



METEOR

Mental Health: Focus on Retention of Healthcare workers

Toolbox second version

Deliverable number: D 7.3

Version: v1



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1. Introduction

Developing and delivering an open access, ready-to-use, and searchable online toolbox is the main objective of work package 7. This online toolbox will improve the understanding of and provide access to retention policies, interventions, and guidelines with a focus on the mental health of health professionals. Furthermore, it will support key stakeholders in the implementation of retention strategies.

The Medical University of Silesia in Katowice (SUM, Poland), the Polish partner in the METEOR project, is the work package leader of work package 7 in which the toolbox will be developed. The main activities, include the development of an interactive dashboard, tailored policy recommendations, and ensuring the sustainability of the toolbox after the project duration.

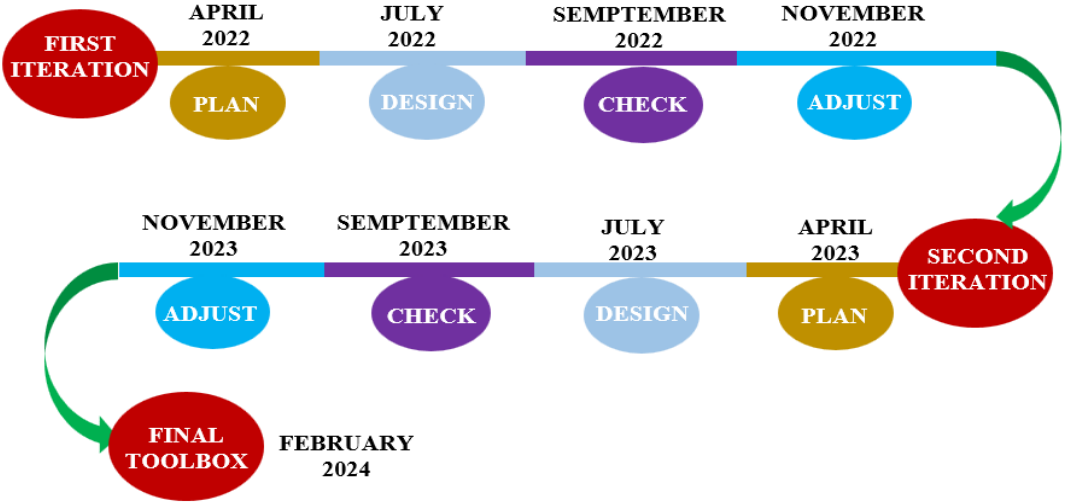
The first version of the online toolbox was delivered 12 months after the project started. Since then, we have been working on improving the tool, mainly concerning target users' needs.

2. Method

To develop the toolbox, we use co-creation methods. This is the approach where our aim is the systematic development of theory and co-created policy recommendations in close collaboration with key stakeholders (policymakers, health managers, physicians, and nurses) in an iterative manner. The focus will be on usability, i.e. how well a specific technology suits its purpose and meets the abilities, needs, and requirements of the targeted users.

Fig. 1 presents the timeline of two iterations conducted in 2022 and 2023, which have been used since the beginning of work on the toolbox for its development process.

Fig. 1. Timeline of the iterative toolbox development process.



The first year of work on the toolbox ended in April 2022 when the skeleton of the first version of the toolbox has been developed. In the same month, we started the first iteration in the development process for the next, second version of the toolbox – planning phase. In the next steps, we defined the target users of the toolbox as physicians, nurses, and hospital managers and we aimed to recognize their needs and expectations before the concept of the second version of the tool has been prepared. This was fulfilled by carrying out a series of in-depth interviews among respondents recruited from participating hospitals between October and November 2022. Then, we analyzed the obtained data and described the requirements of the target group of users. The data analysis has been conducted qualitatively, mostly by structuring responses from open-ended questions to categories.

3. Results

A total of 40 in-depth interviews among METEOR project stakeholders (as potential toolbox users) have been conducted to gain insight into their needs. We have examined 13 physicians, 16 nurses, and 11 hospital managers from Poland, Italy, Belgium, and the Netherlands (Table 1). The questionnaire contained a series of seven, mostly open-ended questions.

Table 1. The number of stakeholder interviews conducted in METEOR project countries.

Number of	Physicians	Nurses	Hospital managers
Poland	N=7	N=5	N=2
Italy	N=4	N=3	N=4
Belgium	No physicians examined	N=3	N=3
The Netherlands	N=2	N=5	N=2

We present a summary of the results below (Table 2) whereas a complete report is available in Appendix 1. It was found that stakeholders recommend including in the toolbox mainly laws related to occupational stress and working conditions, the current situation in particular countries, and examples of practical solutions protecting job resignation. It is worth noting that they declared the expectation to include practical solutions in the toolbox very often, especially if linked to planning to leave their current position, detecting workers' points of view (among hospital managers), stress prevention, motivation, and help, or diagnosis and assessment of burnout syndrome.

Table 2. A summary of toolbox stakeholder interviews.

Question	Summary of responses
1. What should be included in the Toolbox?	Laws (rules) related to occupational stress and working conditions; Examples of practical solutions protecting job resignation; The current situation in particular countries.
2. Do you think, you will make use of this Toolbox?	If there will be practical solutions Ability to consult quickly and effectively; Early identification of work issues.
3. What will make you use the Toolbox? What do you need to take a look at using the Toolbox?	Impact on the manager; Diagnosis of the problem; While complaining or planning to leave current position; Innovative and smart capacity; Practical solutions; Detecting workers' points of view.

4. What do you expect from the Toolbox?	Motivation, help (practical solutions); Diagnosis of burnout syndrome, the tool for burnout assessment; Concrete support to prevent stress.
5. When do you recommend the Toolbox to other users?	Yes, only if it will be acceptable; Yes, if it will be reliable; Discomfort in the workplace, exhaustion, and stress; If they need tools to improve communication.
6. How do You want to be informed about the changes within the Toolbox?	Mostly via e-mail.
7. Do you want to be involved in our group prototype Toolbox testing?	Yes (n=25).

4. Conclusions & Recommendations

In conclusion, the obtained results allow us to formulate the list of recommendations for the second version of the toolbox development process:

