

Brussels, September 2022

Headway

A new roadmap in Mental Health

The logo graphic consists of two stylized human profiles facing each other, forming a circular shape. The profiles are filled with a gradient of colors, transitioning from blue on the left to green on the right.

“Headway – Mental Health Index 2.0” Report

- This Report arises from the initiative “Headway – A new roadmap in Mental Health”, realized by **The European House – Ambrosetti**¹ in collaboration with **Angelini Pharma**². The information contained in this publication do not necessarily reflect the opinion or the position of the individuals and institutions referred to within the report. Decisions regarding the final analysis were ultimately made by The European House – Ambrosetti.
- The following report has been elaborated by The European House – Ambrosetti Team (Daniela Bianco – Partner and Head of Healthcare Area, The European House – Ambrosetti), Elisa Milani (“Headway” Project Coordinator and Consultant, The European House – Ambrosetti), Irene Gianotto (Consultant, The European House – Ambrosetti) and Ilaria Bosticchi (Analyst, The European House – Ambrosetti).

¹The European House - Ambrosetti is a professional Group, with 285 professionals, operating since 1965, which has grown significantly over the years, thanks also to the contributions of many of its Partners, developing numerous activities in Italy, Europe and the rest of the world. The European House – Ambrosetti was named — in the category Best Private Think Tanks — the no. 1 think tank in Italy, the no. 4 think tank in the European Union and among the most respected independents in the world out of 11,175 on a global level in the latest “Global Go To Think Tanks Report” of the University of Pennsylvania. The European House - Ambrosetti was recognized by Top Employers Institute as one of the 131 Top Employers 2022 in Italy. The European House - Ambrosetti has specific expertise in the healthcare sector with a dedicated professional practice, which for over 15 years has been developing different types of projects for all the players - both public and private - in the health ecosystem of health. For more information, please visit www.ambrosetti.eu and follow on twitter.com/Ambrosetti.

²Angelini Pharma is the pharmaceutical division of Angelini Industries. The Group started almost 100 years ago as a small pharmaceutical laboratory, and over the years has grown into a leading international group in healthcare, present in Pharmaceuticals and Mass-Market. Angelini Pharma is a leader in healthcare, with particular strength and expertise in the fields of Central Nervous System (CNS) and Mental Health, including Pain, and Rare Diseases. The company is also a leading player in the Consumer Health segment, with highly successful OTC brands worldwide. The company operates directly in 25 Countries employing more than 3.000 people. As part of its internationalization strategy, Angelini Pharma has also concentrated on development in Countries with high growth potential. Current research focuses on Nervous System Diseases and Disorders, Pain and Inflammation and Rare Diseases, with a particular commitment to the research of new treatments for the pediatric population. The research embraces public-private partnerships with recognized academic institutions and centers of global importance. The Scientific Network and Partnerships both have an important role in creating innovation.

- The “Headway” initiative has been made possible through the **collaboration with experts of the Mental Health Sector**. The European House - Ambrosetti acknowledges the time and expertise provided and would like to thank them for providing valuable insights, contributions and experiences to the elaboration of this Report. In particular (*in alphabetical order*):
 - **Celso Arango** (Director, Institute of Psychiatry and Mental Health Hospital Gregorio Marañón; Professor of Psychiatry, Universidad Complutense Madrid)
 - **Fabrizio Starace** (President, Italian Society of Psychiatric Epidemiology)

- "Headway" is an initiative on Mental Health that was conceived and launched in 2017 by the Think Tank The European House - Ambrosetti in partnership with Angelini Pharma with the aim of creating a **multidisciplinary platform for strategic reflection, analysis, dialogue and comparison between various European experiences** in the management of individuals affected by Mental Health disorders. The initiative, activated in continuity and in coherence with programs, activities and plans of the WHO, international and Institutions and organizations, has a European perspective.
- The "Headway 2020" initiative has been developed over the course of the year 2018 with a **work of analysis, study and dialogue between more than 40 experts** from the medical-scientific community, representatives of patient and family associations and health economists of the European Mental Health sector, **in 3 Countries** - Spain, Italy and Poland – through the activation and organization of dedicated national working group tables and an international workshop aimed at sharing the different experiences. These meetings highlighted the main issues connected to the organization of Mental Health services and the management of individuals affected by Mental Health disorders, and the need for specific training programs dedicated to health and non-health professionals and for initiatives aimed at a better integration of individuals affected by these disorders into the education and working environment. Cases and virtuous experiences have also been identified and shared during a **high-level European Workshop** organized in Rome. In November 2018, the analyses and priorities of action elaborated by each Country were merged into a final report.
- The work of "Headway 2020" continued in 2019 with some specific activities at Country level, including the presentation of the results to national institutions, and with the creation of an important Forum in Brussels, which took place on October 9, 2019, the day before the World Mental Health Day. The "Headway 2020" Forum was primarily aimed at presenting the scenarios and impacts of Mental Health and existing challenges in the EU, at exposing the activities and results of "Headway 2020" and at offering an opportunity for discussion and debate on the centrality of the management patients with Mental Health disorders and priorities of **future actions in order to create a "new roadmap for Mental Health" in Europe.**

- Since the outbreak of the **COVID-19 pandemic in 2020**, the levels of anxiety and stress of the population have increased significantly, whereas the overwhelming loss of family members and fear of contagion has contributed to thorough sadness and fear within the society. In addition to the latter, necessary lockdown measures and social isolation have caused important socio-economic impacts, inducing shared anxiety as businesses struggle to survive and individuals become at risk of loss of income and employment. Moreover, the emergency has restricted daily routines and increased loneliness, triggering the numbers associated to social isolation. As highlighted by Director General Tedros in May 2020, the impact of the **COVID-19 pandemic on the Mental Health of the population is indeed extremely concerning**.
- Following the need to increase the awareness on mental health during these difficult times, in October 2020, The European House – Ambrosetti supported Angelini Pharma with the realization of the “**Headway 2023 – Mental Health Week**” – a week of events, debates and testimonials during which Mental Health experts, patient associations and citizens raised awareness on the issue of Mental Health to overcome the stigmatization that often accompanies mental illness.
- In 2021, “Headway 2023” focused on sharing knowledge and know-how to prevent, diagnose, manage, and find solutions that **reduce the burden of mental conditions not only in the healthcare sectors, but also in workplaces, schools and society in general**. The initiative kept the trajectory of the programs, activities and strategies of Governments and International Organizations such as the WHO and the UN Sustainable Development Goals, as well as European Institutions with the objective of contributing to reducing the burden of Mental Health disorders in Europe and designing a **new roadmap for Mental Health in Europe**. In particular, It has been elaborated an analysis on the responsiveness of European Countries to Mental Health needs (“**Headway2023 - Mental Health Index**”) with particular focus in the areas of Health, Society, School and Work, realized an institutional event to present the “Headway 2023 - Mental Health Index” on the occasion of the Mental Health Day 2021 in Brussels and has reactivated **2 multidisciplinary platforms** in Italy and Spain, **involving experts of the Mental Health across various sectors**.

- In 2022, the goal of "Headway" has been to continue the work started in 2017 aimed at sharing **knowledge and know-how to prevent, diagnose, manage, and find solutions that reduce the burden of mental disorders** not only in the health sector, but also in workplaces, schools, and society at large but also in the environmental context.
- In particular, the objective of "Headway" in 2022 has been to update the model of analysis on the performance of European Countries in the field of mental health ("Headway - Mental Health Index") with particular focus on the areas of Health, Society, Education, and Employment, integrating a new area that is the **environmental context**. The latter takes into account both the environmental context (e.g., pollution, climate, etc.), but also the physical context (e.g., natural disasters, security, crime, etc.). The updating of the data takes into consideration the **impacts of the COVID-19 pandemic on mental health** and gives some insights on the **possible indirect and indirect impacts on the Mental Health of the population of the current scenario**, characterized by the soaring of socio-economic uncertainties (e.g. inflation, energetic crisis, disruption of supply chains, etc.) and geopolitical conflicts (e.g. war in Ukraine), in addition to major global challenges such as the climate crisis, demographic winter and social tensions.
- The latter results have been shared at an institutional event in Brussels, held on **September 28th at the European Parliament**.

Index

- **Introduction on Mental Health**
 - **Mental Health in the UN Sustainable Development Goals**
 - **WHO and EU's main initiatives and action plans**
- **An update on the impacts of the COVID-19 pandemic on Mental Health**
- **«Headway 2023 – Mental Health Index 2.0»**
 - Environmental determinants of Mental Health
 - Mental Health status of the population
 - Responsiveness to Mental Health needs in healthcare
 - Responsiveness to Mental Health needs in workplaces, society and schools
- **Results and conclusion**

Definition of Mental Health

- The topic of Mental Health is of crucial importance, given that it encompasses **people’s psychological, emotional, and social well-being**. It is more than the absence of mental disorder: it is a state of balance within and with the environment. There are many factors affecting mental health such as: biological influences, lifestyle, family history of mental health issues, structural factors, social and community factors. Mental health can change over time and tackling the aforementioned factors is a way of impacting mental health positively.
- Mental Health is an **integral part of health and well-being**, as defined also by the World Health Organization (WHO), namely “*a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community*”. The WHO also stated that “*Mental Health is an intrinsic part of our individual and collective well-being. Having good mental health means we are better able to connect, function, cope and thrive.*”
- The definitions provided by the World Health Organization (WHO) are very broad and Scientific Societies and researchers highlighted the risk of **a significant number of concerns and the possibility of misunderstandings**. Mental Health is differently understood among different cultures and Countries. In addition, Mental Health risks vary across **gender, age, socioeconomic status, and provenance**.
- To better define the concept Mental Health, a paper* drafted, as part of the activities of the **Committee on Ethical Issues of the European Psychiatric Association**, a new definition which aims to encompass a wider array of aspects:
“Mental Health is a dynamic state of internal equilibrium which enables individuals to use their abilities in harmony with universal values of society. Basic cognitive and social skills; ability to recognize, express and modulate one's own emotions, as well as empathize with others; flexibility and ability to cope with adverse life events and function in social roles; and harmonious relationship between body and mind represent important components of Mental Health which contribute, to varying degrees, to the state of internal equilibrium”.

(* Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. “Toward a new definition of Mental Health”, 2015

Mental Health in the UN Sustainable Development Goals (1/2)

- In recent years, Institutions at international level have affirmed the need for action and have started to put in place **policies and programs to address mental illness across all sectors and age groups**. Despite some important initiatives, there still exist critical issues, which require multidisciplinary and cross-sectoral interventions aimed at improving quality of life of individuals affected by Mental Health disorders.

- Fortunately, in more recent years, there has been increasing acknowledgement of the important **role mental health plays in achieving Global Development Goals**, as illustrated by the inclusion of mental health in the Sustainable Development Goals (SDGs). In fact, In September 2015, the United Nations General Assembly recognized the promotion of Mental Health and well-being, and the prevention and treatment of substance abuse, as **health priorities within the Global Development Agenda**. The inclusion of Mental Health and substance abuse in the SDG Agenda is likely to have a positive impact on communities and Countries:

- Specifically, **Goal 3** of the 17 Sustainable Development Goals (SDGs) focuses on ensuring healthy lives and promoting well-being for all at all ages, by making world leader commit to *“prevention and treatment of noncommunicable diseases, including behavioral, developmental and neurological disorders, which constitute a major challenge for sustainable development”*.



3 GOOD HEALTH & WELL-BEING

Ensure healthy lives and promote well-being for all at all ages

- Within the health Goal, 2 targets are directly related to Mental Health and substance abuse:
 - Target 3.4** - requesting that Countries “by 2030, reduce by one third premature mortality from noncommunicable diseases through prevention and treatment and **promote Mental Health and well-being**”.
 - Target 3.5** - requesting that Countries “strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol”.

Mental Health in the UN Sustainable Development Goals (2/2)

- As previously mentioned, Mental Health has been included in the UN SDGs. However, uncertainty exists about the **extent to which the major social determinants of mental disorders** are addressed by these goals.
- A study published in 2018, developed a **conceptual framework for the social determinants of mental disorders** aligned with the SDGs in order to reduce the burden, which **suggests possibilities for action across a range of sectors**. It might also reveal potential mechanisms of interaction between socioeconomic factors and mental disorders, which, in turn, could provide an opportunity to shape the existing strategies to prevent the development of mental disorders in populations. A total of **5 domains were identified**:



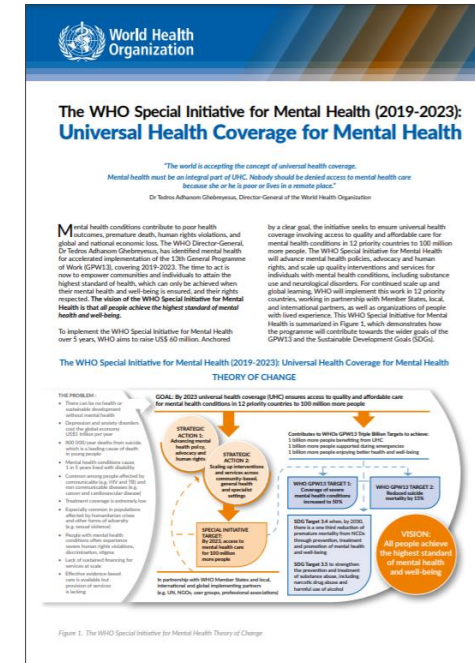
Mental Health promotion and protection according to the World Health Organization (1/2)

- The **work of the World Health Organization (WHO)** focuses on improving Mental Health of individuals and society at large through the promotion of mental well-being, the prevention of Mental Health disorders, the protection of human rights and the care of people affected by Mental Health disorders.
- Several **actions, activities, programs and interventions** have been enforced by the WHO in order to support Member States in dealing with Mental Health disorders in the most relevant manner, these include, among others the elaboration of the **Mental Health Action Plan** (last publication 2013-2020), which focuses on achieving equity through universal health coverage and stresses the importance of prevention and the introduction of Mind – Mental Health in Development, which assesses and supports **Mental Health policy and service development of Member States. In 2019, the World Health Assembly decided to extend the period of the action plan until 2030.**
- An important action was taken during the **WHO European Ministerial Conference on Mental Health**, held in Helsinki in January 2005, where the **Mental Health Declaration for Europe and the Mental Health Action Plan for Europe** were signed and endorsed on behalf of Ministers of Health of the 52 Member States. The signing symbolized a strong commitment by Governments to work to solve the existing and emerging challenges faced by individuals affected by Mental Health disorders in Europe. Member States, representatives of professional organizations and nongovernmental organizations all demonstrated a powerful and unique commitment to take the action set out in the Declaration and to work together in its spirit. A newer version of the Mental Health Action Plan for Europe (2013-2020) was published in 2013 and proposes effective actions to strengthen Mental Health.



Mental Health promotion and protection according to the World Health Organization (2/2)

- In 2019, the WHO launched the **WHO Special Initiative for Mental Health (2019-2023): Universal Health Coverage for Mental Health** to ensure access to quality and affordable care for Mental Health conditions in 12 priority Countries to **over 100 million people**. The WHO Special Initiative for Mental Health will advance **Mental Health policies, advocacy and human rights, and scale up quality interventions and services** for individuals with Mental Health conditions, including substance use and neurological disorders.
- In WHO Region Europe, Mental Health was already identified as a key priority through the **European Programme of Work, 2020–2025 “United Action for Better Health”**, which sets out health priorities for the coming 5 years.
- In light of the COVID-19 pandemic, a renewed focus on Mental Health has been particularly important. In 2021, WHO Region Europe activated the **WHO Technical Advisory Group on the Mental Health impacts of COVID-19** in the WHO European Region.
- In 2021, WHO Member States recommitted themselves to the **“Comprehensive mental health action plan 2013–2030”**, updating it with new targets and implementation options that build on lessons learned over the past decade. The updated plan provides a roadmap for action by all stakeholders.
- The topic is now receiving more broadcast and social media attention, particularly following the COVID-19 pandemic, and among young people. However, the **latest analysis of Countries’ performances carried out through the WHO’s Mental Health Atlas** showed that progress has been very slow.

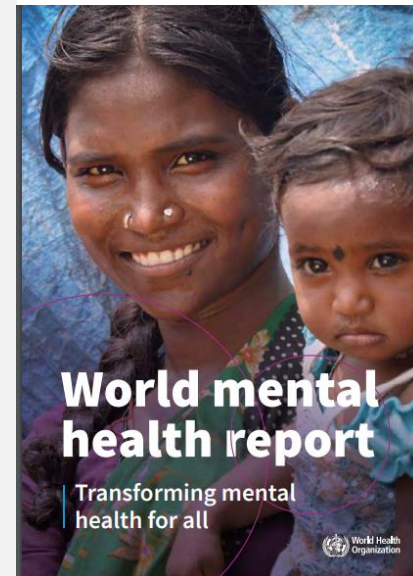


The WHO «Mental Health Global Report 2022»

- The **WHO «Mental Health Global Report 2022»** is an update of a previous report published in 2001 and argues for a worldwide **transformation towards better mental health for all** through the implementation of the WHO Comprehensive mental health action plan 2013–2030, which represents a commitment from all Countries to improve mental health and mental healthcare. In particular, the report points out **3 key paths to transformation** that can accelerate progress against the global action plan:
 1. Increase **value and commitment given to Mental Health as individuals, communities and governments**; and match that value with more commitment, engagement and investment by all stakeholders, across all sectors.
 2. Reshape the **physical, social and economic characteristics of environments** – in homes, schools, workplaces and the wider community – to better protect **mental health and prevent mental health conditions**. These environments need to give everyone an equal opportunity to thrive and reach the highest attainable level of mental health and well-being.
 3. Strengthen mental healthcare so that the **full spectrum of mental health needs is met through a community-based network** of accessible, affordable and quality services and support.

The latest analysis by WHO's Mental Health Atlas of country performance against the targets indicated in the **action plan confirms that progress has been slow**. For example:

- in 2013, **45%** of Countries reported having mental health policies and plans that were aligned with human rights instruments, which rose to **51%** in **2021** (still far from the target of 80% in 2020)
- **Coverage for care of psychosis worldwide** is estimated to be as low as **29%**
- The **global age-standardized suicide mortality rate for 2019** had dropped **10%** since 2013, but also this is far short of the **33% reduction target for 2030**.



Recent Mental Health initiatives promoted by the WHO/Europe Region (1/2)

- To address the gaps in mental health services and to tackle the effects of COVID-19, the **WHO/Europe** launched in September 2021 a flagship initiative, namely the **new Pan-European Mental Health Coalition**.

