- Certainly, factors such as the type of mindfulness training, the way it is organized, woven into everyday activities or work, duration, optionality or the obligation to participate in the course will affect the results obtained.



## VI. Difficulties related to mindfulness and development prospects

- There is also a growing interest in the problem of the influence of mindfulness on the effects of education and effective learning, which applies to both students and younger and elder doctors.
- There are certainly questions about whether the student's condition before beginning studies has an impact on the development of stress and its complications?
- Can we teach doctors to deal not only with their own stress, but with the stress of their patients?
- How to use mindfulness during distance learning?

## VI. Difficulties related to mindfulness and development prospects

- Mindfulness is designed to allow trained healthcare professionals to distance themselves from a mentally and emotionally stressful environment. Especially during the epidemic!
- The structure of medical universities should include tools and programs to achieve these goals.
- Surely there will be questions about when to teach mindfulness in the path of a medical career? what format is the best? how to maintain long-term mindfulness effect? Should mindfulness be conducted only for volunteers or mandatory? It would be interesting to see when the intervention works best - at the beginning of the study or at the end? e.t.c.

## VI. Difficulties related to mindfulness and development prospects

- It may be extremely interesting to examine whether mindfulness features have an impact on making diagnostic and therapeutic decisions in life-threatening situations.
- Is mindfulness related to technical or soft skills of students and doctors?
- Does being more mindful make us listen more carefully to the patient, the person accompanying him or the members of the medical team?
- Our preliminary, unpublished experiences and analyses indicate that the mindfulness of a student leading a medical team in a life-threatening situation (medical simulation) is related to soft skills and the perception of stress by the simulation participant, but does not affect technical skills.

## VI. Difficulties related to mindfulness and development prospects

- It is also important to realize that mindfulness is not the only path of spiritual / mental development, there is no monopoly on helping with stress related to learning and working in difficult epidemic conditions.
- What helps us and does not harm others is exactly what is good for us.
- We should try to avoid persuading "by force", "enlightening" everyone around, converting on the basis of "it helped me, it will help everyone". This is a feature of beginner mindfulness adepts 😊
- It is important not to expect spectacular effects of meditation. Usually “nothing happens”.  
And that's the effect 😊

# Conclusion

- During the epidemic, each of us learns a lot, every day. We are slowly starting to distinguish which things are "important" and which are "urgent". Many of us are already aware that health, also mental health is the most important thing.
- Therefore, it is worth recommending the introduction of techniques that improve the well-being of health professionals and students, which will help to maintain their good shape for the benefit of patients and themselves.
- Perhaps a careful perspective will have an impact on therapeutic decisions and cooperation with the patient in order to achieve better health effects.

# Conclusion

- It seems that healthcare workers who are more mindful/aware will be more likely to engage in self-care and manage stress better.
- They will also be better equipped to support the well-being of their patients. Mindfulness can be widely used by health professionals and students, leading to improved well-being and the quality of care provided by them.
- Good luck 😊

Thank you for your attention



Włodzimierz Łuczyński