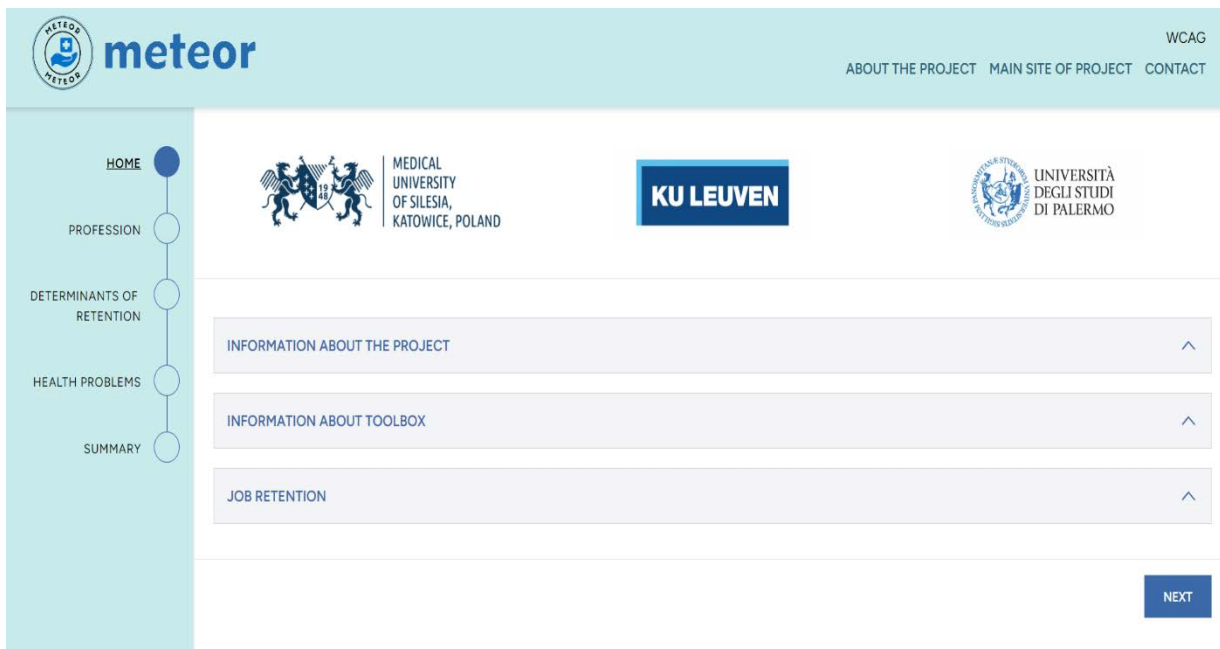
- 1) For physicians and nurses the toolbox should mostly contain practical solutions regarding work issues, e.g.: how to prevent job resignation, occupational stress, exhaustion, and burnout;
- 2) For hospital managers toolbox should contain practical solutions regarding management, e.g.: how to improve communication in the hospital, job retention, and job satisfaction, and how to detect workers' points of view;
- 3) The toolbox can also be used as a personal training tool for improving skills and raising knowledge;
- 4) The toolbox should have an easy-to-use, effective, and quick dashboard, smart capacity, clear and reliable information, and a visually attractive interface.

5. New Template

Next step, the second online version of the toolbox has been developed (Fig. 2) and is available at <https://meteor-toolbox.sum.edu.pl/>. This online version is currently under construction, so in addition, its full offline template is included in Appendix 2. The development of the first version of the toolbox framework was based on a review of existing toolboxes, which provided us with examples of the functionalities. The second version of the toolbox was improved with the needs of target users and opinions of experts in the field during the scientific

board meeting. This approach has made the toolbox more focused on practical solutions for physicians, nurses, and hospital managers that are in line with the recommendations formulated as a result of stakeholder interviews. We focused on making the user interface visually attractive and the dashboard quick and effective. Users will be able to smoothly navigate through the topics listed on the left side of the toolbox page. In addition, that tool will be available as desktop and mobile version. The toolbox will be stored on the SUM servers and will be built using technical environments such as Laravel (free and open-source web framework, intended for the development of web applications), Vue.js (JavaScript framework for building user interfaces and single-page applications) and MySQL (open-source relational database management system).

Fig. 2. Homepage of the toolbox.



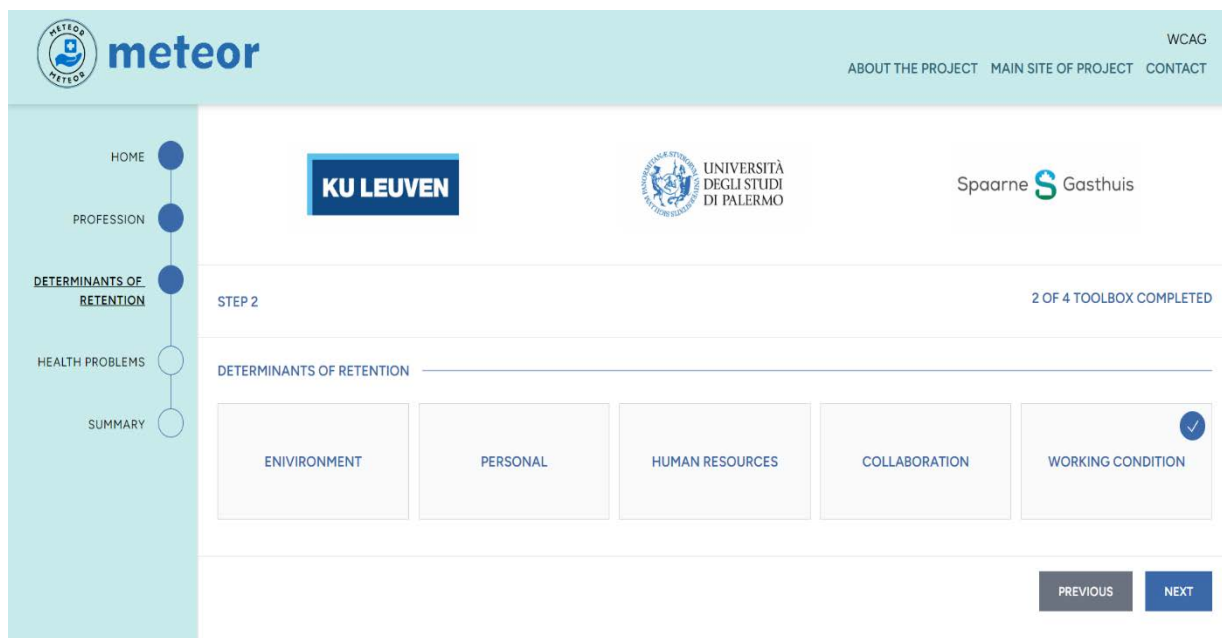
At the top of the main page, the user can find information about the METEOR project and its main goals. What is more, as it was in the first version, the toolbox will be also linked with the main site of the project, social media platforms, such as Facebook, Twitter, Instagram, and LinkedIn. In the middle, users will also find an active button containing ‘information about the toolbox’. It will contain the user manual for the toolbox (navigation explanation, icon explanation, data aggregation, and final report download).

The general part of the toolbox will be published in English due to its international character and providing information on the EU level. However, interested users will be able to view a particular selected national-specific information in four different languages: English, Dutch, Italian, and Polish.

Finally, according to the project goals, the toolbox should primarily support key stakeholders in the implementation of retention strategies. Therefore, on the main page of the toolbox, users will find a button redirecting them to ‘job retention’ information.

When clicking the button “job retention”, the user will have to choose their profession. Depending on whether they choose the icon of a physician, nurse, or other stakeholders. In the next step they will have access to ‘determinants of retention’, such as ‘environment’, ‘personal’, ‘human resources’, ‘collaboration’, ‘working conditions’ (Fig. 3). It will provide the opportunity of receiving specific information about determinants of job retention, that will be tailored to the needs of particular stakeholders.

Fig. 3. Determinants of job retention.