- The Coalition gathers national leaders, professionals, citizens and representatives of International Organizations to discuss and elaborate plans aimed at **transforming mental health services** and **integrating mental health into emergency response** and recovery efforts, as well as **promoting mental health and preventing mental ill health across the life course**.



- The **four main domains** are:
 - Creation of a platform for information **exchange and advocacy**;
 - Umbrella for a multi-agency, Region-wide lessons, **best-practices, and perspectives** for policy formulation and implementation;
 - **Stimulator for research** on mental health, its component and ways to provide assistance and prevention;
 - **Facilitator of dialogue** on mental health in order to determine national policies and plans.

- The Coalition functions as the operationalizing tool of the **European Framework for Action on Mental Health 2021-2025 (EFAMH)**.
- The goal is to implement a **whole-of-society approach** to mental health system reforms by allowing Member States to maintain their diversity.
- To do so, the Coalition is organized around six working packages, which reflect the targets of implementation of the EFAMH:
 - Mental health **leadership**;
 - Mental health and well-being of **children, adolescents, and young people**;
 - Mental health and well-being of **older adults**;
 - Mental health in the **workplace**;
 - Mental health in **emergencies**;
 - Mental health service **transformation**.



Recent Mental Health initiatives promoted by the WHO/Europe Region (2/2)

- The **European Framework for Action on Mental Health (2021-2025)** sets out a response to emergent and pre-existing challenges in light of the negative impacts that the COVID-19 pandemic has had on mental health and well-being in the WHO European Region. EFAMH covers several areas of work, including:
 - moving towards **universal health coverage** - mental health service transformation;
 - **protecting people better against health emergencies** - integration of mental health into the preparedness for, response to and recovery from crises and emergencies; and
 - **ensuring healthy lives and well-being for all at all ages** - mental health promotion and protection over the life course.
- It identifies the **priority initiatives** to promote in order to have positive impacts on mental health and well-being:
 - Creation of a **mental health data platform to collect information** on mental health systems' performances and population mental health status;
 - **Building resilience for the mental health and well-being of children and youths**, especially considering the strong effects determined by the pandemic;
 - **Provision of support for the mental health of older people**, especially considered the effects of COVID-19 on this age group.

- The EFAMH is aligned with the **WHO Comprehensive Mental Health Action Plan 2013–2030** and takes into consideration all 4 globally agreed objectives for mental health:
 1. leadership and governance
 2. promotion and prevention
 3. service improvement
 4. information systems
- EFAMH builds on the **WHO European Mental Health Action Plan 2013–2020**, which placed particular emphasis on the **promotion of mental health and well-being**, the **protection of the human rights of people with mental health conditions** and the development of **accessible, safe and effective services**
- The period of implementation is **2021–2025**
- An interim report on progress will be **prepared in 2023**.



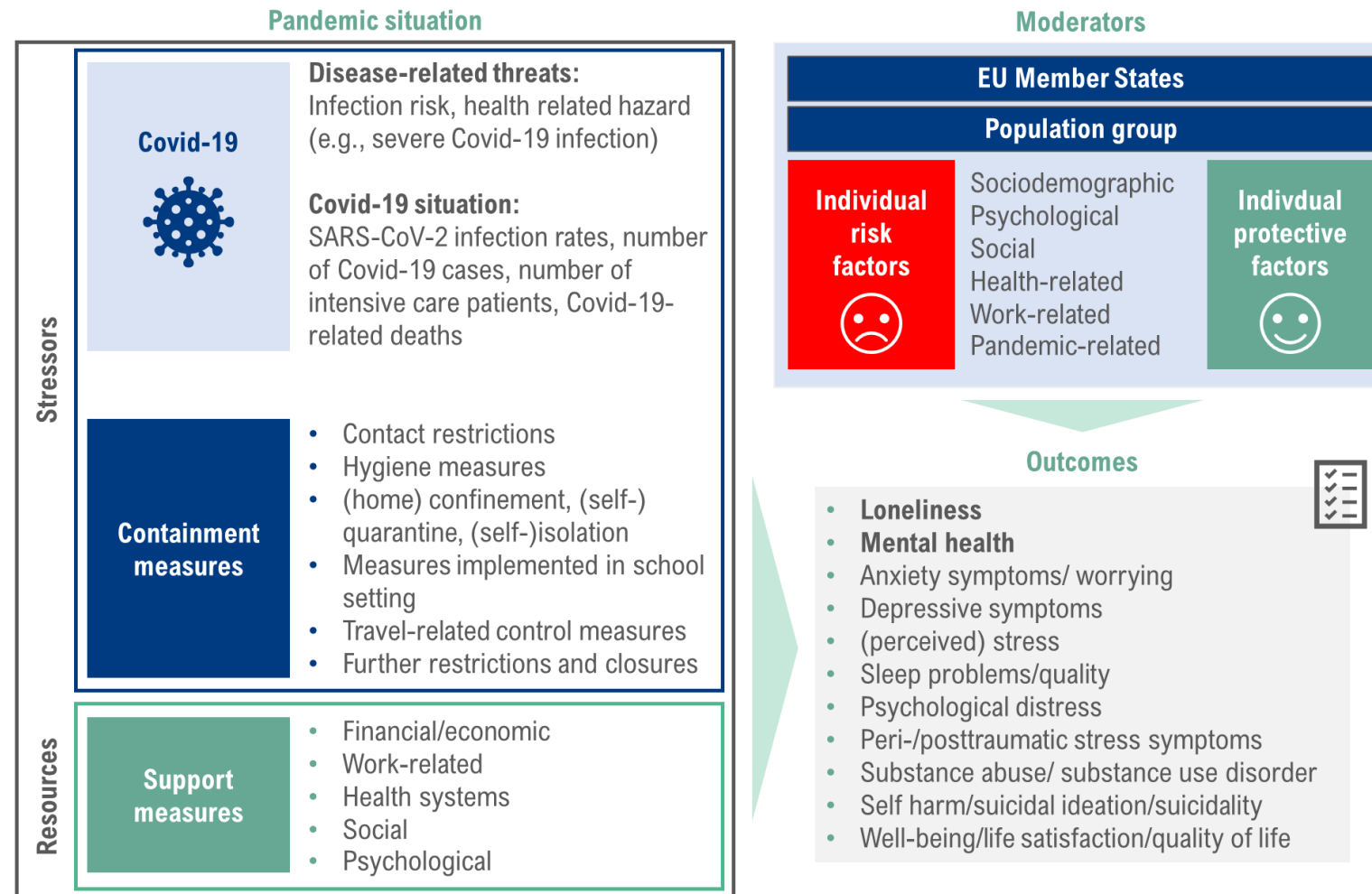
The European Mental Health model for the effects of the COVID-19 pandemic

- The European Parliament can consider **4 subgroups of policy options** which are supposed to be implemented together with the European Commission, the Pan-European Mental Health Coalition, WHO/Europe, Member States, and NGOs:

- EU-wide mental health monitoring** with the aim of measuring the prevalence of mental health disorders in the EU, over a longer period;
 - Awareness raising and intervention** among the public and policy-makers to spread knowledge on mental health consequences of the pandemic, protective factors, and mental health services
 - EU-wide mental health services research study** to better understand and define the consequences of the pandemic;
 - European emergency preparedness for mental health** which aims to define the proper responses to provide mental health support in case of health crisis.

Covid-19 policy responses
(Government responses of EU Member States and the UK)

MODEL FOR THE EFFECTS OF THE COVID-19 PANDEMIC



Recent Mental Health policies at European level (1/2)

- In October 2019, the European Council, through the Employment, Social Policy, Health and Consumer Affairs Council, invited the Commission to propose a **mental health strategy by considering the interrelation of different policies with mental health**.
- In June 2020, the European Parliament released the resolution on the **EU’s public health strategy post-COVID-19**, stressing the importance of the EU4Health action (the largest health program ever in monetary terms).
- In November 2020, the Policy Department for Economic, Scientific, and Quality of Life Policies defined some key **takeaways on addressing mental health during the pandemic**.
- In May 2021, the **European Agency for Safety and Health at Work (EU-OSHA)** defined the risks, benefits, and challenges arising from **tele-working** and offered best practices examples.
- In June 2021, the **Commission’s Expert Panel** shared a draft opinion developing **8 recommendations**, and many action points. Among others: treat mental wellbeing as an inherent part of the workplace and its organization; create a supportive institutional framework at EU-level; build and share knowledge on interventions; define a common visions for mental healthcare and provide timely and adequate access to care when preventive efforts are not effective.

JOINT FLAGSHIP INITIATIVES:

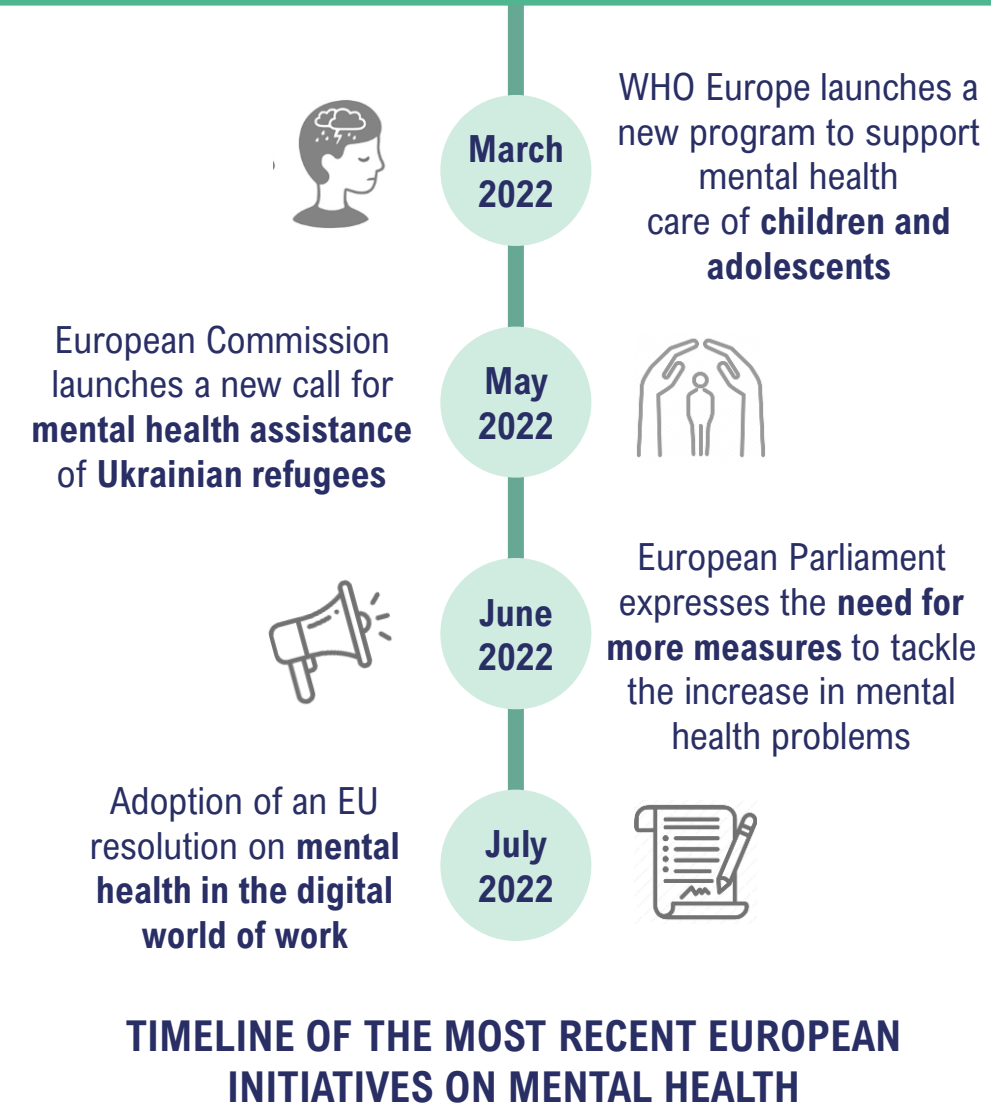
- **EU Health Policy Platform:** interactive tool for discussions on public health concerns
- **European Parliament Coalition on Mental Health and Wellbeing:** platform for the amplification of the people with mental health problems
- **Steering Group on Health Promotion and Disease Prevention:** provision of advices and expertise to implement activities in the field of health promotion

TIMELINE OF THE MOST RECENT EUROPEAN INITIATIVES ON MENTAL HEALTH




Recent Mental Health policies at European level (2/2)

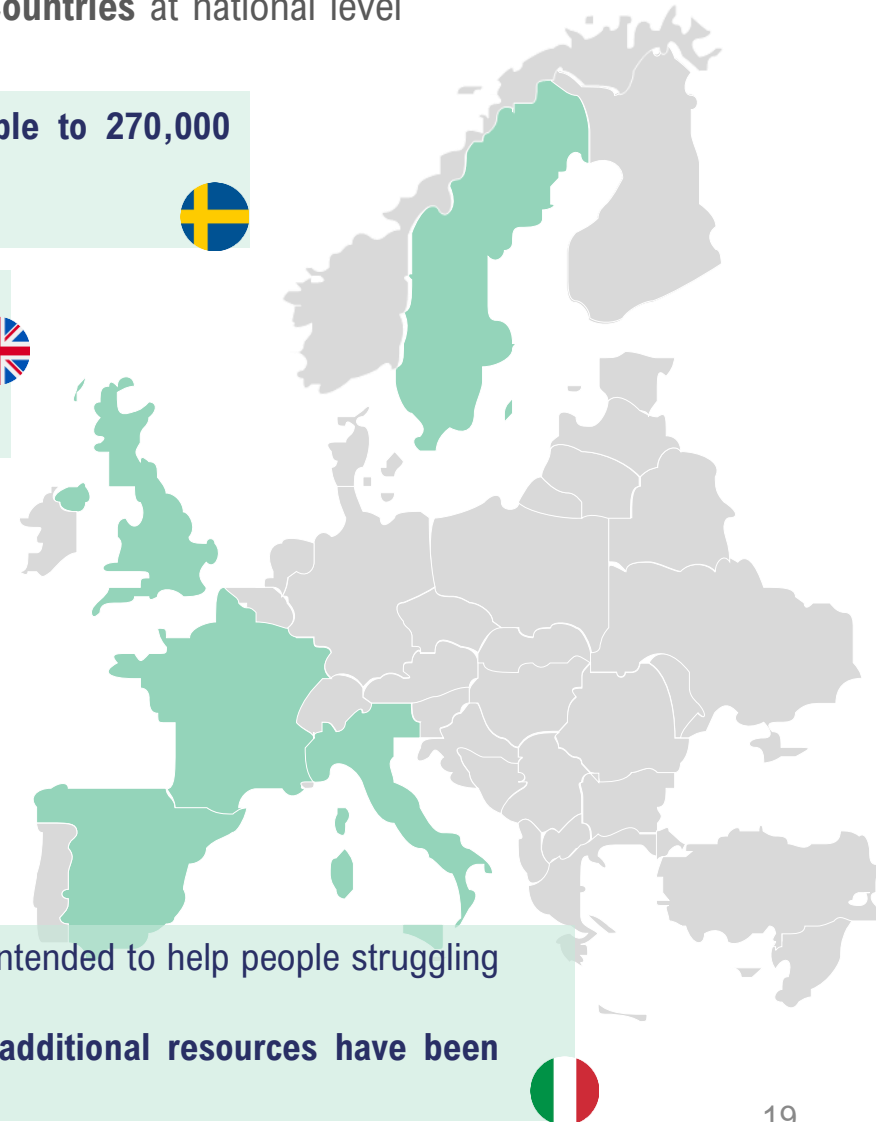
- In March 2022, the **WHO Europe** launched a **new program to support and promote the quality of mental health care of children and adolescents** in all 53 Countries of the WHO European Region. The program aims to improve mental health status and quality of services available to set a foundation for **broader health and well-being across the entire lifecycle**. The program fits into a context in which depression is one of the leading causes of illness and disability among adolescents globally and suicide is one of leading cause of death in 15–19-year-old individuals.
- In April, the European Commission has mobilized **9 million euros** from the EU4Health Program to **assist people fleeing Ukraine in urgent need of mental health and trauma support services**. In particular, in May 2022, the European Commission launched **new call for proposal to collect and implement best practices** to support Ukrainian displaced people mental health.
- In June 2022, the European Parliament expressed the **need for more measures by the EU** to tackle the increase in mental health problems that could result in a health crisis. MEPs also called for **2023** to be designated as the European **Year of Good Mental Health**.
- On 5 July 2022, the European Parliament adopted a **resolution on mental health in the digital world of work**. The resolution asks the EU institutions and Member States to take note of the high level of work-related mental health problems and find ways to help prevent them. The resolution also calls for **flexible working hours** to help mitigate work-related stress; **mental health education**; and **training for employers**.



Recent Mental Health initiatives at country level: a few examples

In addition to the policies adopted at EU level, **several initiatives have been taken by European Countries** at national level during the last few months.

- In 2021, the Sweden Social Partners' Council announced to offer **mental health training available to 270,000 government employees** whose workload has been affected by the coronavirus pandemic.
- The program is part of a comprehensive **nationwide approach to promoting a sustainable work-life.** 
- In 2022, UK has been working on a **new cross-government, 10-year plan for Mental Health and Wellbeing**, opening a public consultation and a call for evidence.
- Goals of the plan are to prevent mental ill-health, improve mental health support across the country and put mental and physical health on an equal footing. 
- Starting from April 2022, French citizens aged 3 and over, based on certain conditions, can benefit from a package of **8 free sessions per year** at a psychologist reimbursed by the national health service.
- The **“MonPsy”** initiative, financed with 50 million euros for 2022 for about 200,000 patients, was met with criticism from some professionals. 
- In December 2021, Spain announced a new **100 million euros plan** to provide improved mental health services (**the first in 12 years**). Measures include a 24-hour suicide prevention hotline.
- **Autonomous Communities** will take care of its implementation, contributing the necessary resources that are not provided by the plan. 
- Announced in February, the Italian Government has launched in July 2022 the **“psychologist bonus”** intended to help people struggling with the effects of the pandemic to access mental health services.
- In response to the huge demand recorded (in 2 days over 100,000 applications were received), **additional resources have been allocated** in August, bringing total national resources to **25 million euros.** 



Healthier Together - EU Non-Communicable Diseases (NCDs) Initiative

- Non-communicable diseases are responsible for **80%** of the disease burden in **the Member States** and **about two thirds of all deaths in the European region.**
- With the **Healthier Together - EU Non-Communicable Diseases (NCDs) Initiative**, the European Commission supports ambitious and innovative actions against the **leading causes of avoidable premature death in Europe**, thus building a strong Health Union and complementing the Europe's Beating Cancer Plan, covering five key areas:
 - **Cardiovascular diseases**
 - **Diabetes**
 - **Chronic respiratory diseases**
 - **Mental health** and neurological disorders
 - **Health determinants**
- The **Healthier Together Initiative** will support actions during 2022-2027, with a view of helping Member States reach the **Sustainable Development Goals 2030 targets and the WHO 2025 targets on NCD.**

- Improved **health promotion and disease prevention** can reduce the prevalence of NCDs by as much as **70%**:
 - Nevertheless, only approximately **3%** of total health spending in the EU is **targeted towards health promotion and disease prevention.**
- At least **20%** of **the annual EU4Health budget (2021-2027)** dedicated to health promotion and disease prevention (for 2022, approximately **156 million euros**).
- With coordination across strands and close alignment with Europe's Beating Cancer Plan, this Initiative helps address **environmental, commercial and lifestyle-related risk factors** in a more effective and efficient manner, thus contributing to build a European Health Union.
 - **Creating a tobacco-free generation**
 - **Improving nutritional quality of food**
 - **Addressing pollution and climate change**
 - **Raising awareness of NCDs and supporting early detection**
 - **Reducing health inequalities**



Environmental policies at European level

- With the 2019 **EU Green Deal**, the European Commission recognized climate change and environmental degradation as **huge threats to human's health**.
- The **EU Health Environment Research Agenda** might be the most relevant framework to support research and address the concerns on the effects of climate change and environmental deterioration on both human and ecosystem health.
- The current **EU Strategy on the Adaptation to Climate Change** is aimed to build a more sustainable Europe and, in response to it, 25 Member States introduced policies to tackle climate change. The strategy is matched with increase EU climate funding (2014-2020) and the European Climate Adaptation Platform which provides resources to support adaptation policies.
- In addition to the official initiatives of the EU, there are various EU-funded projects which focus on implementing nature-based solutions to renature cities and positively impact mental health. Among the most important projects there are: **CONNECTING, GROW GREEN, UNALAB, URBAN GreenUP, Nature4Cities, and NATURVATION**.
- Since policy decisions made outside of the health care sectors are still able to influence many determinants of health, WHO/Europe's Health 2020 policy framework aims to include health in environmental assessments. This would lead to the implementation of a **Health Impact Assessment**.



78% of Europeans agree that environmental issues have a direct effect on their life and health



THE EUROPEAN GREEN DEAL

It aims to promote the Economy of Wellbeing and put the **health of citizens and future generations** at the center of policy-making decisions. By understanding the effects that a healthy natural environment can deliver mental health benefits, through a cross-sectoral approach, the Deal can **positively influence urban and natural systems and individuals**.



THE EU BIODIVERSITY STRATEGY FOR 2030

The intent is to **increase understanding on how green spaces and mental health** are related, and how they can support prevention and treatment of mental health disorders.

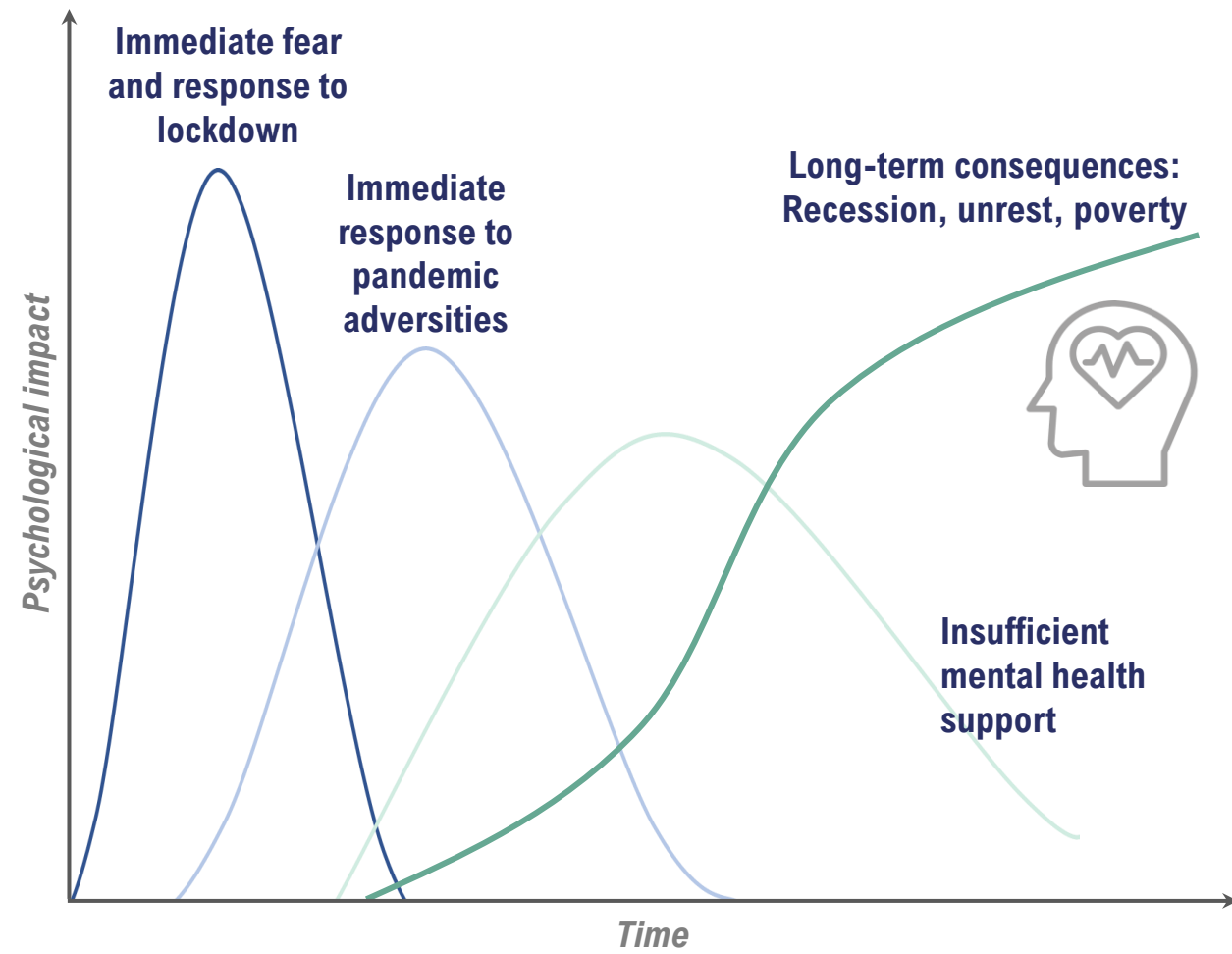
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The COVID-19 pandemic and its impacts on Mental Health (1/2)

- From the outset, it has been clear that the potential mental health effects of the COVID-19 pandemic, the various restrictions and its health and socio-economic consequences, would be one of the **most important challenges of the pandemic**.
- A consistent finding is that the COVID-19 pandemic has been associated with a **substantial rise in symptoms of mental ill-health**. Nevertheless, there is still uncertainty surrounding the pandemic's future waves and these will affect mental health, including the pandemic's long-run consequences.
- In general, **four main types of mechanisms** by which various stress factors associated with the pandemic might have affected mental health, and the time horizons over which these mechanisms might have played out, can be considered:
 - Health-related anxieties** directly arising from the advent COVID-19 and the lockdown;
 - Mental Health consequences** resulting from the immediate response to the pandemic adversities;
 - Insufficient mental health support**;
 - Uncertainty related to the financial situation**, in both the short and the long run.

TIME HORIZONS OF THE PANDEMIC'S KEY MENTAL HEALTH IMPACTS

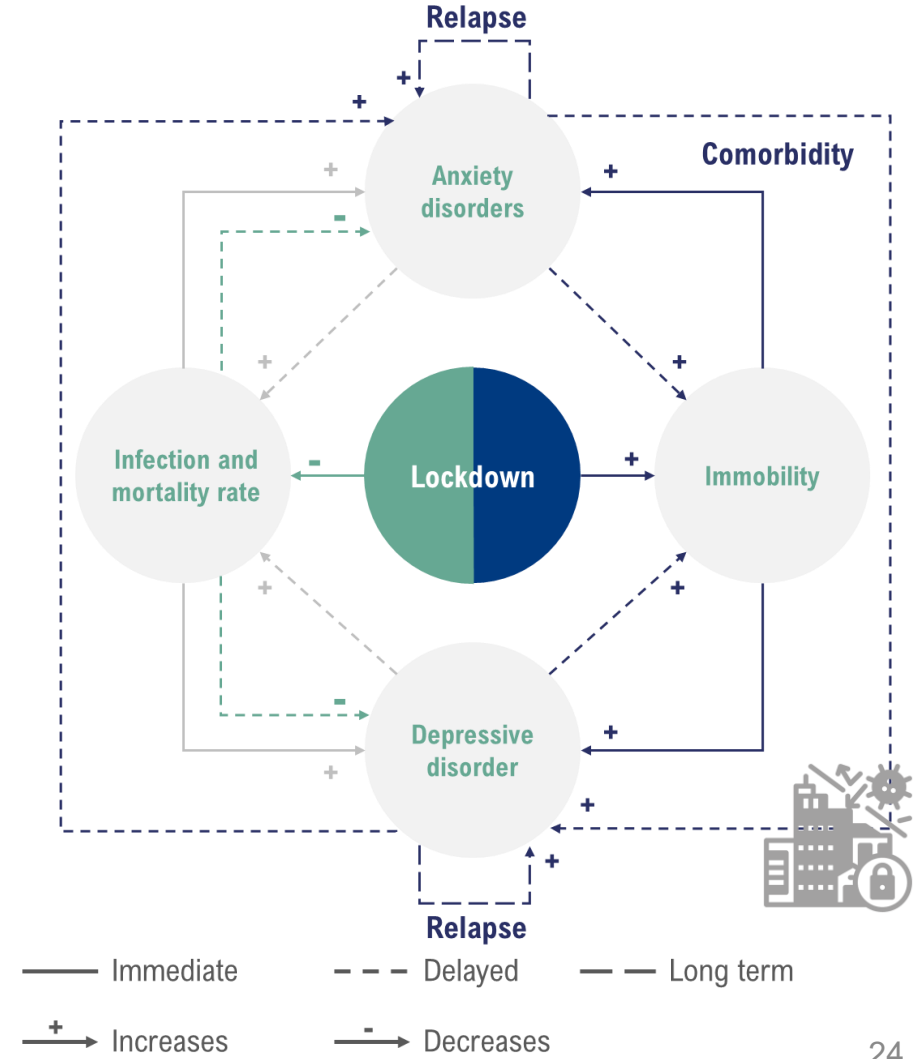


The COVID-19 pandemic and its impacts on Mental Health (2/2)

- Lockdowns seem to have both **advantageous and disadvantageous effects**: by lowering infection rates, the latter might positively impact mental health, reducing the incidence of depressive and anxiety disorders. However, lockdowns are also likely to increase the prevalence of these disorders due to the resulting immobility.
- Depressive and anxiety disorders **undermine general health**, thus worsening the effects of SARS-CoV-2 infection and creating a **reinforcing loop between the increased infection rates and the disorders**. Not only that, but these disorders are also highly comorbid and can form another feedback loop in which they can reinforce each other.
- **Reinforcing feedback loops between increased immobility and the disorders** are also likely because depressive disorders and some anxiety disorders impair the mobility of the affected people.
- In general, the pandemic has increased risk factors associated with poor mental health and at the same time protective factors fell dramatically. This has led to a marked and unprecedented worsening of **population mental health during the pandemic**.

	<p>Risk factors having increased:</p> <ul style="list-style-type: none"> • Financial insecurity • Unemployment • Fear • Grief • Isolation • Poverty and inequality 		<p>Protective factors having decreased:</p> <ul style="list-style-type: none"> • Social connection • Employment and educational engagement • Financial stability • Access to physical exercise • Daily routine • Access to mental health services
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Effects of the COVID-19 pandemic and lockdowns on depressive and anxiety disorders

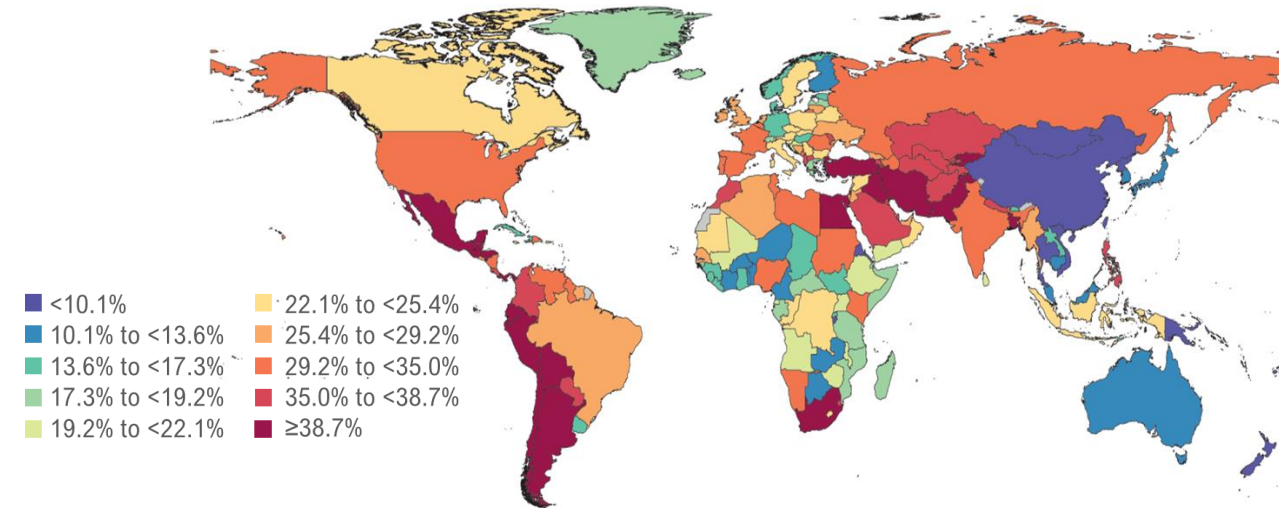


Impacts of the COVID-19 pandemic on Mental Health epidemiology at global level

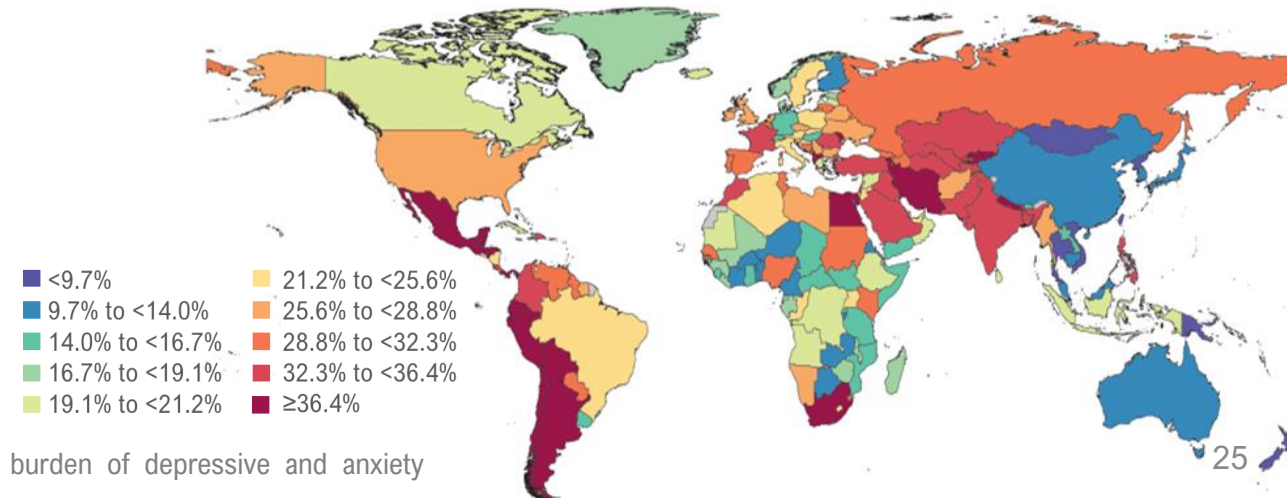
- According to the **Global Burden of Disease (GBD)** estimates, the COVID-19 pandemic, in 2020, led to the following phenomena:
 - **+27.6%** increase in **major depressive disorders (MDD)**
 - **+25.6%** increase in **anxiety disorder (AD)**
 - **+10.7 million** Disability-adjusted life years (**DALYs**) due to **MDD** (of which 7,1 million were among females and 3.6 million among males)
 - **+9.1 million** DALYs due to **AD** (of which 6.2 million among females and 2.9 million among males)
 - Young people registered **higher risk of suicidal behaviors**
- The prevalence of anxiety and depression are driven by **2 key factors**:
 - **Infection rates;**
 - **Immobility.**

As the maps on the right show, the greatest deterioration in mental health were registered in the **Countries where the pandemic hit hardest.**

Change in the prevalence of major depressive disorder during the COVID-19 pandemic



Change in the prevalence of anxiety disorders during the COVID-19 pandemic



The categories most impacted by the COVID-19 pandemic (1/3)

- The **consequences on Mental Health of the pandemic affect all ages**, from **younger generations** (disruption of schooling), to **adults** (unemployment, poverty, debt) and **elderly people** (isolation), but particularly concerning are the impacts **on specific categories**:



CHILDREN AND ADOLESCENTS

- Mental Health problems among children and adolescents are increasingly observed during the outbreak of COVID-19, **leading to significant healthcare concerns**.
- Anxiety (**28%**), depression (**23%**), loneliness (**5%**), stress (**5%**) and fear (**5%**) were the **most common mental health issues** reported.
- Age, gender, psychological quality, and negative coping strategies were identified as **risk factors for the development** of mental health problems.
- Social and family support**, along with a positive coping style, was associated with **better outcomes**.



ELDERLY AND PEOPLE WITH DISABILITY

- Older adults experienced disproportionately greater adverse effects including more **severe complications, higher mortality, concerns about disruptions** to their daily routines and access to care, **difficulty in adapting to technologies** and concerns that isolation would exacerbate existing mental health conditions (**46%** of adults >65 years felt that their mental health **was negatively influenced by these worries**).
- Also, **people with disabilities were disproportionately affected by the hardships of COVID-19**, and some groups of people with disabilities have been particularly hard hit.