The determinants of job retention listed in the toolbox were determined based on the results of a systematic literature review carried out as a part of the METEOR project¹. Each button will be interactive and users can find information such as definitions, links to publications, applicable legal regulations in occupational medicine, etc. What is more, we also plan to add a button “results of the survey”. When clicking the button users will have an access to the results of two surveys managed by WP5. Alternatively, choosing the button “publications”, there will be the results of systematic reviews related to the risk factors for retention of medical workers, which are managed by WP4, in addition to applicable international and regional regulations, and selected occupational mental health problems concerning physicians and nurses employed

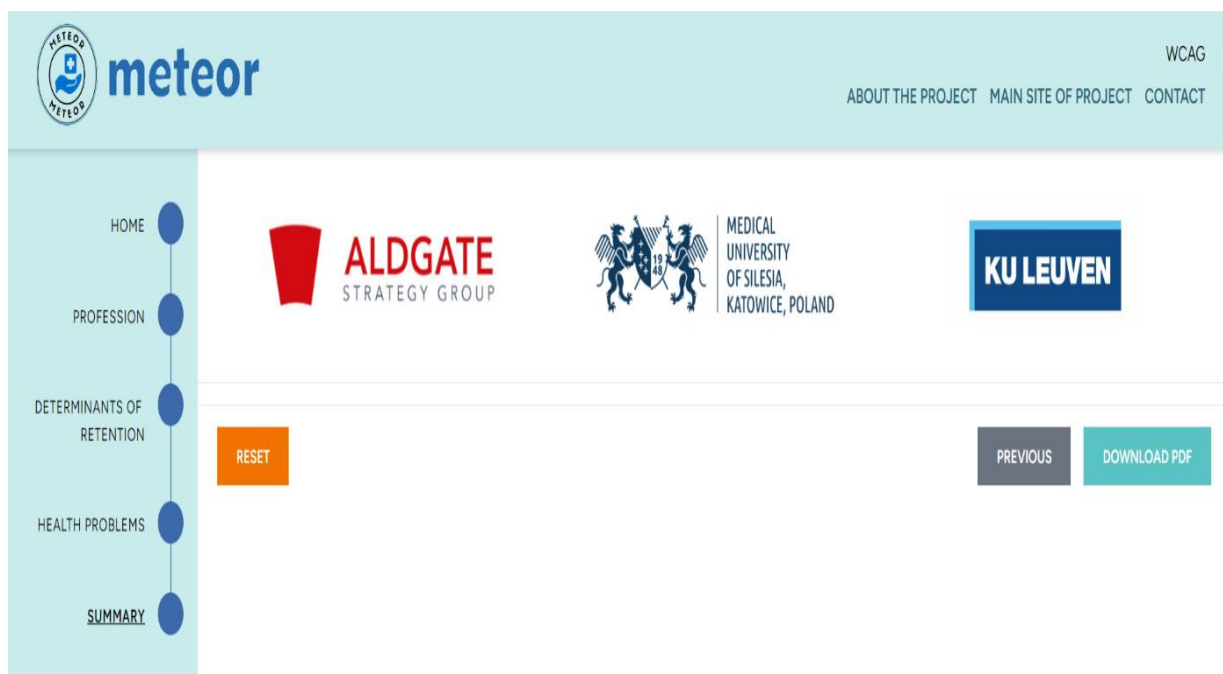
¹ de Vries, Neeltje et al. “The Race to Retain Healthcare Workers: A Systematic Review on Factors that Impact Retention of Nurses and Physicians in Hospitals.” *Inquiry : a journal of medical care organization, provision and financing* vol. 60 (2023): 469580231159318. doi:10.1177/00469580231159318.

in hospitals. The update of these sections of the toolbox will be continuously ongoing as the results of the other WPs become available. Additionally, after selecting “co-creation activity” there will be included policy recommendations developed as a result of co-creation workshops organized in participating hospitals (part of WP6).

Finally, as in the first version of the toolbox, it has been maintained that already existing practices, interventions, policies, data aimed at micro-level retention strategies, and results of the survey will be used to prepare the content of the tool at the next development stages.

It is also planned that users will be able to generate, in the summary, a final pdf report containing information selected after completing the toolbox (Fig. 4).

Fig. 4. The second version of the toolbox – last step (summary).



6. Next steps

First of all, during the last year of the project, we plan to develop the functionalities of the toolbox. After the construction is designed, then the project partners will work together to build the content of the toolbox that meets stakeholders' needs. After conducting stakeholder interviews, we know that they mainly expect practical solutions in the toolbox. However, it needs to be further investigated with the cooperation of the project partners and scientific board experts as well. So, periodical meetings on the toolbox content preparation will be held to discuss the ideas and assess the progress of work. We still have important questions to address, including:

- How make the toolbox content tailored to the needs of stakeholders from different countries? Who will provide the relevant content?
- How to adjust the obtained content to the needs of the toolbox?

When the entire toolbox is built, then it will be all tested to ensure is it working properly. After that, it will be shown to the stakeholders and ready to be implemented. The last thing to consider is to ensure the sustainability of the toolbox after the project duration. From a technical point of view, the toolbox will include an administration panel that enables its maintenance by any person or institution that will be granted the access.



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Suggestions for improving the toolbox – the summary of stakeholder interviews

Content:

Feedback from **physicians**

Feedback from **nurses**

Feedback from **hospital managers**

Recommendations

Questions





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STRATEGY GROUP

Sample

Number of	Poland	Italy	Belgium	The Netherlands
Physicians	N=7	N=4	No physicians examined	N=2
Nurses	N=5	N=3	N=3	N=5
Hospital managers	N=2	N=4	N=3	N=2

Questions

1. What should be **included** in the toolbox? (**CLOSED question**)
2. Do you think, you will make use of this toolbox?
3. What will make you use the Toolbox? What do you **need** to take a look in using the toolbox?
4. What do you **expect** from the Toolbox?
5. When do you **recommend** the Toolbox to other users?
6. How do You want to be informed about the changes within the Toolbox?
7. Do you want to be involved in our group prototype Toolbox testing?

Physicians

What should be included in the toolbox?	Poland (N=7)			Italy (N=4)			The Netherlands (N=2)			Total (N=13) YES
	Yes	No	No idea	Yes	No	No idea	Yes	No	No idea	
Information on the METEOR project and participants	5/7 71.4%	2/7 28.6%	0/7 0%	4/4 100%	0/4 0%	0/4 0%	0/2 0%	0/2 0%	2/2 100%	9/13
Laws (rules) related to occupational stress and working conditions	7/7 100%	0/7 0%	0/7 0%	4/4 100%	0/4 0%	0/4 0%	2/2 100%	0/2 0%	0/2 0%	13/13
Definitions of job retention, burnout syndrome, chronic fatigue, etc.	5/7 71.4%	2/7 28.6%	0/7 0%	4/4 100%	0/4 0%	0/4 0%	1/2 50%	1/2 50%	0/2 0%	10/13
The current situation in particular countries	5/7 71.4%	2/7 28.6%	0/7 0%	4/4 100%	0/4 0%	0/4 0%	2/2 100%	0/2 0%	0/2 0%	11/13
Examples of practical solutions protecting job resignation	7/7 100%	0/7 0%	0/7 0%	4/4 100%	0/4 0%	0/4 0%	2/2 100%	0/2 0%	0/2 0%	13/13

Nurses

What should be included in the toolbox?	Poland (N=5)			Italy (N=3)			Belgium (N=3)			The Netherlands (N=5)			Total (N=16) YES
	Yes	No	No idea	Yes	No	No idea	Yes	No	No idea	Yes	No	No idea	
Information on the METEOR project and participants	4/5 80.0%	1/5 20.0%	0/5 0%	2/3 66.7%	0/3 0%	1/3 33.3%	2/3 66.7%	1/3 33.3%	0/3 0%	5/5 100%	0/5 0%	0/5 0%	13/16
Laws (rules) related to occupational stress and working conditions	5/5 100%	0/5 0%	0/5 0%	3/3 100%	0/3 0%	0/3 0%	2/3 66.7%	1/3 33.3%	0/3 0%	5/5 100%	0/5 0%	0/5 0%	15/16
Definitions of job retention, burnout syndrome, chronic fatigue, etc.	4/5 80.0%	1/5 20.0%	0/5 0%	3/3 100%	0/3 0%	0/3 0%	2/3 66.7%	1/3 33.3%	0/3 0%	2/5 50%	3/5 50%	0/5 0%	11/16
The current situation in particular countries	4/5 80.0%	0/5 0%	1/5 20.0%	1/3 33.3%	1/3 33.3%	1/3 33.3%	1/3 33.3%	2/3 66.7%	0/3 0%	3/5 50%	2/5 50%	0/5 0%	8/16
Examples of practical solutions protecting job resignation	4/5 100%	0/5 0%	0/5 0%	2/3 66.7%	1/3 33.3%	0/3 0%	3/3 100%	0/3 0%	0/3 0%	5/5 100%	0/5 0%	0/5 0%	14/16