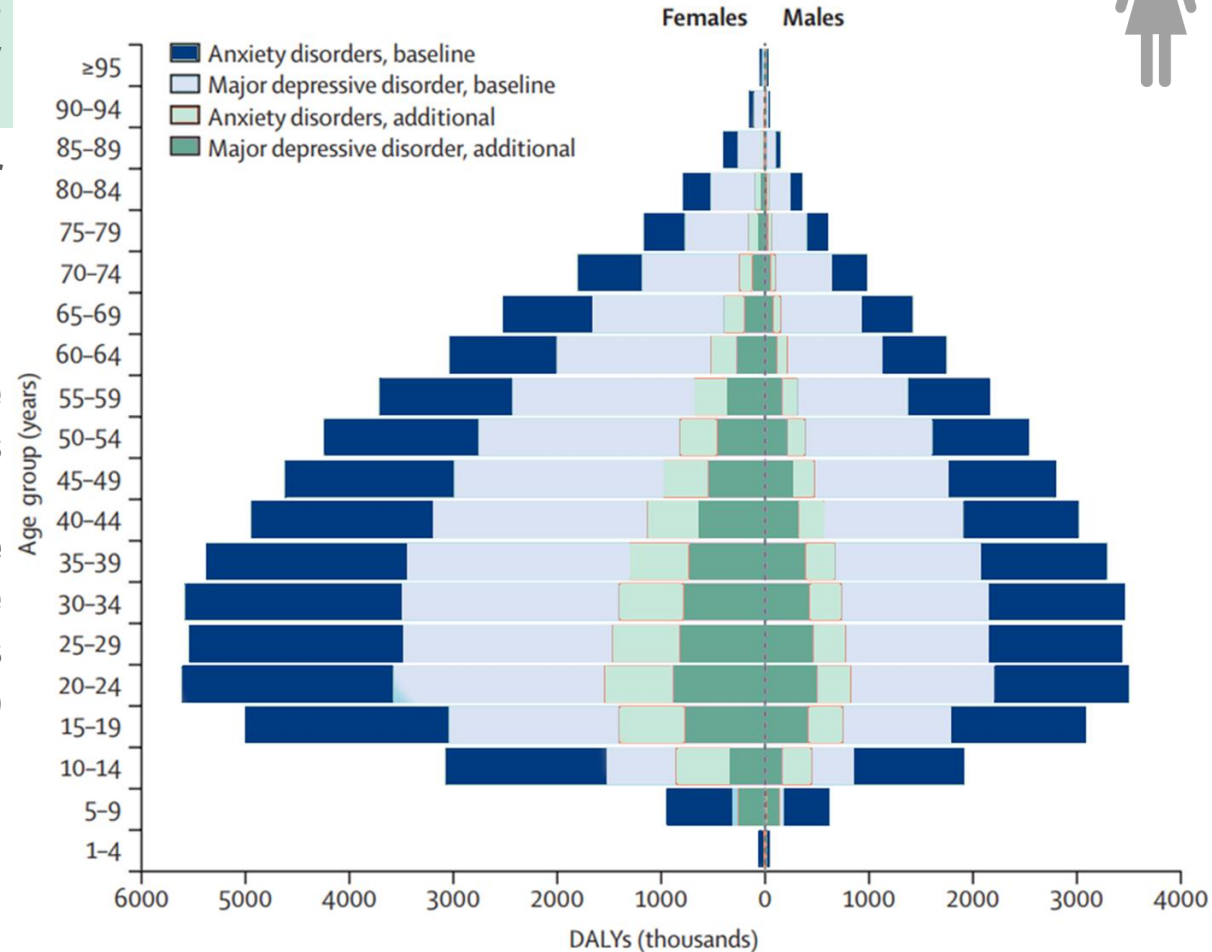
HEALTHCARE PROFESSIONALS

- Being in the frontline in fighting COVID-19 expose healthcare professionals to **higher risk of infection, longer working hours and high patient loads**.
- Social distancing and isolation from family members** and possible death of colleagues or loved ones are all menacing factors for mental illness.
- According to a WHO/Europe report, healthcare professionals are experiencing **higher levels of anxiety (13%** vs. 8.5%) and **depression 12.2%** vs. 9.5%) vs. other professionals.
- An April 2021 paper shows that as up to **43%** of frontline workers are experiencing **significant levels of anxiety**.

The categories most impacted by the COVID-19 pandemic (2/3)

- The COVID-19 pandemic has **exacerbated gender-linked Mental Health challenges**. Available data on gender-specific effects suggests that the Mental Health consequences seem to disproportionately affect women:
 - In fact, females were affected more than males for both **major depressive disorders (+29.8%** vs. **+24.0%** in males) and **anxiety disorders (+27.9%** vs. **+21.7%** in males).
- The greater increase in disorder prevalence between females and males has widened even more the **gender difference** in prevalence that was present before the pandemic. Unfortunately, the increase was anticipated due to females being most likely **affected by the social and economic consequences** of the pandemic (e.g., additional care and household responsibilities, lower salaries, less secure employment than their male counterparts), particularly in age **groups between 20-50 years**, as shown on the right. The disparities keep amplifying as the pandemic evolves.
- Especially at high risk for developing Mental Health disorders during the pandemic are **women who are pregnant, in the postpartum period, miscarrying or experiencing intimate partner violence**.

Effects of the COVID-19 pandemic and lockdowns on depressive and anxiety disorders



The categories most impacted by the COVID-19 pandemic (3/3)

- The COVID-19 pandemic has had a **significant disruptive impact on people living with Mental Health conditions**. Social distancing, confinement measures and disruption of daily routines have worsened existing conditions and **losing contact with Mental Health services further aggravated symptoms**.
- The findings from a survey carried out by GAMIAN-Europe between October 2021 and February 2022, investigating what worked during the pandemic and what did not, show that **much still needs to be done to support the mental health of patients and professionals**.
- According to the respondents, **the pandemic often intensified** (e.g., the **long-waiting times, staff shortages, lack of funding**, etc.) and, in many cases, forced services to change the way they delivered care and treatment to patients.

Examples of positive practices implemented:

- Peer support** offered remotely through videocalls or small groups meetings
- Support from health professionals** (GP or psychotherapist using telemedicine)
- Digital devices** for health professional to **continue rehabilitation and teaching work** with patients and trainees
- Support from **third sector organizations**



PATIENTS

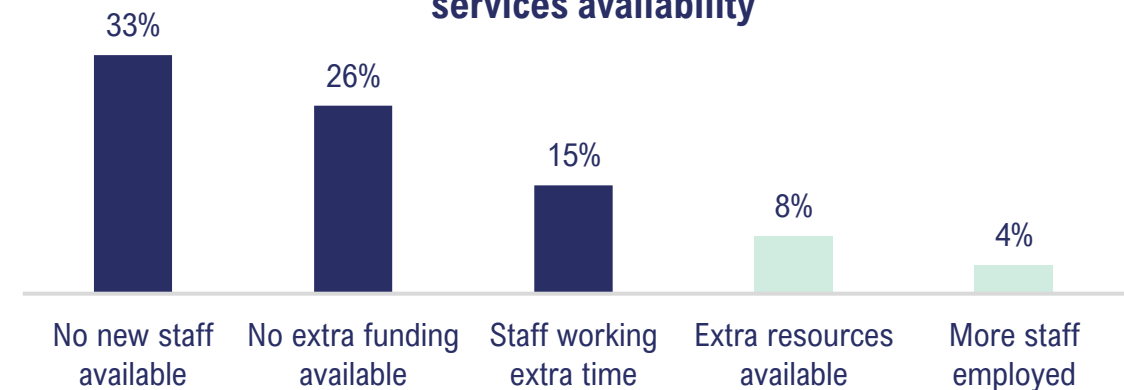
- 52%** saw a **worsening of their condition** during the pandemic
- 85%** had **access to medication**
- 1 out of 4** had **fewer or shorter outpatient appointments**
- 19%** were **not able to access Mental Health services**
- 42%** had appointments via **Internet or by phone**

CLINICIANS



- 7 out of 10** Mental Health professionals reported that **increased pressure on service delivery impacted their condition**
- 14%** diagnosed with a **Mental Health disorder**, **9%** with **depression**
- 20%** professionals **not able to reach vulnerable patients** during the pandemic

Principal solutions/constraints to increase Mental Health services availability



Index

- **Introduction on Mental Health**
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 - Mental Health status of the population
 - Responsiveness to Mental Health needs in healthcare
 - Responsiveness to Mental Health needs in workplaces, society and schools
- **Results and conclusion**

«Headway - Mental Health Index 2.0»



Monitoring the responsiveness of a Country, assessing its trend over time and comparing it to other systems, allows for a **dynamic and more complete picture of the effects of health, social, employment, educational and environmental policy interventions** on the mental health status of the population

The "Headway Mental Health Index 2.0" is designed to provide a **multidimensional picture on mental health** across European Countries (EU-27 + UK). It is a framework **aimed at measuring** a limited number of indicators* representing key aspects of Mental Health and selected based on the comparability and availability of data from the EU-27 + UK Countries. The "Headway - Mental Health Index 2.0" consists of **4 sub-indices**:

1 ENVIRONMENTAL DETERMINANTS OF MENTAL HEALTH

Analyzing **environmental determinants** of Mental Health in **European Countries**

KPI: e.g., Pollution (water, waste, air), Climate (average annual hours of daylight), Nature (green and blue areas, natural disasters), Urban Environment (i.e., poor housing and indoor air quality, noise pollution, ...), Socio-economic and Political Scenario (i.e., wars, conflicts, forced migration, economic recession,...)

NEW

2 MENTAL HEALTH STATUS OF THE POPULATION

Analyzing **Mental Health outcomes** across European Countries **KPIs:** prevalence of mental disorders, mortality rate (including suicide rate), years lived in disability, prevalence of risk factors (e.g., drug use, alcohol consumption, etc.)

3.1 RESPONSIVENESS OF THE SYSTEM TO MENTAL HEALTH NEEDS

in healthcare

Analyzing the **ability of healthcare systems to improve** (or at least not worsen), in the near future, the **mental healthcare outcomes achieved so far**

KPIs: availability of healthcare professionals specialized in Mental Health (e.g., psychiatrists, psychologists, nurses), economic resources for Mental Health, quality of care indicators (e.g., hospitalization rates, length of hospitalization, etc.)

in workplaces, schools and in the society

Analyzing the system's ability to meet **needs of people with mental disorders** in:

- **workplaces** (KPIs: employment rate, working days lost due to illness, etc.)
- **society** (KPIs: number of social workers, etc.)
- **schools** (KPIs: young people who drop out of school for mental health reasons, existence of day care centers, etc.)

(*) **The realization of the "Headway - Mental Health Index 2.0" involves the use of the following databases:** World Bank, UN, WHO, OECD, Eurostat, European Environment Agency, Institute for Health Metrics and Evaluation (in particular Global Burden of Disease), as well as databases of Statistical Institutes and institutional sites of individual Member States (e.g., Ministries of Health sites), as well as secondary sources of scientific literature (e.g., papers, articles, reports, etc.).

- The "Headway - Mental Health Index 2.0" considers **55 Key Performance Indicators (KPIs)** related to **3 macro-areas**: the **Environmental determinants of Mental Health, the Mental Health status of a population and the responsiveness of the Systems to needs in healthcare, workplaces, schools and society** in general. While the macro-area Environmental determinants of Mental Health assesses the impacts of the surroundings on Mental Health, the macro-area state of Mental Health of the population measures the mental health outcomes, whereas the macro-area related to the responsiveness of the Systems takes into consideration the **quality of health, welfare, social and educational services** provided and of the policies implemented to promote Mental Health wellbeing:
 - The **area of the Environmental determinants of Mental Health** considers **12 KPIs**;
 - The **area of Mental Health status of the population** considers **18 KPIs**;
 - The **area of responsiveness to healthcare needs** **12 KPIs**;
 - The **area of responsiveness to needs in the workplaces, schools and society** in general, respectively **5 KPIs, 5 KPIs and 3 KPIs**.
- For each of the **55 KPIs**, a **maximum score (10)** and a **minimum score (1)** has been assigned to the **best and worst performing Countries** respectively. For each country with an intermediate performance, on the other hand, a score from 1 to 10 was assigned depending on the relative result. The KPIs were then standardized on a 1-10 scale with respect to their point value, in order to make the relative performance comparable.
- The scale was assigned according to an **algorithm applied to all indicators**:
 - $scale = (best\ performer - worst\ performer) / (max\ score - min\ score)$
- After fixing the scale, the **score for each country is calculated as**:
 - $score = [(value\ of\ Country - worst\ performer) / scale] + 1$
- When the KPI is composed of multiple sub-indicators, the score is assigned to each sub-indicator. The final score is given by the average of the scores of the sub-indicators. After calculating the score for each KPI, a score is assigned for each area based on the average of the KPI scores, weighted by the assigned weights.

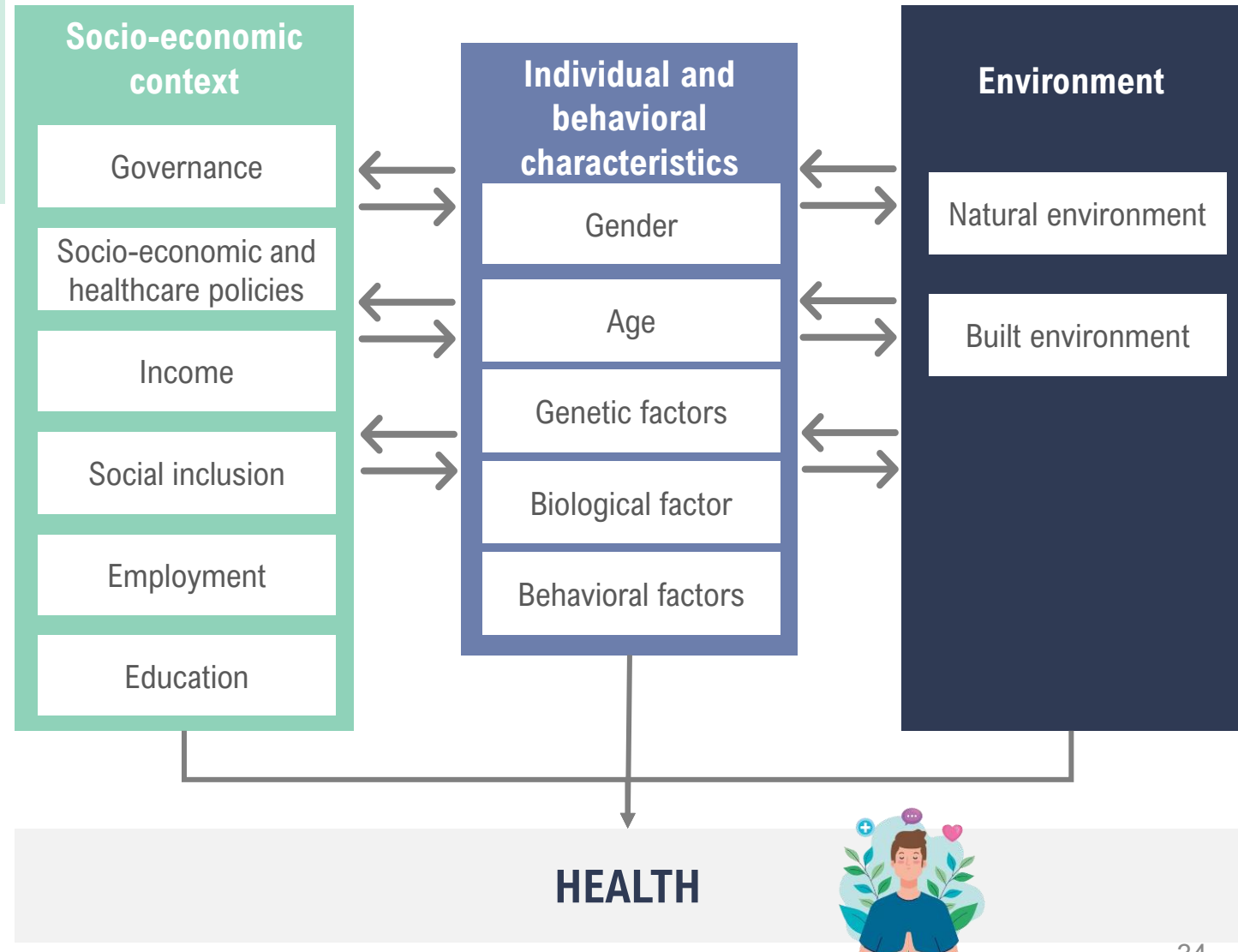
- In the following analysis, it is important to emphasize the difference between the Countries considered. Indeed, some important caveats should be taken into account:
 - The **methodological framework** of the “Headway - Mental Health Index 2.0” focuses on providing a multidimensional picture on Mental Health across the Countries considered. However, **structural differences** exist and create limitations in terms of data comparability between **different databases** and **health and social care systems**.
 - The choice of different KPIs and the design of the “Headway - Mental Health Index 2.0” aim at balancing between the application of **analytical principles** and **qualitative interpretation** of responsiveness in terms of Mental Health. Given that, the lack of available and reliable data might induce some biases.
 - **Mis-** and **under-reporting** can be identified as an area of improvement for many European Countries as well as the adoption of standardized approach to data collection and monitoring.

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The determinants of health

- Human Health is affected by the **interaction of factors coming from different sectors**. The range of **personal, social, economic, and environmental factors** that influence health status are known as **determinants of health**.
- Determinants of health reach **beyond the boundaries of traditional healthcare** and include sectors such as education, housing, transportation, agriculture, and environment. The interrelationships among these sectors determine individual and population health. Due to the latter, interventions that target multiple determinants of health are most likely to be effective. The **determinants of health** include:
 - Individual and behavioral characteristics** such as gender, age, genetic, biological and behavioral factors
 - Socio-economic context** such as governance, socio-economic and healthcare policies, income, social inclusion, employment and education
 - Environment** such as natural environment (green spaces, climate change, etc.) and built environment (i.e., pollution, safety, etc.)



The environmental determinants of health

The **Environment** is the **totality of all the external conditions affecting the life, development and survival of an organism**, and can be differentiated in **Built Environment** and **Natural Environment**

- Environmental factors, such as access to clean water and hygienic sanitation services, housing conditions, air quality, work environment and exposure to extreme weather conditions, are estimated to be responsible for **13–20% of the burden of disease in Europe**. Inequalities in environmental exposure exist in all European Countries and can **reach extreme levels, with exposures for worse-off populations** often being at least five times those for well-off groups.
- According to the World Health Organization, healthier environments could prevent **almost one quarter of the global burden of disease**:
 - Clean air, stable climate, adequate water, sanitation and hygiene, safe use of chemicals, protection from radiation, healthy and safe workplaces, sound agricultural practices, health-supportive cities and built environments, and a preserved nature are all **prerequisites for good health and well-being**.
- Threats to any one of the environmental determinants of health (EDHs) can have an **adverse impact on health and well-being at the population level**. These environmental threats can occur naturally or because of social conditions and ways people live. Addressing EDHs improves directly the health of populations and indirectly productivity and increases the **enjoyment of consumption of goods and services unrelated to health**.