Hospital managers

What should be included in the toolbox?	Poland (N=2)			Italy (N=4)			Belgium (N=3)			The Netherlands (N=2)			Total (N=11) YES
	Yes	No	No idea	Yes	No	No idea	Yes	No	No idea	Yes	No	No idea	
Information on the METEOR project and participants	2/2 100%	0/2 0%	0/2 0%	2/4 50.0%	1/4 25.0%	1/4 25.0%	1/3 33.3%	1/3 33.3%	1/3 33.3%	2/2 100%	0/2 0%	0/2 0%	7/11
Laws (rules) related to occupational stress and working conditions	2/2 100%	0/2 0%	0/2 0%	4/4 100%	0/4 0%	0/4 0%	2/3 66.7%	0/3 0%	1/3 33.3%	0/2 0%	2/2 100%	0/2 0%	8/11
Definitions of job retention, burnout syndrome, chronic fatigue, etc.	2/2 100%	0/2 0%	0/2 0%	3/4 66.7%	1/4 33.3%	0/4 0%	0/3 0%	2/3 66.7%	1/3 33.3%	0/2 0%	2/2 100%	0/2 0%	5/11
The current situation in particular countries	2/2 100%	0/2 0%	0/2 0%	3/4 66.7%	1/4 33.3%	0/4 0%	3/3 100%	0/3 0%	0/3 0%	2/2 100%	0/2 0%	0/2 0%	10/11
Examples of practical solutions protecting job resignation	2/2 100%	0/2 0%	0/2 0%	3/4 66.7%	1/4 33.3%	0/4 0%	3/3 100%	0/3 0%	0/3 0%	2/2 100%	0/2 0%	0/2 0%	10/11

Hospital managers

Other topics possible to include: (suggestions from Belgian and Dutch hospital managers):

- literature
- network
- study results
- webinars
- **training sessions**
- personal tests for self reflection
- short presentation on teamwork
- the work experience through the years
- changes e.g. pre and post COVID

2. Do you think you will make use of this toolbox?

Physicians		
Poland	The Netherlands	Italy
<ol style="list-style-type: none">1. If managers will be involved in the project2. If there will be practical solutions (x3)3. If there will be diagnosis of the problem4. If there will be proved effectivity of toolbox (examples)5. If it will engage all staff (physicians, nurses and managers)	<ol style="list-style-type: none">1. Yes2. Probably not	<p>Related factors:</p> <ol style="list-style-type: none">1. Ability to consults quickly and effectively2. Interactivity and continous updating3. Applicable and practical advice

2. Do you think you will make use of this toolbox?

Nurses			
Poland	Belgium	The Netherlands	Italy
Related factors: 1. Practical solutions (x2) 2. Actual data, 3. Law regulations (standards)	Related factors: 1. Practical solution (x3) 2. Scientific literature (x1) 3. On the recommendation of colleagues (x1)	Yes (x3)	Related factors: 1. Feedback on the application of the tools recommended by the toolbox 2. Early identification of work issues 3. Tools for personnel's training

2. Do you think you will make use of this toolbox?

Hospital managers			
Poland	Belgium	The Netherlands	Italy
Related factors: 1. The practical solutions regarding management 2. Clear and easy to use	Related factors: 1. The practical solutions 2. Clear and easy to use 3. Novelty	1. Yes, with the prerequisite of the quality of the information/data	<i>This question was missed for Italian hospital managers</i>

3. What will make you use the Toolbox? What do you need to take a look in using the toolbox?

Physicians		
Poland	The Netherlands	Italy
<ul style="list-style-type: none"> 1. Free access, 2. Clear to use, 3. Impact on manager (x2) 4. Diagnosis of the problem (x2) 5. The occurrence of crisis in the workplace 6. The contact details to specialists 7. Recommendation from other person 	<ul style="list-style-type: none"> 1. When it's easy to found all information in one place 2. While complaining or planning to leave current position 	<ul style="list-style-type: none"> 1. Innovative and smart capacity 2. Increased absenteeism and near misses 3. Scientific curiosity

3. What will make you use the Toolbox? What do you need to take a look in using the toolbox?

Nurses			
Poland	Belgium	The Netherlands	Italy
<ol style="list-style-type: none">1. Practical solutions (x2)2. Training for all staff3. Law regulations	<ol style="list-style-type: none">1. Practical solutions (x2)	<ol style="list-style-type: none">1. Easy to use2. Clear3. Visual (interface) (x3)	<ol style="list-style-type: none">1. Discomfort on the workplace, exhaustion and stress2. The possibility of early identification of work issues3. Detection of distance between formal mission and what is actually implemented

3. What will make you use the Toolbox? What do you need to take a look in using the toolbox?

Hospital managers			
Poland	Belgium	The Netherlands	Italy
1. Practical solutions (x2)	1. Literature and practical solutions (x3)	1. Clear menu 2. Subject/sublinks or menu you can pin if you are interested	1. Raising awareness about workers' issues 2. Detecting workers' point of view 3. Absence of personnel willing to work in my hospital

4. What do you expect from the Toolbox?

Physicians		
Poland	The Netherlands	Italy
<ol style="list-style-type: none">1. The toolbox will show the reasons of resignation2. Motivation (practical solutions) (x4)3. How the labour market looks like4. Diagnosis of burnout syndrome, the tool for burnout assessment (x3)5. Law regulations,6. Easy to use	<ol style="list-style-type: none">1. Clear and visual information2. Easy and quick to use system	<ol style="list-style-type: none">1. Practical, easy of use and concrete help2. The possibility of being used by all employees3. Concrete support to prevent stress4. Tips to best apply the regulations to avoid burnout

4. What do you expect from the Toolbox?

Nurses			
Poland	Belgium	The Netherlands	Italy
<ol style="list-style-type: none">1. Approved information collected in the toolbox (sources)2. Law regulations regarding the workplace,3. Practical solutions4. Diagnosis of burnout syndrome, tools for health assessment	<ol style="list-style-type: none">1. Practical experiences (x2)2. Practical and friendly (easy to use) (x1)	<ol style="list-style-type: none">1. Practical experiences (x3)2. Forum of discussion (x1)	<ol style="list-style-type: none">1. Getting know the reference standards2. Problem solving tools3. Training tools for improving skills4. Organizational models to enhance professional figures and optimize resources5. Tools to create a healthier workplace and to improve sensitivity towards burnout and turnover6. Tools for personnel's training and place where they can share their work experiences

4. What do you expect from the Toolbox?

Hospital managers			
Poland	Belgium	The Netherlands	Italy
1. Data and statistics	1. Literature and practical solutions (x3)	1. Tips and intentions how to improve job retention 2. Less is more 3. Good search strategy 4. Good bright colors 5. Easy to handle and navigate 6. Vitality in different countries 7. Success stories of hospitals	1. An increase of workers absenteeism 2. Detection of distance between formal mission and what is actually implemented 3. Staff performance assessment tool 4. Company objective assessing system 5. Employee interview system 6. Tools for personnel's training 7. Tools to identify wards which seem less welcoming and dissatisfied employees