Built Environment

- Human made surroundings that provide the **setting for human activity**
- It is a material, spatial, and cultural product of human labor that combines **physical elements and energy in forms for living, working and playing**
- It is developed to **satisfy residents' requirements**, promoting security, respect, and self-expression

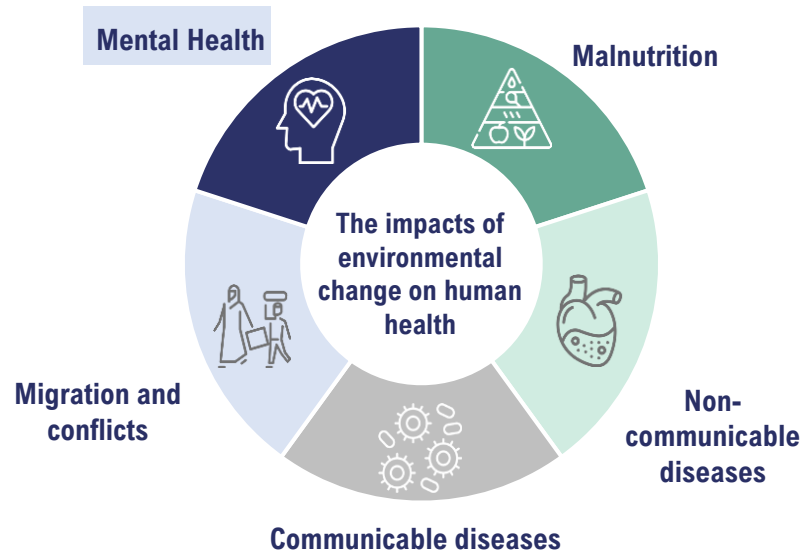
Natural Environment

- All **living and nonliving things occurring naturally**, meaning not artificial; for example, a geographical area.
- It encompasses the **interactions of all living species**, elements and phenomena of Earth's lands, waters, and biodiversity
- Nature differ significantly depending on the **type of vegetation and level of biodiversity** ³⁵

The health of the population is intrinsically linked to the environment: Damaging the planet therefore means damaging human health

- The consequences for human health are many, but can be traced to **5 macro-dimensions**:
 - **increased incidence and mortality** of non-communicable diseases;
 - an **increased likelihood of developing** infectious diseases;
 - the **change in nutrition patterns**;
 - the **worsening of mental health conditions**;
 - new migration flows and population shifts.

Main areas of impact of environmental changes on human health



AIR POLLUTION

- Responsible for **7 million premature deaths annually** as a result of increased mortality from stroke, heart disease, COPD, lung cancer and acute respiratory infections
- **9 out of 10 people** breathe air that **exceeds WHO guideline limits**

CLIMATE CHANGE

- Causes **over 150,000 deaths annually** (includes deaths as a result of extreme weather conditions)
- Changes in temperature and rainfall conditions **influence transmission patterns for many diseases** (including water-related diseases and vector-borne infections)

CONTAMINATED WATER

- Nearly **1 million people die each year from water, sanitation and hygiene-related diseases**
- **>2 billion** people use **contaminated a drinking water**

BIODIVERSITY LOSS

- **+25% use of natural resources** with consequently **increased pressure on species, habitats and local communities**
- Changes in ecosystem services affect **livelihoods, income, local migration and may even cause or exacerbate political conflicts**
- **Millions** of people face a future where **food supplies are more vulnerable to diseases**

SOIL DEGRADATION

- **Higher threats of malnutrition** from reduced food and water supplies
- More **water- and food-borne diseases** that result from poor hygiene and a lack of clean water
- Increase of **respiratory diseases** caused by atmospheric dust

The determinants of Mental Health

- Mental health is determined by a **complex interplay of individual, family, community and structural factors** that vary over time and are experienced differently from person to person
 - **Individual and behavioral** characteristics referring to **intrinsic and learned abilities**, for dealing with emotions, for relating with people, and for taking on actions and responsibilities.
 - **Family and community** referring to the **immediate surroundings, opportunities** to engage with partners, family members, friends or colleagues, to earn a living etc.
 - **Structural factors** referring to sociocultural, geopolitical, and **environmental surroundings**.

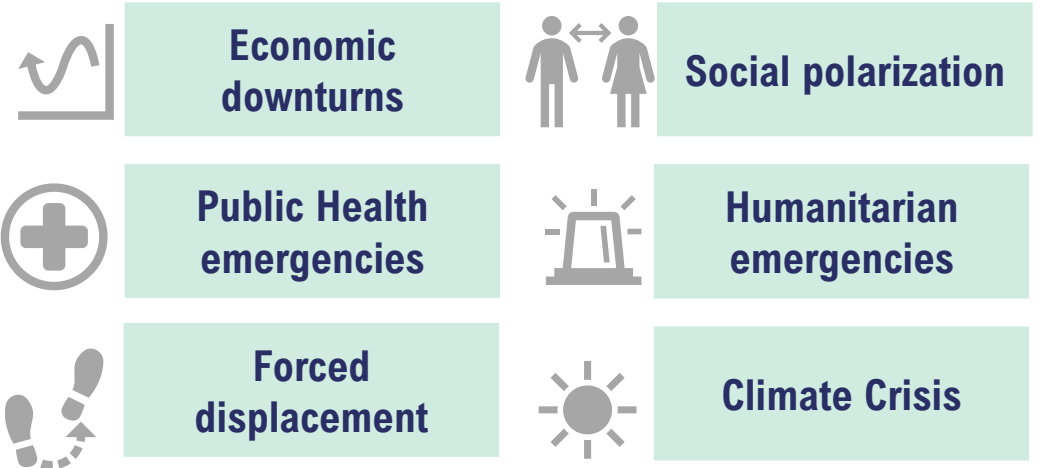
RISKS AND PROTECTIVE FACTORS THAT DETERMINE MENTAL HEALTH

	INDIVIDUAL	FAMILY AND COMMUNITY	STRUCTURAL
PROTECTIVE FACTORS	<ul style="list-style-type: none"> • Genetic factors • Social and emotional skills • Sense of self-worth and mastery • Good physical health • Physical activity 	<ul style="list-style-type: none"> • Good perinatal nutrition • Good parenting • Physical security and safety • Positive social networks, social capital and social supports • Green spaces 	<ul style="list-style-type: none"> • Economic security • Good quality infrastructure • Equal access to services • Quality natural environment • Social justice and integration • Income and social protection • Social and gender equality
RISK FACTORS	<ul style="list-style-type: none"> • Genetic factors • Low education • Alcohol and drug use • Unhealthy diet • Obesity and other metabolic risks • Chronic disease • Vitamin D deficiency • Body dissatisfaction • Sleep disturbances • Obstetric complications at birth 	<ul style="list-style-type: none"> • Sexual abuse and violence • Emotional and physical abuse and neglect • Substance use by mother during pregnancy • Bullying • Intimate partner violence • Being a war veteran • Sudden loss of a loved one • Job strain • Job loss and unemployment • Urban living • Being from an ethnic minority 	<ul style="list-style-type: none"> • Climate crisis, pollution or environmental degradation • Poor quality infrastructure • Poor access to services • Injustice, discrimination and social exclusion • Social, economic and gender inequalities • Conflict and forced displacement • Health emergencies

Mental Health and the Environment (1/2)

- An important step forward, following the recognition of the environment as a relevant factor impacting people's health, was **acknowledging the relevance of the environment as one of the determinants of mental health**. The World Health Organization stressed how discovering and recognizing the mechanisms determining the connection between healthy natural environments and mental health benefits is a way to **simultaneously achieve healthier individuals and environment**.
- The effectiveness of tackling environmental factors is determined by the **possibility of reducing and managing mental health risks at a, potentially, lower cost**. Reshaping the physical, social, and economic characteristics of environments is a way to better protect mental health and prevent conditions.
- Various **types of nature experiences are associated with mental health benefits**. In this light, nature experience can be seen as a determinant of mental health. As such, the impact on mental health can differ depending on socioeconomic status, preferences, residential location, occupation, personality traits, culture, gender, and age.

- There are some **major global threats** to mental health which are structural stressors affecting whole populations and potentially undermining the mental health of huge numbers of people.
- These are **structural and environmental factors**, and they include sociocultural, geopolitical, and environmental surroundings.



Mental Health and the Environment (2/2)

- Given the economic and societal impact of mental health, evaluating every **possible intervention to reduce and manage health risks is crucial**. Any decision should be taken by keeping in mind the quality of life and well-being of the individuals.
 - Considering **environment and nature-based treatments** is fundamental because it could be an effective approach to reduce and manage mental health risks at a, potentially, lower cost.
- There are a significant number of **environmental elements that seem to affect mental health**. So far, the main domains investigated are the following:



HEALTH AND ENVIRONMENT CONSENSUS STATEMENTS:



NATURE EXPERIENCES AND INCREASED PSYCHOLOGICAL WELL-BEING

Impacts on **happiness, positive social interactions, cohesion and engagement**, decreases in personal distress. Increased attention and memory, impulse inhibition, and more creativity.

NATURE EXPERIENCES AND REDUCED RISKS FACTORS AND BURDEN OF SOME TYPES OF MENTAL ILLNESSES

Improved sleep and reduction in stress levels can both decrease the risk of mental illnesses

OPPORTUNITIES FOR NATURE EXPERIENCES ARE DECREASING IN QUANTITY AND QUALITY FOR MANY PEOPLE AROUND THE WORLD

Increased time **spent indoors, on screens, and doing sedentary activities** may shift the benchmark for acceptable quality and variation in nature experience

- This area aims at evaluating the **outcomes related to the Mental Health of citizens** achieved by different European Countries by analyzing different **indicators**, namely:

- NATURAL ENVIRONMENT:**

- Climate**

- Hours of daylight** (annual duration of sunshine in hours)
 - Average Temperature** (average temperatures in each Country in C°)

- Nature**

- Economic damage caused by weather extreme events** (loss per capita in euro PPP)
 - Earthquakes** (number of earthquakes of magnitude 2 or higher)

- BUILT ENVIRONMENT:**

- Urban environment**

- Poor housing conditions** (% population living in poor housing conditions)
 - Overcrowding rate** (% of population living in overcrowded households)
 - Air pollution** (% of population exposed to particulate matter)
 - Noise pollution** (% of population reporting they are impacted by noise)
 - Transport and road traffic** (time lost per year in hours)
 - Urban green space** (% of green infrastructure over total area)

- SOCIO-ECONOMIC AND POLITICAL SCENARIO:**

- Conflicts, migration, economic recession** (Fragile State Index)
 - Crime, violence or vandalism** (% of people reporting crime, violence or vandalism in their neighborhood)

KPI	UNIT OF MEASURE	SOURCE
Hours of daylight	Hours	National databases
Average temperature	C°	Climate Change Knowledge Portal
Economic damage caused by weather extreme events	Loss per capita in euro PPP	European Environment Agency
Earthquakes	Number of earthquakes of magnitude >2	European Facilities for Earthquake Hazard and Risk
Poor housing conditions	% population living in poor housing conditions	Eurostat
Overcrowding rate	% of population living in overcrowded households	Eurostat
Air pollution	% of population exposed to particulate matter	Eurostat
Noise pollution	% of population reporting they are impacted by noise	Eurostat
Transport and road traffic	Hours per year	Eurostat and Tom Tom database
Urban green space	% of green infrastructure over total area	Eurostat
Conflicts, migration, economic recession	Score	The Fund for Peace
Crime, violence or vandalism	% of people reporting crime, violence or vandalism in their neighborhood	Eurostat

- The longer the hours of the day with light, the longer the **potential exposure of humans to sunlight**. Despite the well-known negative effects of sunlight (i.e. on the skin), there are many positive impacts both on physical and mental health.

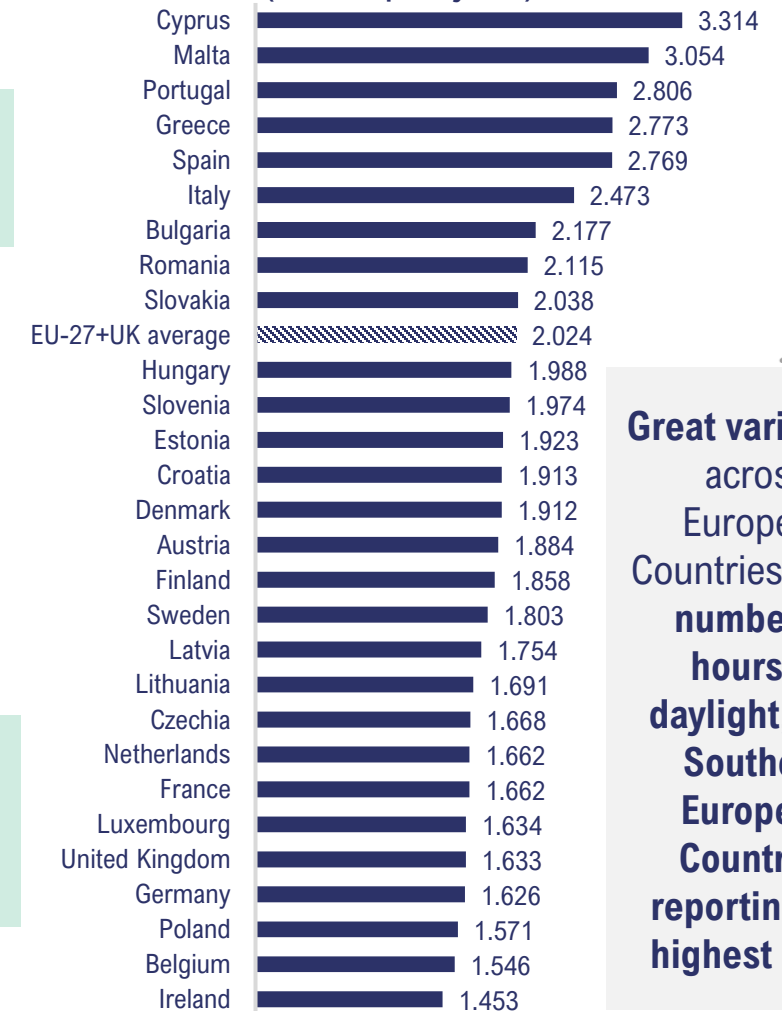
- Exposure to **sunlight boosts Vitamin D intakes** - it has been shown that low levels of Vitamin D may be associated with a **higher risk of developing cancer, diabetes, high blood pressure, schizophrenia, and depression**:

- Among people with **depression**, the levels of Vitamin D tend to be lower. Consequently, in presence of depression and low levels of Vitamin D, supplements can be useful.
- Seasonal Affective Disorder (SAD)**, one of the many forms of depression, is responsible for changes in mood. It is more common during winter months, especially in Countries where the **Daylight-Saving time** is in place, and in the Northern Countries, where the number of hours with daylight is lower.
- Furthermore, researchers have discovered that low levels of Vitamin D are common among people with **schizophrenia**.

- Exposure to sunlight also **supports the production of melatonin** since when people are exposed to sunlight (or very bright artificial light) in the morning, the nocturnal melatonin is produced sooner, making people **fall asleep easily at night**. Indeed, insomnia is more common in winter months.

- More hours of light increase the **time spent outdoor and in social activities**, all aspects positively impacting mental health

Daylight in European Countries (hours per year), 2021

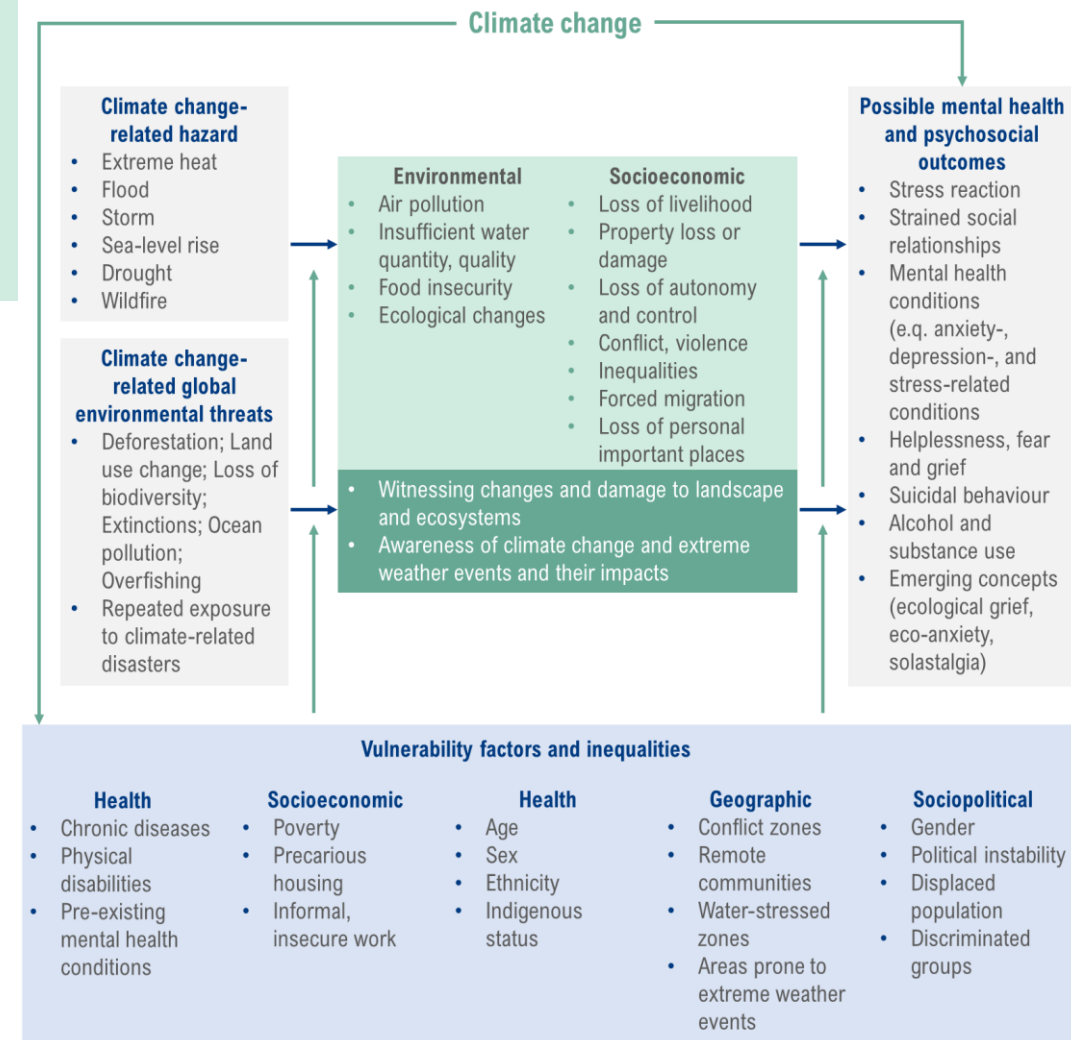


Great variability
across
European
Countries in the
number of
hours of
daylight, with
Southern
European
Countries
reporting the
highest rates

- **Climate change** can be defined as “*long-term shifts in temperature and weather patterns*”. The changes can be **nature-induced**, as in the case of solar cycle variations, or **induced by human activities**. Currently, the major causes of climate change are **burnt fossil fuels**.
- The **effects of climate change on mental health** have been addressed only recently and knowledge on the pathways between the two is still limited. The main phenomena investigated have been **floods, hurricanes, typhoons, and major storms**.
- Of relevance are **higher ambient temperatures** which have been linked with higher risk of worsening symptoms, hospital admissions, suicidal behaviors, and death for people with mental health conditions.
- However, it has been found that the **climate change impacts on individuals occur in different ways and studies of the exposure of frequent, long-lasting, and severe adverse weather events** showed that there are :
 - **Direct effects:** they are the result of the exposure to danger, injury and death; acute stress and post-traumatic stress disorders; heat-related exacerbation of pre-existing mental health issues; increased rates of violence.
 - **Indirect effects:** they affect mental health through their impact on ecosystems and human activities or other physical circumstances. For example, they consist in community and healthcare resources disruption, increased socioeconomic disparities, damage and/or loss of homes and infrastructures.