5. When do you recommend the Toolbox to other users?

Physicians		
Poland	The Netherlands	Italy
1. Yes, only if it will be acceptable (x7)	<ol style="list-style-type: none">1. When it's convenient and contains new information2. When toolbox is interesting for different people in different position in the company/hospital3. If he/she will have a good experience with it	<ol style="list-style-type: none">1. In all places where the interventions already put in place are not functional2. Always because it represents an innovative instrument3. When I get tangible results in my department4. When I have verified its validity

5. When do you recommend the Toolbox to other users?

Nurses			
Poland	Belgium	The Netherlands	Italy
<ol style="list-style-type: none">1. Yes, if it will be reliable (x4)2. If there will be practical solutions, communication via media	<ol style="list-style-type: none">1. Yes, if workers have difficult time or losing pleasure in job (x2)2. Yes, it will be helpful for the beginners (x1)	<p>Related factors:</p> <ol style="list-style-type: none">1. Discomfort on the workplace, exhaustion and stress2. The possibility of early identification of work issues3. Detection of distance between formal mission and what is actually implemented	<ol style="list-style-type: none">1. When there is a problem in the company mission2. In case of the lack personnel or wards


5. When do you recommend the Toolbox to other users?

Hospital managers			
Poland	Belgium	The Netherlands	Italy
Yes, always (x2)	1. As needed (x3)	1. If there is really usable information	1. If they need tools to improve communication


Recommendations for the Toolbox (1)



Physicians and nurses mostly expect practical solutions regarding work issues, e.g.: how to prevent job resignation, occupational stress, exhaustion and burnout




For **hospital managers**, toolbox should contain practical solutions regarding management, e.g.: how to improve communication in the hospital, job retention and job satisfaction, and how detect workers' point of view




Toolbox can also be used as a personal training tool for improving skills and raising knowledge

Recommendations for the Toolbox (2)



Toolbox should have an easy to use, effective and quick dashboard, smart capacity, clear and reliable information, and visually attractive interface (UX designer recommended)



Most of respondents (25 out of 34) want to be involved in our Toolbox testing group

Appendix 2. Toolbox - new template (full version).



meteor

TOOLBOX



Spaarne  Gasthuis

KU LEUVEN





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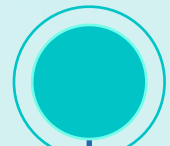
ABOUT THE PROJECT

MAIN SITE OF PROJECT

CONTACT



HOME



TOPIC 1



01

TOPIC 2



02

TOPIC 3



03

TOPIC 4



04

TOPIC 5



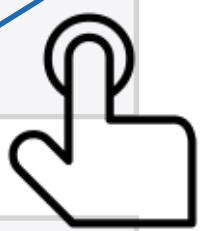
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INFORMATION ABOUT THE PROJECT



INFORMATION ABOUT TOOLBOX



JOB RETENTION



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NEXT





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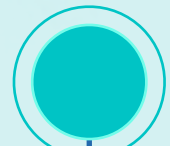
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HOME



TOPIC 1



01

TOPIC 2



02

TOPIC 3



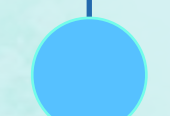
03

TOPIC 4



04

TOPIC 5



05



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INFORMATION ABOUT THE PROJECT




INFORMATION ABOUT TOOLBOX

-  Navigation explanation
-  Icon explanation
-  Data aggregation and raport download



JOB RETENTION



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NEXT





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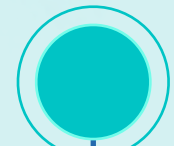
ABOUT THE PROJECT

MAIN SITE OF PROJECT

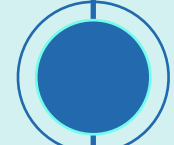
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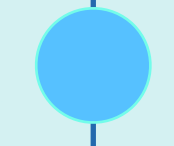


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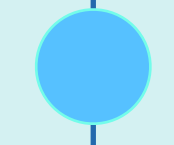
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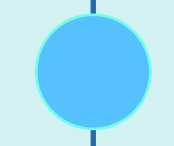
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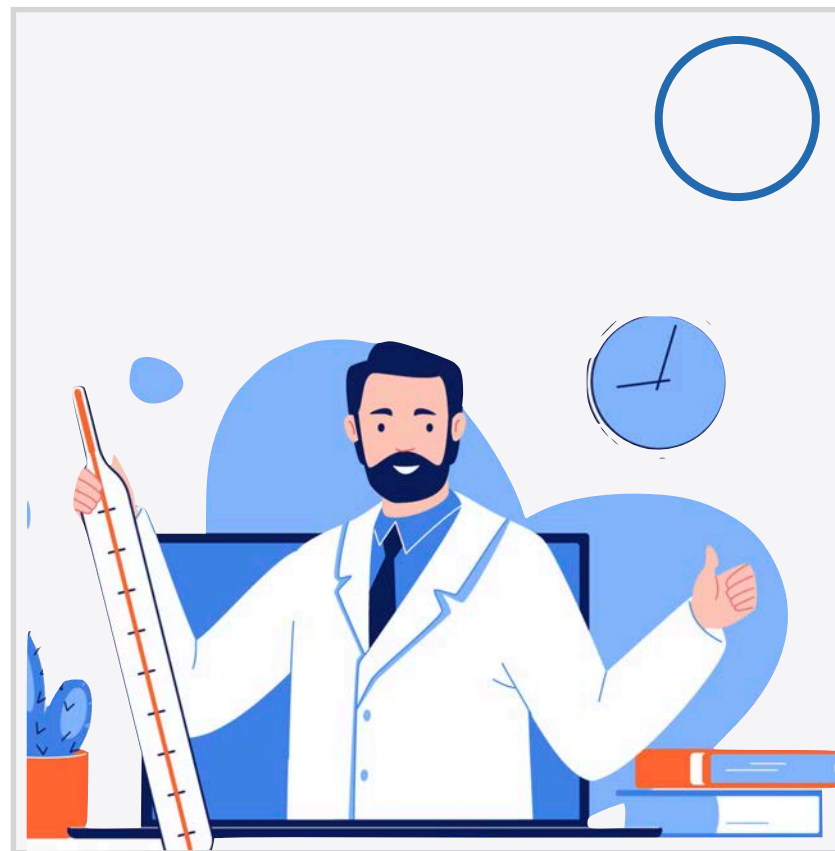