- Some climate-related mental health outcomes have already been documented and they are **similar across different population around the world**. The impacts of climate change are expected to **differently hit individuals** - the most affected being those with pre-existing vulnerabilities, young people, indigenous people, people living in poverty and those with cognitive/mobility impairments.
- Among the **impacts of climate change, there are increased mortality, impulsive and aggressive behaviors, and higher suicide rates**. In addition, the long-term changes in landscapes or environmental degradation may lead to a distressed sense of loss.
- In order to describe this distressed sense of loss, a recent study **introduced the concept of “Solastalgia”** which refers to the **pain felt when the place loved or of residence is recognized as transformed (“physical desolation”)**. It manifests with the erosion of the sense of belonging (“*identity*”) and a feeling of distress (“*psychological desolation*”). The causing factors are not just natural, they can also be artificial as in the case of war, terrorism, and land clearing and mining.
- Another terminology introduced to describe a **sense of grief in response to ecological losses** is “**Ecological Grief**”. This disenfranchised grief derives from **experienced physical ecological losses, loss of environmental knowledge** and ability to predict its phenomena, and the one associated with **anticipated future losses**.



1 Average Temperature Increase

- **Ambient temperatures and mental health are strongly linked.** It has been shown that cold temperatures reduce negative mental health outcomes while hot temperature increase them:

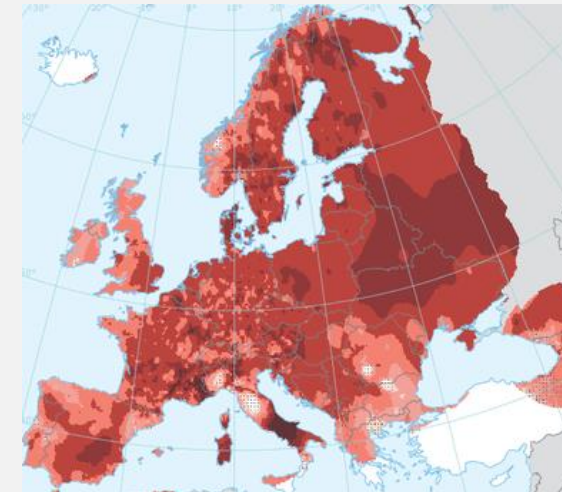
- Increasing temperature is associated with **higher mental-health related mortality**, especially because of substance-related mental disorders and organic mental disorders, and with **mental-health related morbidity** such as mood disorders, organic mental disorders, schizophrenia, neurotic, and anxiety disorders. According to a study of 2019, increasing average monthly temperature by one degree leads to **0.48% increase in mental health emergency department visits** and a **0.35% increase in suicides**.*

- Heat is often linked with higher levels of humidity, drought, wildfires; these events are also associated with **psychological distress, worsened mental health, and higher mortality among people with pre-existing mental health conditions**, increased psychiatric hospitalization and suicide rates.
- Some of the consequences are **elevated rates of anxiety and mood disorders, stress and post-traumatic stress disorder** – especially when there are injuries or losses of beloved ones and property – **sleep disruption, suicide** and suicidal ideation.
- Furthermore, heat suppresses thyroid hormones which can cause **lethargy, low mood and cognitive impairment**, and stimulates growth hormone and prolactin.

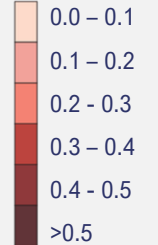
(*) Mullins, Jamie T., and Corey White. "Temperature and mental health: Evidence from the spectrum of mental health outcomes", 2019.

Source: The European House – Ambrosetti on Lawrence A. Palinkas and Marleen Wong "Global Climate Change and Mental Health" (2020); "Jingwen Liu et al. "Is there an association between hot weather and poor mental health outcomes? A systemic review and meta-analysis" (2021) and European Environment Agency data, 2022

- **Global mean near-surface temperature** between 2012 and 2021 was up to **+1.14°C** warmer than the pre-industrial level.
- **European land temperatures** have increased even faster over the same period by **+1.99°C**.



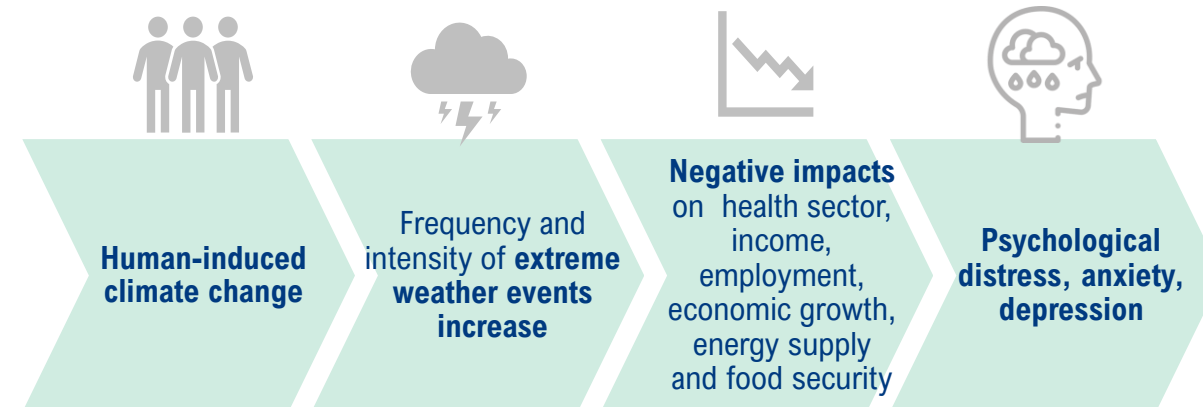
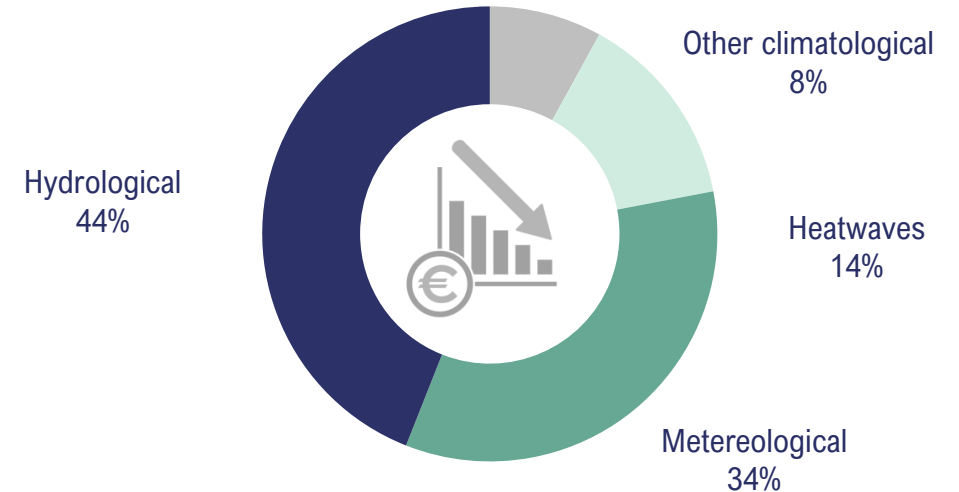
Trends in annual temperature from 1960-2021



- The UNFCCC member Countries have committed in the **Paris Agreement** to limiting global temperature increase to well **below 2°C above the pre-industrial level** and to aim to **limit the increase to 1.5°C**

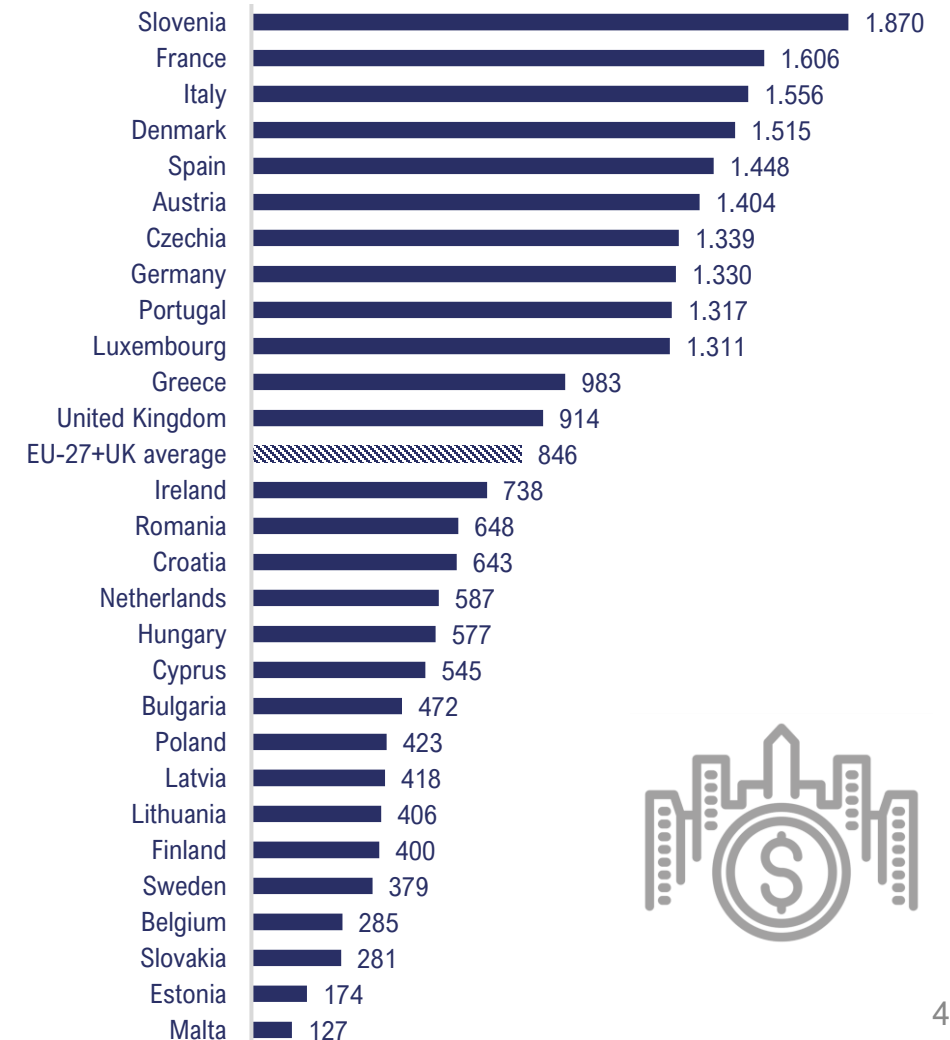
- **Global Warming and Climate Change** are causing, among others, more intense and frequent droughts, cloud bursts, heavy precipitation events, and floods, with **important economic impacts**:
 - **Extreme weather events** have cost Europe **over 500 billion euros between 1980 and 2020** (44% due to hydrological hazards)
- Economic losses derived from extreme weather events can negatively impact on individuals' mental health, for example by causing **psychological distress and anxiety about the future**.
 - **Children and adolescents** represent the most vulnerable group and research has shown that the exposure to Extreme Weather Events (EWE) significantly impacts their mental health due to lack of sufficient coping abilities, causing increased levels of **anxiety, depression symptoms, post-traumatic stress and behavioral disorders**.
 - Among the adult population, it has been discovered that, alongside the physical damage caused by EWE, there is an **emotional damage which can last longer than the economic impacts registered**, which is often referred to «psychological casualties» - in fact, **over 50%** of people whose homes and businesses were exposed to EWE, **experience poorer mental health**.

Economic losses by extreme weather and climate events in the Europe (%), 1980-2020



- In the EU, **economic losses from weather and climate-related extreme events** account on average to **12 billion of euros per year**. Around **3%** of these events are **responsible for 60% of economic losses**. However, it is also important to record small- and medium-scale events to fully assess climate change impacts and to support adaptation actions:
 - Slovenia, France and Italy** recorded the **highest losses per capita**.
- Monitoring** the impact of such events is important to improve climate change adaptation and take measures to minimize damage and loss of human life.
- The **EU's adaptation strategy** sets out how the European Union can adapt to the impacts of climate change and become climate resilient by 2050. Increasing **insurance coverage** can be one of the **key financial risk management tools** to better recover from disasters and reduce vulnerability.
 - Around **23% of total losses were insured**, although this also varied considerably among Countries, ranging from **1% in Romania and Lithuania to 56% in Denmark and 55% in the Netherlands**.

Economic damage caused by weather extreme events (average loss per capita in euros), 1980-2020



- The link between mental health and earthquakes is **complicated and multi-dimensional**. Among negative effects, developing both in the short- and long-term, the following can be listed:



- **DEPRESSION:** populations may develop depressive disorders due to the **loss of beloved ones or important belongings**:



- **POST-TRAUMATIC STRESS DISORDER (PTSD):** the rates of PTSD as a consequence of earthquakes reach **87%**. The symptoms, triggered by fear during the earthquake, can show up by **re-experiencing the traumatic event**.



- **SUICIDE RISK:** the **incidence of suicidal thoughts increases**, especially among those experiencing losses.



- **ANXIETY:** it often shows as **fear of other earthquakes occurring** and can manifest with sleeplessness, nervousness and lack of focus.



- **SUBSTANCE USE DISORDER:** following earthquakes, substance abuse tends to increase (such as **alcohol, drugs and tobacco**)

POST-TRAUMATIC STRESS DISORDER AND COMORBID DEPRESSION AMONG SURVIVORS OF THE 1999 EARTHQUAKE IN TURKEY (Ebru Salcioglu, Metin Basoglu, Maria Livanou, 2007)

*Following the 1999 Turkey earthquakes, among a sample of 769 survivors surveyed either 3.1 years (81% of participants) or 3.9 years (the remainder) after the event, **40% and 18%**, respectively registered **PSTD and comorbid depression**.*

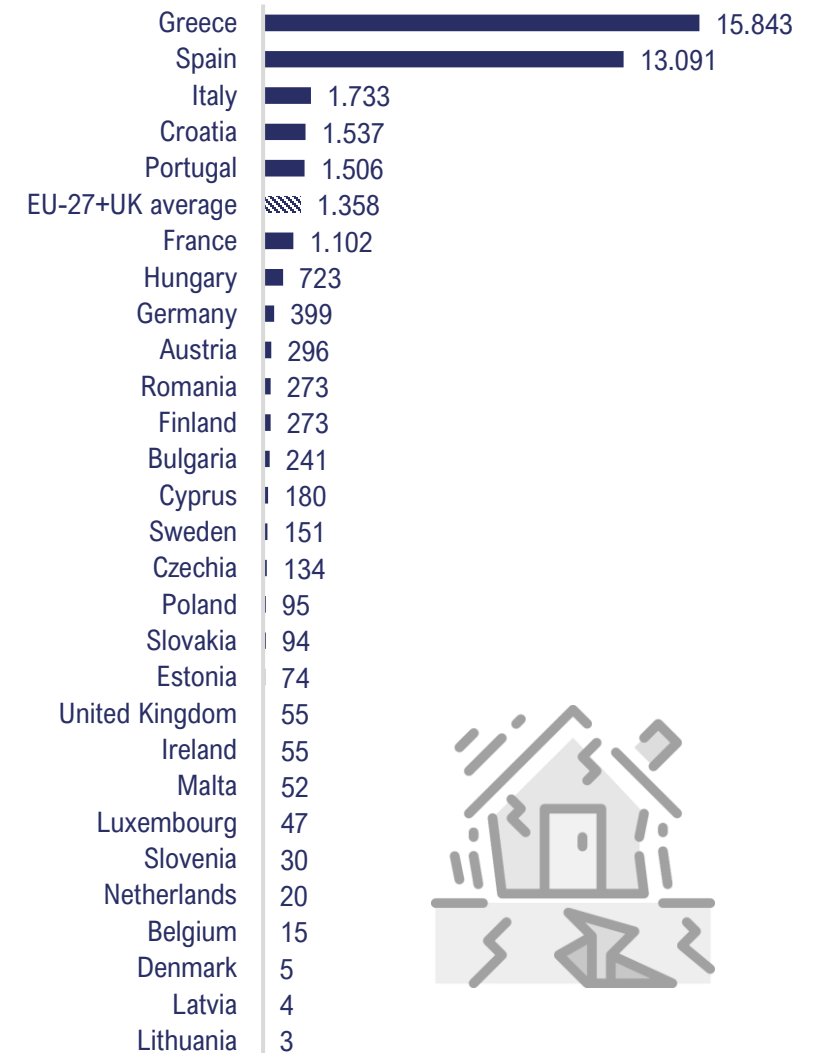
PTSD Growth and Substance Abuse Among a College Student Community: Coping Strategies after 2009 L' Aquila Earthquake (Bianchini, et al., 2015)

*Among a sample a 411 **University students** surveyed after L'Aquila Earthquake, **43.8%** of them reported a marked increase in **alcohol use**, **7.8%** in **cannabis** and **15.8%** in **nicotine**.*

Source: The European House – Ambrosetti on Xueyi Wang and Kezhi Liu “Earthquake and Mental Health” (2012); J.C. Kane, et al. “Mental Health and psychosocial problems in the aftermath of the Nepal earthquakes: findings from a representative cluster sample survey” (2018), Katayoun Jahangiri, et al. “The prevalence of suicidal ideation after the earthquake: a systemic review and meta-analysis” (2020) and Mackenzie Cope “Can We Have a Talk about Earthquake Anxiety?” (2020), J.C. Kane, et al. “Mental Health and psychosocial problems in the aftermath of the Nepal earthquakes: findings from a representative cluster sample survey” (2018); Katayoun Jahangiri, et al. “The prevalence of suicidal ideation after the earthquake: a systemic review and meta-analysis” (2020); Mackenzie Cope “Can We Have a Talk about Earthquake Anxiety?” (2020), 2022

- The **incidence of earthquakes varies vastly based** on the location of the country. In general, Countries situated in **Southern Europe** are more affected by **seismic events compared to Countries of Northern Europe**. In fact, according researchers at the EU-funded SHARE project, who have produced a map displaying which parts of Europe are **most at risk from an earthquake**, Italy, the Balkans, Spain, Greece, Bulgaria, Romania and Turkey are among the most exposed regions of the continent.
 - In general, according to data of the European Facilities for Earthquake Hazard and Risk, in 2021, **76%** of total quakes of magnitude 2 or higher were registered in **Greece and Spain**.
- Studies conducted after the earthquakes in **Cephalonia** (2014) highlighted that there are several factors that might **contribute to the level of PTSD a person can experience**:
 - The **distance from the epicenter**, the **magnitude** of the earthquake, the **severity of the trauma** experienced, the **familiarity** of the residents with seismic events, **prior mental disorders**, all play a relevant role in the impact on the mental health of a person, especially among **children and adolescents**.