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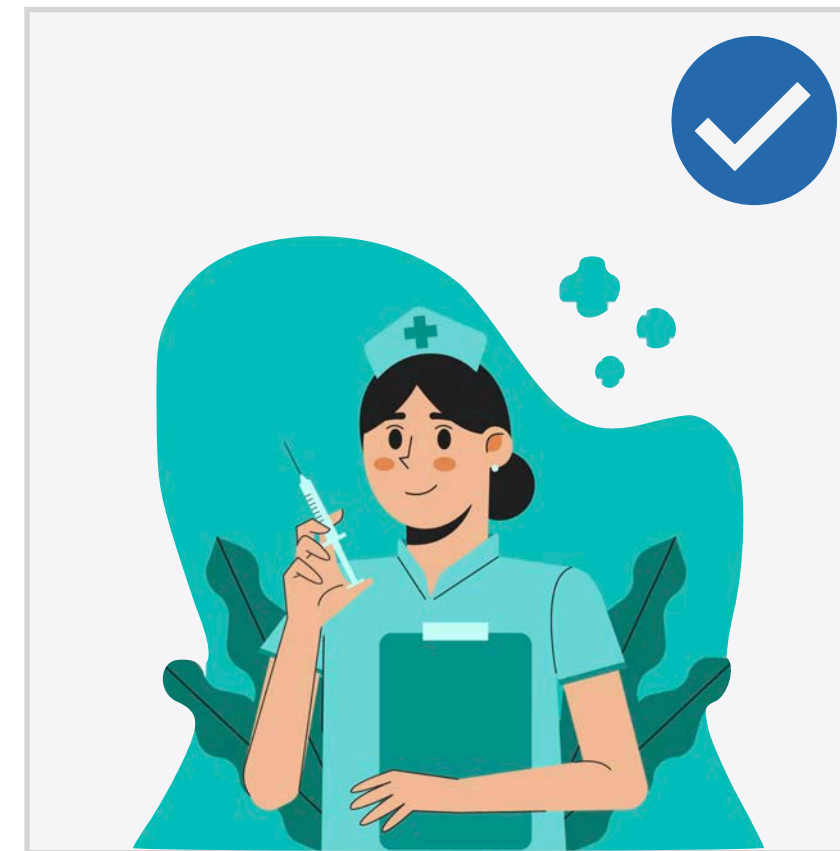
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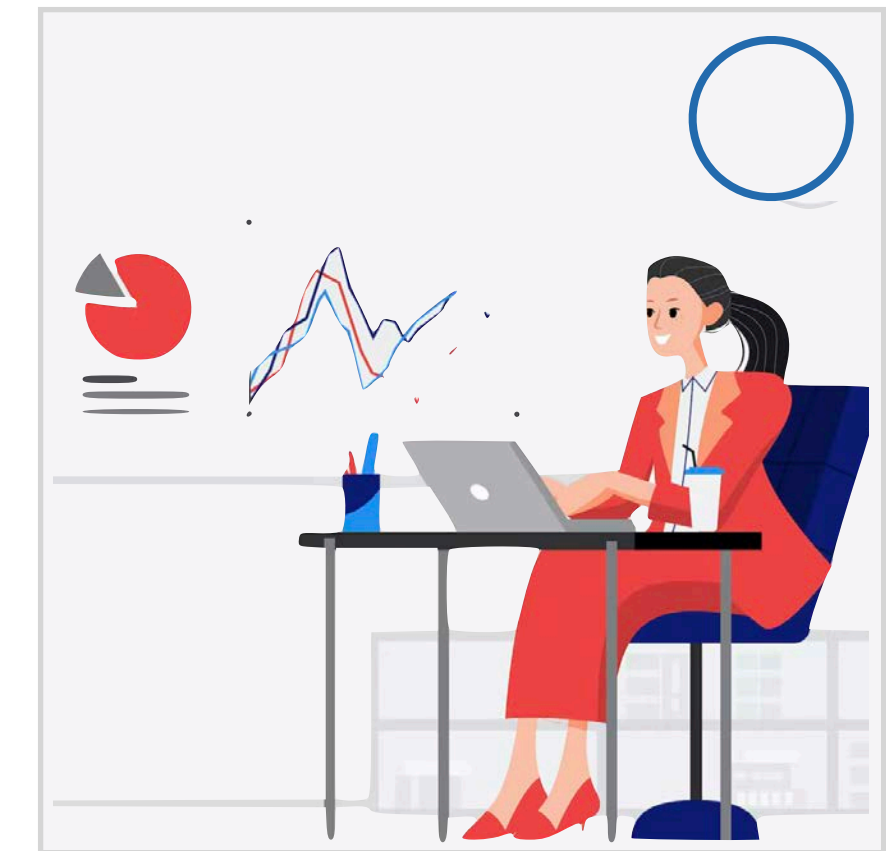
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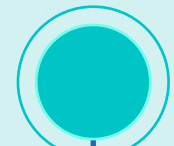
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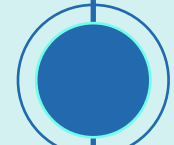
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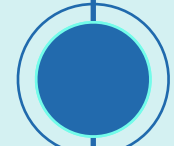


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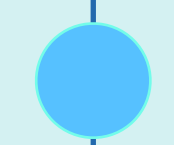
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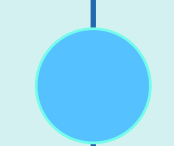
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HUMAN RESOURCES

PERSONAL

COLLABORATION

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WORKING CONDITION

CULTURE



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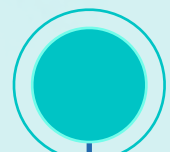
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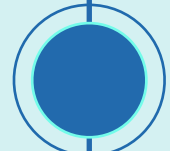
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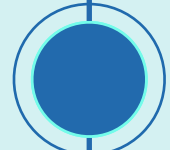


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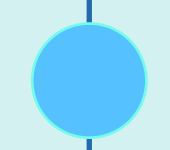
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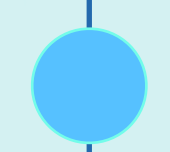
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ENVIRONMENT



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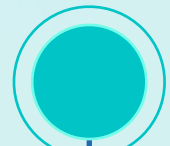
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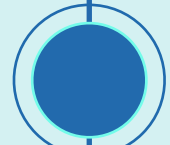
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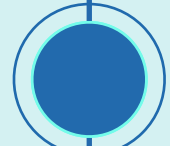


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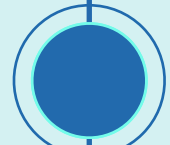
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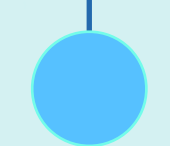
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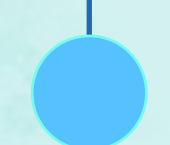
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HEALTH PROBLEMS

OCCUPATIONAL STRESS

BURNOUT

CHRONIC FATIGUE



MOBBING

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CHRONIC FATIGUE



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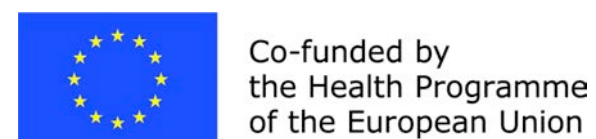


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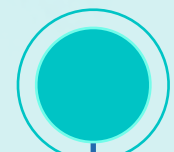
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ALTERNATIVE VIEW
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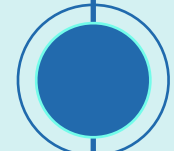
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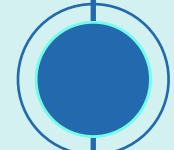


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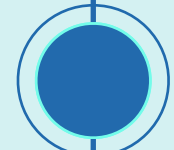
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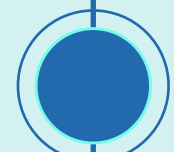
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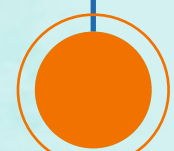
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SUMMARY

ENVIRONMENT

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DETERMINANTS OF BURNOUT

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BURNOUT ► DEFINITION

DEFINITION



Burnout is defined as the consequences of prolonged stress experienced in the work environment resulting from the imbalance between the requirements of the workplace and the capabilities of the employee. According to Christina Maslach's concept, there are three components of burnout, including emotional exhaustion, depersonalization, and reduced personal accomplishment mental and physical exhaustion. Emotional exhaustion refers to feelings of being emotionally overextended and depleted of one's emotional resources.

Depersonalization refers to a negative, callous, or excessively detached response to the people who are usually the recipients of one's service or care. Reduced personal accomplishment refers to a decline in one's feelings of competence and achievement in one's work [1].