Earthquakes in EU-27 and the United Kingdom (number of quakes of magnitude 2 or higher), 2021



- There are **both direct and indirect effects on mental health**. **Direct effects** include:
 - **Housing** refers to the impact of the specific **characteristics** of the house (high or low-rise, and multiple or singular dwelling units), **floor level**, **housing quality** (structural quality, maintenance and upkeep, amenities, and physical hazards), **neighborhood quality** (social and physical attributes such as the average income level and the number of abandoned buildings).
 - **Institutional settings** are the **mental health facilities** present in a particular area offered to vulnerable individuals of the society.
 - **Crowding**, which can be measured in a wide variety of ways, refers to the **number of people living in a certain area** (e.g. number of people per room).
 - **Noise**, which is mainly studied through **analysis on the effect of airport noise exposure on mental health**.
 - **Indoor air quality** which can be characterized by the presence of **malodorous and behavioral toxins** (e.g. heavy metals, pesticides, and solvents).
 - **Light** which refers both to **levels of illumination** and amount of **daylight exposure**.

URBAN
ENVIRONMENT AND
ITS
CHARACTERISTICS



BUILT
ENVIRONMENT



DISTRESS, POOR
COGNITIVE
DEVELOPMENT,
AGGRESSION,
TRAUMA



- **Indirect effects**, altering psychosocial processes. Examples of alteration having an impact on mental health include:
 - **Personal Control** is influenced by factors such as **territoriality**, the **ability to monitor and regulate use of space**, the **size, location and permeability of a location**, and **social cohesion**. People have better mental health when they have control over their surroundings.
 - **Social support** is promoted by **inside buildings by proximity**, and creation of **focal points** (i.e. neutral territory, visual prospect, inclusion of activity generators, and furniture arrangements facilitating social interactions).
 - **Restoration** which refers to all those **natural** (such as exposure to natural elements, landscape paintings, and room views) and **design** (such as architectural features) elements which can enhance restorative processes.



The understanding of the effects of the Built Environment on Mental Health needs **more investigation and stronger research design**. The most important need is to better understand the link **between psychosocial and biological processes** and the way they **can explain the relationship under analysis**

An important impact is the one that **neighborhood characteristics** have, indirectly, on Mental Health.

- **High density of a particular ethnic groups** have benefits on those who belong to that ethnicity since it increases social support, makes people feel a stronger sense of identity, and positive self-evaluation. Consequently, there is a **reduced risk of anxiety, depression, and psychoses**.
- Another aspect relates to the **walkability** of the neighborhood which provides more **social opportunities**, and consequently social cohesion, and more exposure to natural elements.



- Previous studies highlighted that people living in poor housing conditions had a **higher risk of experiencing mental ill health**:
 - An alarming factor is that people with a mental health disorder are **1.5 times more likely** to live in poor housing conditions with respect to the general population
- The **main impacts of poor housing conditions** on mental health include:
 - **STRESS, ANXIETY AND DEPRESSION**: especially if the area is unsafe and the house is overcrowded (overcrowding often results in a lack of privacy which negatively impacts on mental well-being)
 - **SLEEP PROBLEMS**: especially in case of overcrowded, noisy and uncomfortable spaces.
 - **SUBSTANCE USE DISORDER**: substances are often used to escape the reality of the conditions of the place someone is living in.

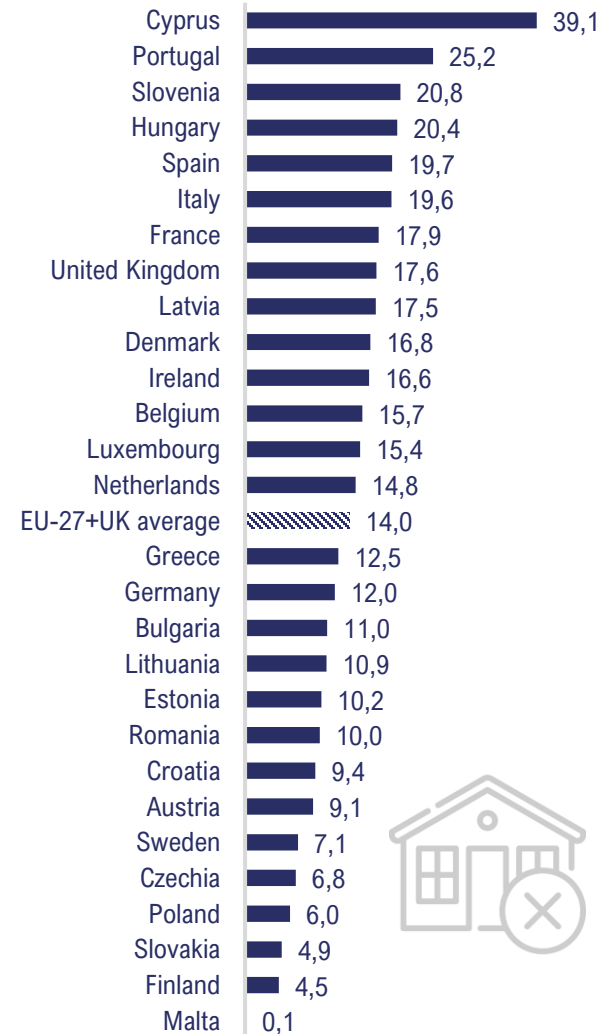
FOCUS: PERSISTING HOUSING PROBLEMS AND MENTAL HEALTH

- According to **UK data**, persistent housing problems affect just a small portion of the population, equal to approximately **10%**.
- However, the reason why poor housing persists is often related to **strict budget constraints** and the **inability to either afford a new house or make renovations**.
- Given the limited evidence on the **relationship between persistent poor housing and mental health**, it became crucial to investigate it. An interesting study is the one conducted in the UK considering **13 annual waves of the British Household Panel Survey (BHPS)**. The main findings included:
 - **Living with housing problems in the past** is associated with **poorer mental health in the present**
 - **Persistently living in poor housing negatively affects mental health** more than living in poor housing in the present

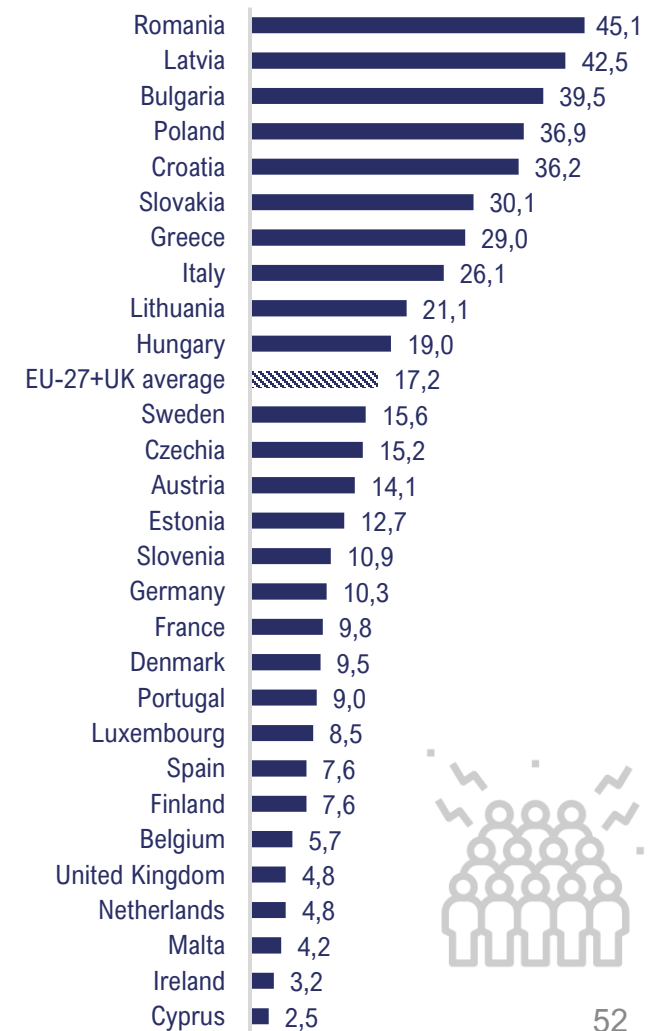


- Several studies have reported a direct association between **crowding** and **adverse health outcomes** (both physical and mental), as well as a connection with **poor educational attainment levels**.
- Although some of the results are conflicting, many studies have detected that people living in crowded households were more likely to report mental health problems, such as **psychological distress**, **alcohol abuse** and **depression feelings**, compared to those that were not living under such conditions.
 - In the UK, **30%** of people living in overcrowded housing indicated psychological distress, compared to **24%** living in non-overcrowded housing (2020).
- The two charts on the right show a great variability across European Countries considering the percentage of total population that lives in **poor housing conditions** and the **overcrowding rate** (% of people living in overcrowded households).

Population living in poor housing conditions
(% of total population), 2020



Overcrowding rate
(% of total population), 2020



- The **World Health Organization** identified air pollution as the **major environmental cause of premature death**. The relationship between air pollution and physical health is well investigated while, the relationship with mental health still has limited evidence. The main challenge comes from the positive and negative confounding factors affecting the true size of the impact. However, a concerning fact, stated by the WHO, is that **9 out of 10** people worldwide **are estimated to be exposed to high levels of outdoor air pollutants**.
- Some observational studies looked at the effects of **traffic derived from air pollution exposure on mental health**. Specifically, they link the latter with high risk of dementia, psychotic disorders, schizophrenia, depression, anxiety, and cognitive impairment. According to recent surveys, **these impacts on mental health may be even greater than the physical ones**.
- **The brain is impacted directly and indirectly** through systemic inflammation. Recent evidence shows that **chronic exposure to polluted air is a major environmental risk factor** for accelerated **cognitive decline, suicidal thoughts, anxiety, and depression**.
- According to the Belgian Health Interview Survey (BHIS), which enrolls 16,455 participants and which was run in 2008, 2013 and 2018, **long-exposure to PM 2.5, Black Carbon and NO₂ is negatively associated with mental health disorders** (psychological distress, suboptimal vitality, suicidal ideation, depressive and generalized anxiety disorder) **and self-rated health**.

NOX, PM10,
PM2.5, UFPS,
HEAVY METAL AIR
POLLUTANTS



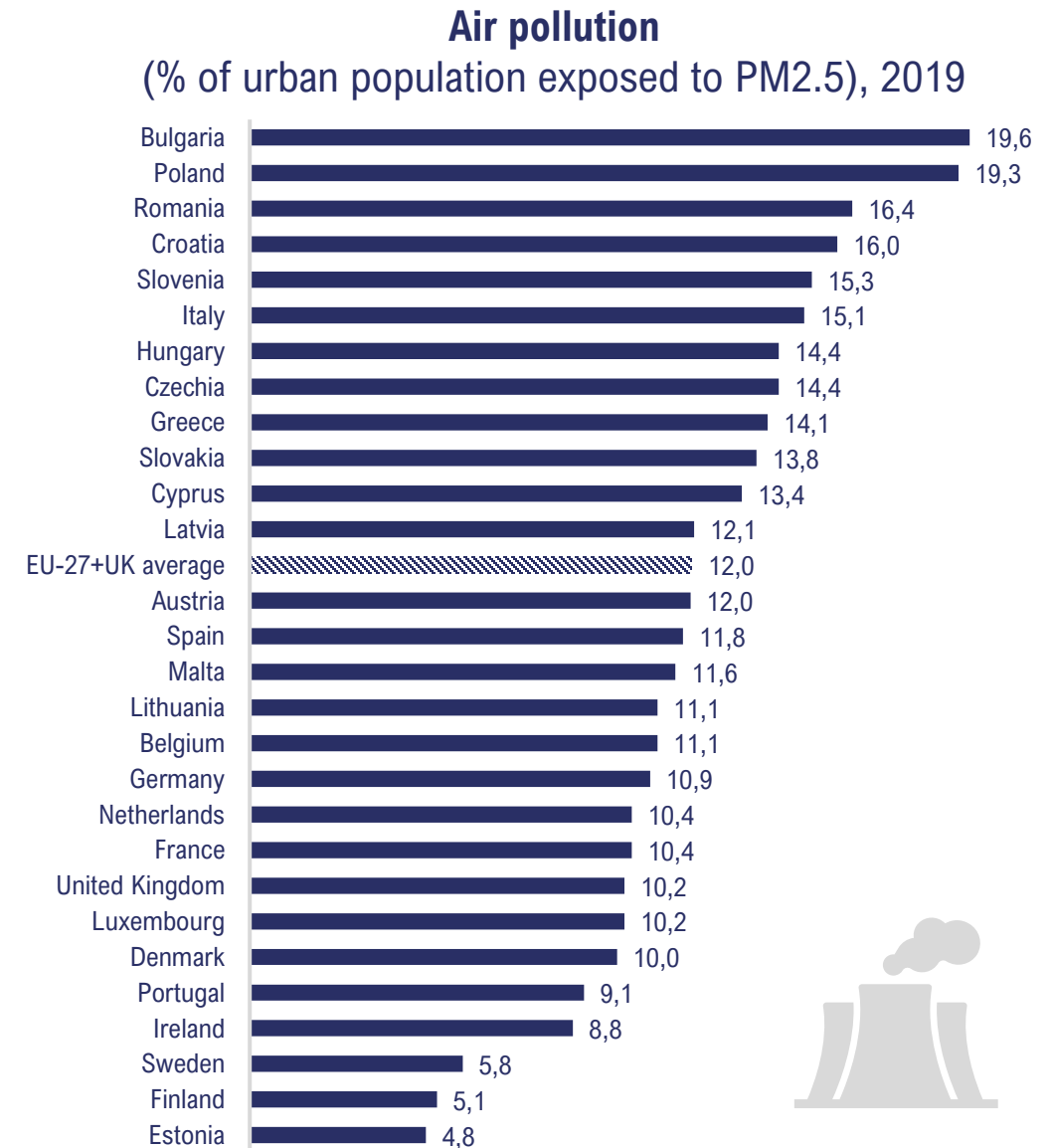
OUTDOOR
AIR
POLLUTION



ANNOYANCE,
POOR SLEEP,
COGNITIVE
IMPAIRMENT



- Air pollution is a major cause of premature death and disease and is considered the **single largest environmental health risk in Europe**. **Heart disease** and **stroke** are the most common reasons for premature deaths attributable to air pollution, followed by **lung diseases** and **lung cancer**.
- As mentioned before, scientific evidence has demonstrated that people exposed to certain air pollutants, such as **fine particulate matter (PM2.5)** and **NO₂**, are more likely to **experience Mental Health problems**, in particular **anxiety**.
- On average in EU, **12% of people living in urban areas are exposed to PM2.5**. The chart on the right shows, however, a large variability across European Countries considering the percentage of total population exposed to PM2.5, ranging from the **19.6% of Bulgaria** to **4.8% of Estonia**.
- In 2021, the EU Commission as adopted the Action Plan “**Towards Zero Pollution for Air, Water and Soil**”, setting out the overarching vision that, by 2050, pollution is reduced to levels no longer considered harmful to health and natural ecosystems.
 - The Plan aims to reduce the number of premature deaths caused by PM2.5 by **at least 55% by 2030** from 2005 levels.



Noise Pollution is known as the **spread of undesired noise in the environment**. It is an intrusive noise disruption, such as airplanes, traffic, and workplace noise **responsible for increasing anxiety and stress levels**.

- Noise Pollution can negatively affect many different spheres of mental health and is recognized as a **major environmental hazard**. The recognition was formalized with the publication by the WHO, in 2018, of the Environmental Noise Guidelines.
- There are different types of studies researching the relationship between noise and mental illness, both at individual and community level. The findings are not always consistent; however, they seem to suggest that **high levels of environmental noise might lead to increased incidence of mental health disorders**, like depression and anxiety, but not to clinically defined psychiatric disorders or accelerate/intensify the development of **latent mental disorders**. Specifically, **some of the impacts of Noise pollution** may include:
 - **Sleep disorders**, especially problematic for light-sleeper. Reduced sleep time can cause serious problems, for example lead to confusion, depression, and anxiety.
 - **Everyday life troubles**, people can become more irritable, violent, and angry. This can negatively affect stress levels and, consequently, all health problems related to it.



AIRCRAFT NOISE AND ANXIETY

- According to «Medication use in relation to noise from aircraft road traffic in six European Countries: results of the HYENA study» by Sarah Floud, et al. (2014), a **10-decibel increase** in aircraft noise is associated in a **28% increase in the use of anti-anxiety medication**.