Maslach Ch. Burnout. [International Labour Office. Encyclopaedia of Occupational Health and Safety, 4th edition. Vol 2:34,64. Geneva, 1998]; Burnout. ILO. Available: <https://www.iloencyclopaedia.org/part-v-77965/psychosocial-and-organizational-factors/chronic-health-effects/item/68-burnout>



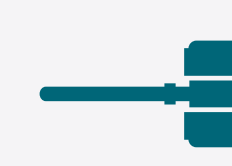
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PREVENTION



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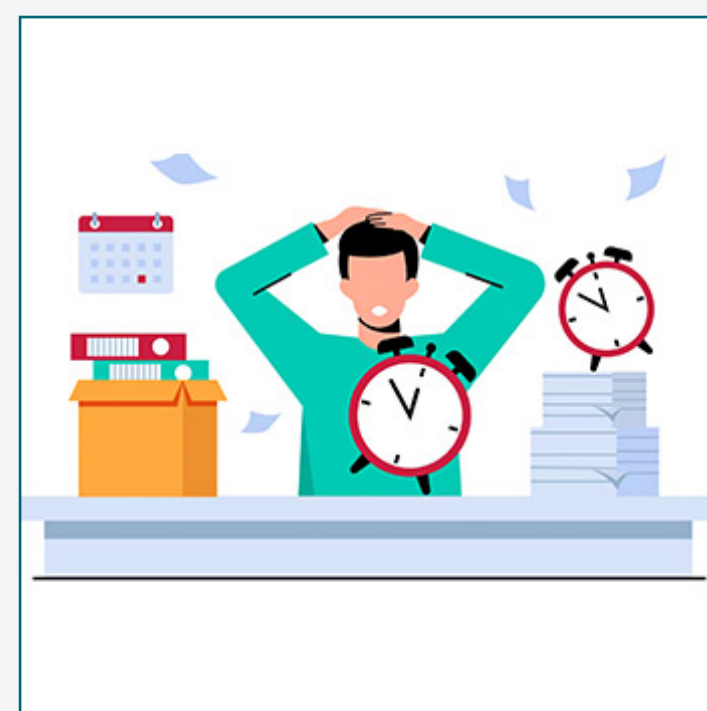
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BURNOUT ► FACTS & NUMBERS

SYMPTOMS (according to Ch. Maslach) AND HEALTH CONSEQUENCES OF BURNOUT



It was documented that burnout is related to the occurrence of mental disorders, nearly half (45%) of employees with severe burnout met the criteria for a depressive disorder, 21% for an anxiety disorder, and 10% for alcohol dependence [4]. A prospective study of dentists confirmed that burnout favored the occurrence of depressive symptoms during the three-year follow-up [5]. Another study found that burnout has predicted new cases of insomnia during an 18-month follow-up of employed adult [6]. It is believed that burnout can lead to other diseases such as cardiovascular disease, musculoskeletal disorders, and metabolic diseases including diabetes, gastroenteritis, and common colds [2],[7].

The mechanism affecting the association between burnout and health problems can be direct (i.e., stress predisposes individuals to illness, or accelerates the disease process in its subclinical phase), indirect (i.e., stress increases individuals' unfavorable health behavior), or even reversed (i.e., coping with illness further increases stress). Burnout predisposed individuals' to depression and depression predisposed individuals' to burnout [2].

EMOTIONAL EXHAUSTION

DEPERSONALIZATION

REDUCED PERSONAL ACCOMPLISHMENT

RESULTS OF OCCUPATIONAL BURNOUT ASSESSMENT ACCORDING TO THE MASLACH CRITERIA

PHYSICAN FUNCTIONING

EMOTIONAL FUNCTIONING

IN THE SPHERE OF BEHAVIOR

MORE ...



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BURNOUT ► FACTS & NUMBERS

SYMPTOMS (according to Ch. Maslach) AND HEALTH CONSEQUENCES OF BURNOUT



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EMOTIONAL EXHAUSTION

Emotional exhaustion refers to feelings of being emotionally overextended and depleted of one's emotional resources

DEPERSONALIZATION

Depersonalization refers to a negative, callous, or excessively detached response to the people who are usually the recipients of one's service or care

REDUCED PERSONAL ACCOMPLISHMENT

Reduced personal accomplishment refers to a decline in one's feelings of competence and achievement in one's work

RESULTS OF OCCUPATIONAL BURNOUT ASSESSMENT ACCORDING TO THE MASLACH CRITERIA

Author and year of publication or study	Study group	Mean value of scoring		
		Emotional exhaustion	Depersonalization	Reduced personal accomplishment
Donohoe E. at all. 1993	physiotherapists	23.5	7.6	37.3
Goehring C. at all.[9] 2005	primary health care doctors	17.9	6.5	39.6
Jabłkowska K, Borkowska A.[10]	managers	15.6	5.1	31.0
Kowalska M, Zejda J. 2009	office employees working with a computer	17.1	5.1	34.1

PHYSICAN FUNCTIONING

Headaches, stomachaches, sleep disturbances, increased blood pressure, feeling of weakness, decreased immunity

EMOTIONAL FUNCTIONING

Mood swings, depression, feeling of helplessness, low self-esteem, lack of faith in the possibility of changing a difficult situation

IN THE SPHERE OF BEHAVIOR

Absenteeism at work, frequent conflicts, indifference to patients, reduced work efficiency, poor time management, increased number of accidents, quitting work

MORE ...

Unfortunately, it has been shown that the frequency of burnout among physicians tends to increase. The largest study, involving more than 35,000 physicians in the United States, found that the burnout syndrome across all disciplines increased by nearly 10% in 2014 compared to 2011 [11]. More recent work on burnout in palliative care physicians indicates that the problem may affect up to 24 – 38% of physicians of this specialty, depending on the country [12]. Also interesting are the results of a study conducted in China, which shows that during the COVID-19 pandemic, the frequency of burnout was lower in frontline medical workers than in those who worked in a regular ward [13]. It was concluded that preventive actions should cover both the employer and the employee himself. The employer must care for good relations with employees, including a quick and effective response to all forms of mobbing, compliance with safe working hours and its intensity, prevention of work routine, enabling professional development, and the use of a clear remuneration system appreciating the employee's commitment and efficiency. Nevertheless, on the part of the employee himself, it is necessary to balance the time devoted to professional and personal life (including regular use of vacation leaves and rest during free time) and to maintain good relations in the team through cooperation, assistance, and support in the implementation of tasks. Self-education in terms of coping with stress or assertiveness aimed at improving communication with the employer or colleagues is also important [3].



The European Agency for Safety and Health at Work indicates that among the psychosocial factors in the work environment that can lead to both burnout and depression are: excessive workloads, conflicting demands and lack of role clarity, lack of involvement in making decisions that affect the worker and lack of influence over the way the job is done, poorly managed organizational change, job insecurity, ineffective communication, lack of support from management or colleagues, psychological and sexual harassment, third party violence[14]. Workers experience stress when the demands of their job are excessive and greater than their capacity to cope with them. In addition to mental health problems, workers suffering from prolonged stress can go on to develop serious physical health problems such as cardiovascular disease or musculoskeletal problems. On the other hand, for the organization, the negative effects include poor overall business performance, increased absenteeism and presenteeism (workers turning up for work when sick and unable to function effectively), and increased accident and injury rates. Estimates of the cost to businesses and society are significant and run into billions of euros at a national level.



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BURNOUT ► DERERMINANTS

FACTORS



Below we present determinants potentially responsible for the development of burnout syndrome [2]. They include both individual factors (failure to retain one's idealized self-image, progressive disillusionment, unrealistic expectations, disturbing action pattern, loss of resources, narcissistic disorders, an imbalance between conscious and unconscious functions, failed quest for existential meaning) as well as interpersonal (lack of social competence, emotional overload, lack of reciprocity, emotional contagion, emotional labor), societal (alienation, discrepancy between surface and latent functions of the organization, cultural product), and also those related to the organization of work (type of work, workload, time pressure, no clear allocation of responsibilities).

Currently, it is believed that the nature of the profession is not crucial for the occurrence of occupational burnout, although the phenomenon concerns people professionally exposed to intense contact with people (clients, wards, or patients), a higher problem is related to its occurrence in health care workers (mainly doctors and nurses)[3].

INTERPERSONAL FACTORS

INDIVIDUAL FACTORS

SOCIO-DEMOGRAPHIC FACTORS

WORK FACTORS



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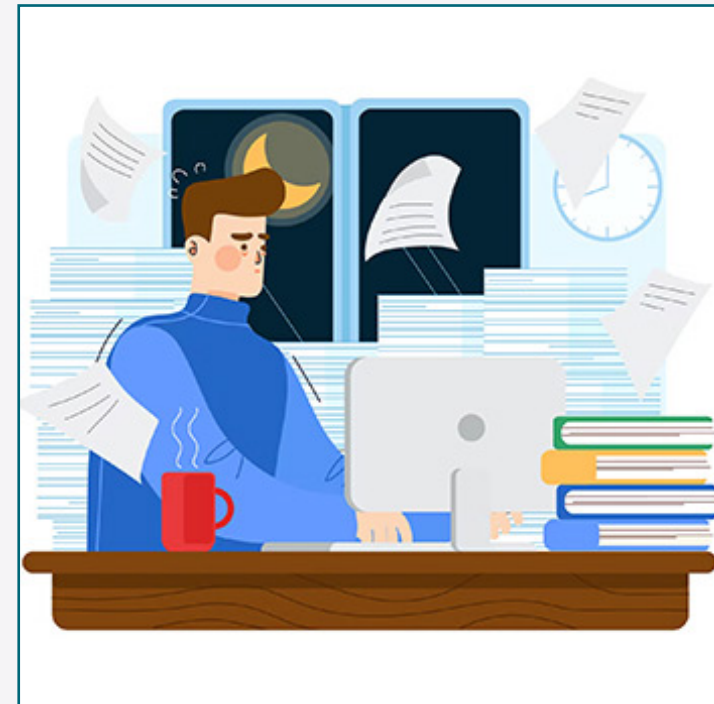
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BURNOUT ▶ DERERMINANTS

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INTERPERSONAL FACTORS

Lack of social competence, emotional overload, lack of reciprocity, emotional contagion, emotional labor

INDIVIDUAL FACTORS

Failure to retain one's idealized self-image, progressive disillusionment, unrealistic expectations, disturbing action pattern, loss of resources, narcissistic disorders, an imbalance between conscious and unconscious functions, failed quest for existential meaning

SOCIO-DEMOGRAPHIC FACTORS

Alienation, discrepancy between surface and latent functions of the organization, cultural product

WORK FACTORS

Type of work, workload, time pressure, no clear allocation of responsibilities



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BURNOUT ► PREVENTION

EXAMPLES OF EFFECTIVE METHODS THAT HAVE SUCCESSFULLY REDUCED HOSPITAL WORKER STRESS IN THE UNITED STATE OF AMERICA INCLUDE:

- Providing adequate staffing
- Educating employees and management about job stress
- Addressing work-related stressors, such as inadequate work space, unreasonable workload, lack of readily available resources, and inadequate and unsafe equipment
- Establishing regular staff meetings and discussions to communicate feelings, gain support, and share innovative ideas
- Establishing stress management programs
- Providing readily available counseling from a nonjudgmental source
- Being flexible in allowing workers to employ alternative job arrangements
- Providing reasonable shift schedules that allow workers adequate time for sleep each day
- Providing group therapy for staff confronting particularly difficult professional problems such as treating patients with cancer or other chronic illness and patient death
- Providing an organized and efficient work environment
- Recognizing and taking action on legitimate complaints regarding overbearing physicians and supervisors.
- Using individual approaches, such as relaxation exercises and other techniques (e.g., biofeedback), to relieve symptoms of stress and learn how to change physiological activity to improve health and performance
- Providing systematic educational sessions and other opportunities to improve skills and confidence
- Scheduling rotation of unit assignments
- Ensuring that the workload is in line with workers' capabilities and resources
- Designing jobs to provide meaning, stimulation, and opportunities for workers to use their skills
- Clearly define workers' roles and responsibilities
- Giving workers opportunities to participate in decisions and actions affecting their jobs.
- Establishing programs to address workplace stress, such as Employee Assistance Programs (EAP), or Organizational Change Programs



An Employee Assistance Program (EAP) can improve the ability of workers to cope with difficult work situations. Stress management programs teach workers about the nature and sources of stress, the effects of stress on health, and personal skills, such as time management or relaxation exercises that help reduce stress. EAPs also provide individual counseling for employees for both work and personal problems.



Organizational Change Programs are used to change hospital policies and procedures to reduce organizational sources of stress by bringing in a consultant to recommend ways to improve working conditions. This approach may be the most direct way to reduce stress at work. It involves the identification of stressful aspects of work (e.g., excessive workload, conflicting expectations) and the design of strategies to reduce or eliminate the identified stressors.



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BURNOUT ► RULES & LAW

RULES & LAW



Burnout is currently included in the 11th Revision of the International Classification of Diseases (ICD-11) as an occupational phenomenon. It is not classified as a medical condition, it is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three dimensions: 1) feelings of energy depletion or exhaustion; 2) increased mental distance from one's job, or feelings of negativism or cynicism related to one's job; and 3) a sense of ineffectiveness and lack of accomplishment. Burnout refers specifically to phenomena in the occupational context and should not be applied to describe experiences in other areas of life. Burnout received the code QD85 in the classification.

The European Union framework directive on safety and health at work (89/391 / EEC) regulates the implementation of occupational safety and health rules in the member states. While this document does not refer directly to work-related stress or psychosocial risks, it does oblige the employer to ensure the health and safety of employees in every aspect related to work, including the organization and working conditions, social relations, and environmental conditions[15]. Some European countries include psychosocial or mental health risks in their OSH legislation (eg Austria, Denmark, Estonia, Finland, France, Greece, Italy, the Netherlands, Belgium, Norway, Slovakia, and Sweden). Unfortunately, Poland is not one of them.

ADDITIONAL INFORMATION

DESCRIPTION

https://www.ciop.pl/CIOPPortalWAR/file/57728/2014072984051&BP4_2012_12_14.pdf

DESCRIPTION

<http://kodeks-pracy.org/wykaz-chorob-zawodowych>,

DESCRIPTION

<https://isap.sejm.gov.pl/isap.nsf/download.xsp/WDU20130001367/O/D20131367.pdf>

ADDITIONAL INFORMATION

ADDITIONAL INFORMATION

ADDITIONAL INFORMATION

ADDITIONAL INFORMATION

IN THE PROJECT WE USED:

COLOURS:

	3B69A9
	74BFFA
	2B6678
	59C3C3
	C8EBEB
	F5F4F7
	F27200
	F51727

FONTS: COMFORTAA <https://fonts.google.com/specimen/Comfortaa>

TECHNICAL ENVIRONMENT: LARAVEL Vue JS MySQL