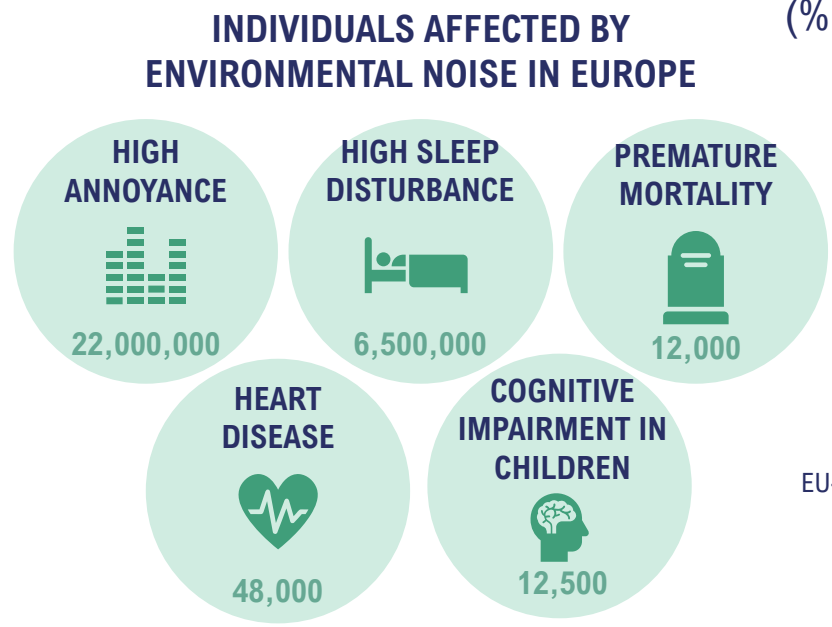


TRAFFIC NOISE AND DEPRESSION

- According to «Residential Road Traffic Noise and High Depressive Symptoms after Five Years of Follow-up: Results from the Heinz Nixdorf Recall Study» by Ester Orban, et al. (2016), **people living in high-traffic areas are 25% more likely to develop depression**.

1 Noise Pollution (2/2)

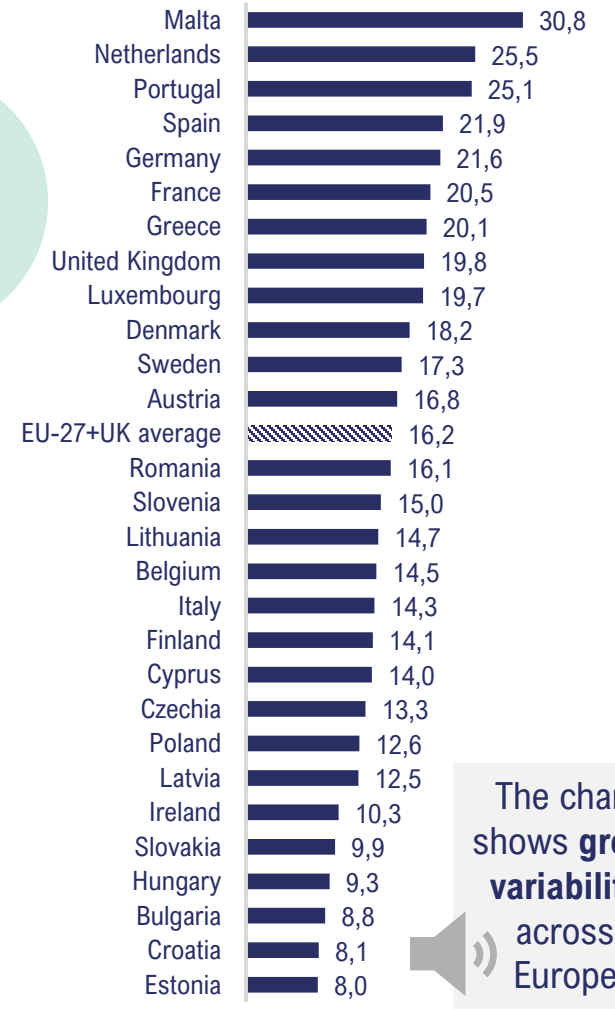
- **Environmental noise remains a major environmental problem** affecting the health and well-being of millions of individuals in Europe, with **more than 20 million** impacted by **chronic high annoyance** and **6.5 million** people by **chronic high sleep disturbance**.
- At least **20% of the EU population lives in areas where traffic noise levels are harmful to health**, even if exposure is likely to be underestimated.
 - **Road traffic noise** is the most dominant source of environmental noise. An estimated **113 million people in EU** are affected by long-term day-evening-night traffic noise levels.
- **Emissions of noise at source have been regulated in the EU for many years.** Maximum noise limits for motor vehicles, household appliances and outdoor equipment date back to the 1970s.
 - More recently, **measures to control noise from operations and airports**, and the regulation of industrial facilities' noise levels have broadened the control of environmental noise.



1 in 5 EU citizens lives in areas where **noise levels are considered harmful to health**



Noise pollution
(% of total population exposed), 2020



The chart shows **great variability** across Europe

1 Transport and Road Traffic (1/2)

- **Driving is a common part of modern society** and spending large amounts of time in the car are a common pattern. However, commuting is considered as one of the **least pleasant activities to do**.
- The primary concerns related to driving are the **negative impacts on the environment, road injuries, and reduced opportunities for personal time**. In addition, there are many effects on people's health and well-being, especially increasing **stress** at:
 - **Psychological level** causing anxiety, lack of control, work frustration, and behavioral problems;
 - **Cognitive level** because of a sense of lack of control, a feeling of helplessness and poor tolerance of frustration;
 - **Physical level** which, in return, has impact on the overall well-being and mental health;
 - **Social level** because of a lack of motivation in the workplace or to meet beloved ones.



TRAFFIC JAMS AND EFFECTS ON MENTAL HEALTH

According to the study «I am sick and tired of this congestion: Perceptions of Sanandaj inhabitants on the family mental health impacts of urban traffic jam» by Haidan Nadrian, et al., traffic triggered **stress, anxiety, reduced tolerance, family squabbles, annoyance and boredom**.



ROAD RAGE AND AGGRESSIVE BEHAVIOR

According to the study «Traffic and Crime» by Louis-Philippe Beland and Daniel A. Brent, extreme evening traffic **increase the incidence of domestic violence by 9%**.



HIGH-TRAFFIC AND DEPRESSIVE SYMPTOMS

According to the study «Traffic stress, vehicular burden and well-being: A multi-level analysis» by Gilbert C. Gee and David T. Takeuchi, populations living in areas with high-traffic reported having **more depressive symptoms driven by the unpredictability of traffic and the feeling of helplessness**.

1 Transport and Road Traffic (2/2)

- In 2019, more than half (61,3%) of employed people in Europe travelled less than 30 minutes for commuting, with an average commuting time of 25 minutes.



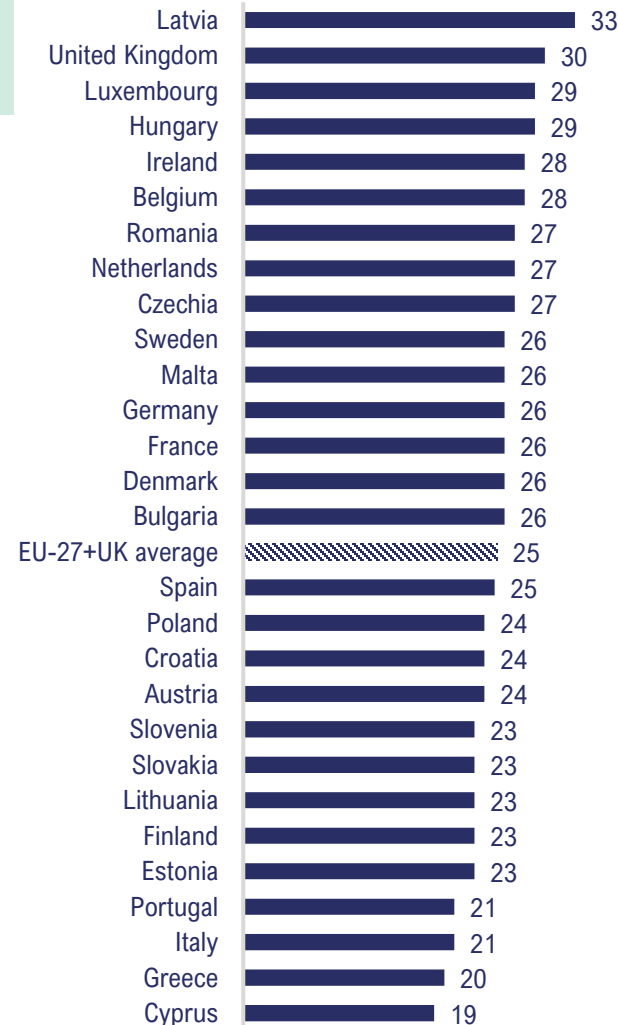
- Employed people in Latvia had the longest average commuting time (33 minutes). On the other end of the spectrum, Cyprus (19 minutes) and Greece (20 minutes) had the shortest average commuting times, closely followed by Italy and Portugal (21 minutes).

- The indicator “Time lost per year” measures the additional travel time as compared to a one-hour period during free-flow conditions, measured by 230 working days per year.

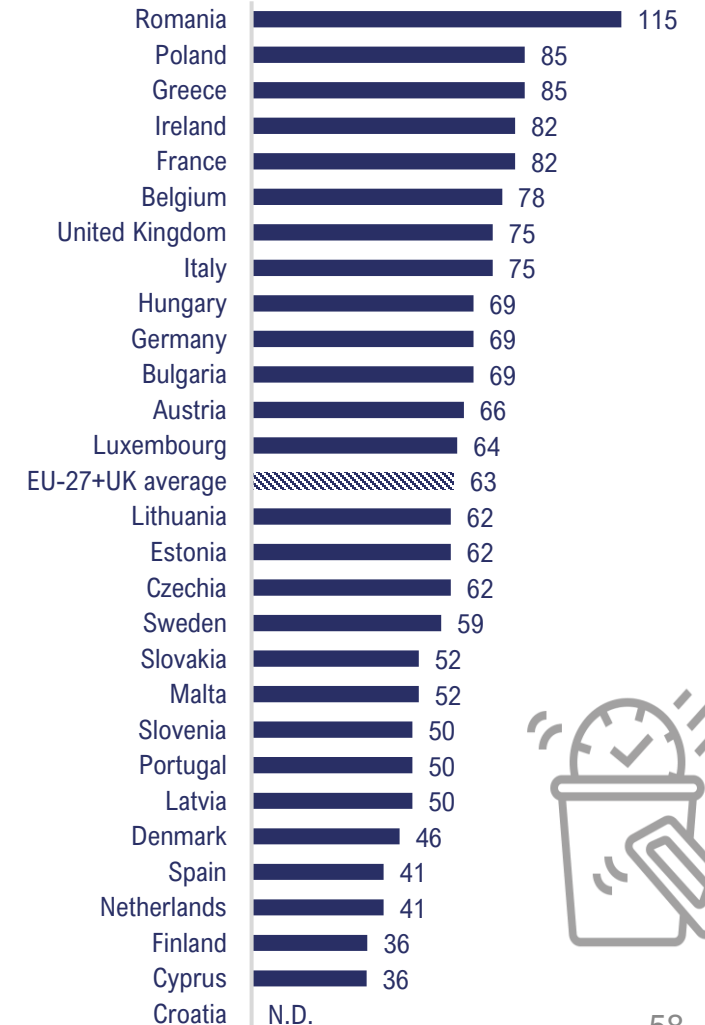


The study revealed that in 2021 the congestion levels were slowly going back to the pre-pandemic levels (70 out of the 404 cities in the study surpassed the 2019 benchmarks). Bucharest (Romania), not only is the 1st for time lost per year in Europe, but it is also 8th in the global ranking.

Average Commuting Time (daily minutes), 2019



Time lost per year in each capital city (hours per year), 2019



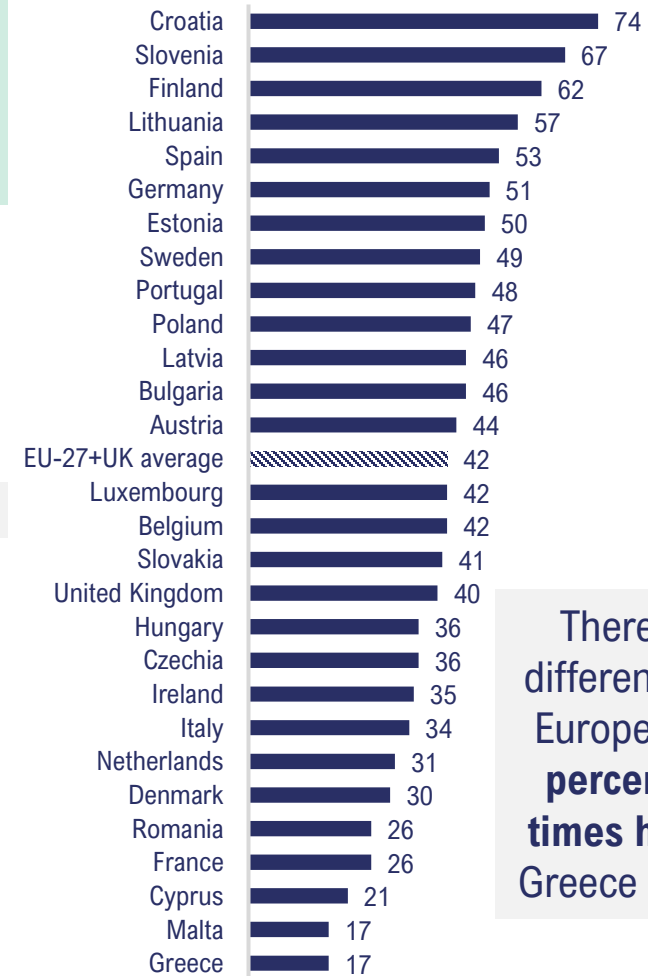
1 Urban Green Space

- **Urbanization** is associated with increasing **incidence of mental health disorders**; consequently, research has been focusing on the impact of urban and peri-urban green and blue spaces on mental health. **Green spaces** are “*outdoor areas dominated by vegetation, such as urban parks, or isolated green elements, such as street trees*”. Unfortunately, the **high heterogeneity in findings** makes it complicated to draw proper conclusions for policy proposals. However, there is **general consensus that green spaces have positive effects on mental health**.
- An interesting research has been conducted **following the COVID-19 pandemic** outbreak since the citizens who did not have private green spaces (like a balcony or a garden) could not benefit from the public spaces due to the restrictions imposed. It has been shown **that green spaces in the city are important for stress and anxiety relief** and allow **physical activities and social gatherings**, all aspects positively impacting on mental health*.

THE PATHWAYS THROUGH WHICH GREEN SPACES BENEFIT MENTAL HEALTH:

- 1 MITIGATION**
Reducing harm by restoring the natural conditions of spaces
- 2 RESTORATION**
Restoring capacities by increasing the aesthetic appreciation and residential satisfaction
- 3 INSTORATION**
Building capacities by increasing social interactions and the relevance in and of green spaces

Urban green space
(% of total green infrastructure in capital cities),
2021



There are vast differences across Europe. **Croatia's percentage is 4 times higher** than Greece and Malta's



CONFLICT

- According to the Global Conflict Tracker, there are **27 ongoing conflicts** and **68,6 million displaced people worldwide** due to conflicts (UN data).
- The **incidence** of mental disorders in conflict settings is estimated to be **22.1%** (**13%** of people show **mild forms of depression, anxiety and PTSD**; **4%** show more moderate forms; **5.1%** show severe **depression and anxiety, schizophrenia, and bipolar disorder**)
- Approximately **1/5 people** in post-conflict settings has **depression, anxiety disorders, PTSD, bipolar disorder and schizophrenia**.



MIGRATION

- In 2021, the United Nations estimated **281 million people** to be **international migrants**
- Previous research showed how migrants tended to develop **unhealthy life-styles, risk behaviors, psychological and social distress and low self-esteem**
- **Refugees** and recently arrived **asylum seekers** tend to show **PTSD, mood disorder and depression**.
- Negative effects are also registered by **those who are left in the country of origin becoming** less performing and not very resilient.



ECONOMIC RECESSION

- The greatest burden of economic recessions are **high levels of unemployment and a decline in living conditions**, impacting vulnerable groups of people more.
- According to previous research, unemployment, income decline, social exclusion, and unmanageable debts are considerably linked with **poor mental wellbeing**, increased rates of mental disorders, substance-related disorders, and suicidal behaviors.
- Indeed, in period of financial crisis, a **higher psychological distress** and **greater use of mental health services** are registered.



CONFLICT

As the conflict in Ukraine continues to unravel, the **prevalence of trauma and mental health problems will grow**. The availability of mental health and psychosocial support is crucial.

In Afghanistan, the impact of conflicts on the population's mental health is clear: There has been an increase in post-traumatic stress disorder (PTSD) and other psychological conditions linked to **armed conflict throughout the country**, with the International Psychosocial Organisation (IPSO) estimating that **70%** of Afghanistan's are in need of **psychological support**.

In **Israel**, among the subjects exposed to **war-related trauma**, **76.7%** of them had at least one **traumatic stress-related symptoms** (A. Bleich, et al. «Exposure to terrorism, stress related mental health symptoms, and coping behaviors among a nationally representative sample in Israel», 2003).



MIGRATION

~5 million people have **fled the war in Ukraine** and **7 million** more are internally displaced. According to recent estimates, about **1/3 Ukrainian refugees** might develop **depression, anxiety disorders or PTSD**.

Studies showed that **Irish, British, and New Zealander migrants** to Australia had **higher rates of suicide** compared to **those in their Countries of origin** (FA. Whitlock «Migration and suicide», 1971).

Looking at in-patient psychiatric treatment in Malmö (Sweden), over a 1-year period highlighted that **immigrants had increased risk of admission for psychosis**. Despite the incidence, it is not possible to rule out that psychosis might be determined by other factors. (Cambridge University Press “Increased rates of psychosis among immigrants in Sweden: is migration a risk factor for psychosis?”, 2001).



ECONOMIC RECESSION

Following the **financial crisis**, in **Spain**, among Primary Care attendees, **19.4%** had **major depression**, **8.4%** generalized **anxiety**, **7.3%** **somatoform**, and **4.6%** **alcohol dependence** (M. Gili, et al. «The mental health risk of economic crisis in Spain: evidence from primary care centres, 2006 and 2010», 2012).

In **Greece**, **depression** increased by **3%** following the **economic crisis in 2008 and 2009** (M. Madianos, et al. «Depression and economic hardship across Greece in 2008-2009: two cross-sectional surveys nationwide», 2010).

While the pandemic is primarily a physical health crisis, it has also had widespread **impact on people's mental health, inducing, among other things**, considerable levels of **fear, worry, and concern**. The growing burden on mental health has been referred to by some as the “**silent' pandemic**”. (European Parliament, Briefing Mental health and the pandemic, 2021).

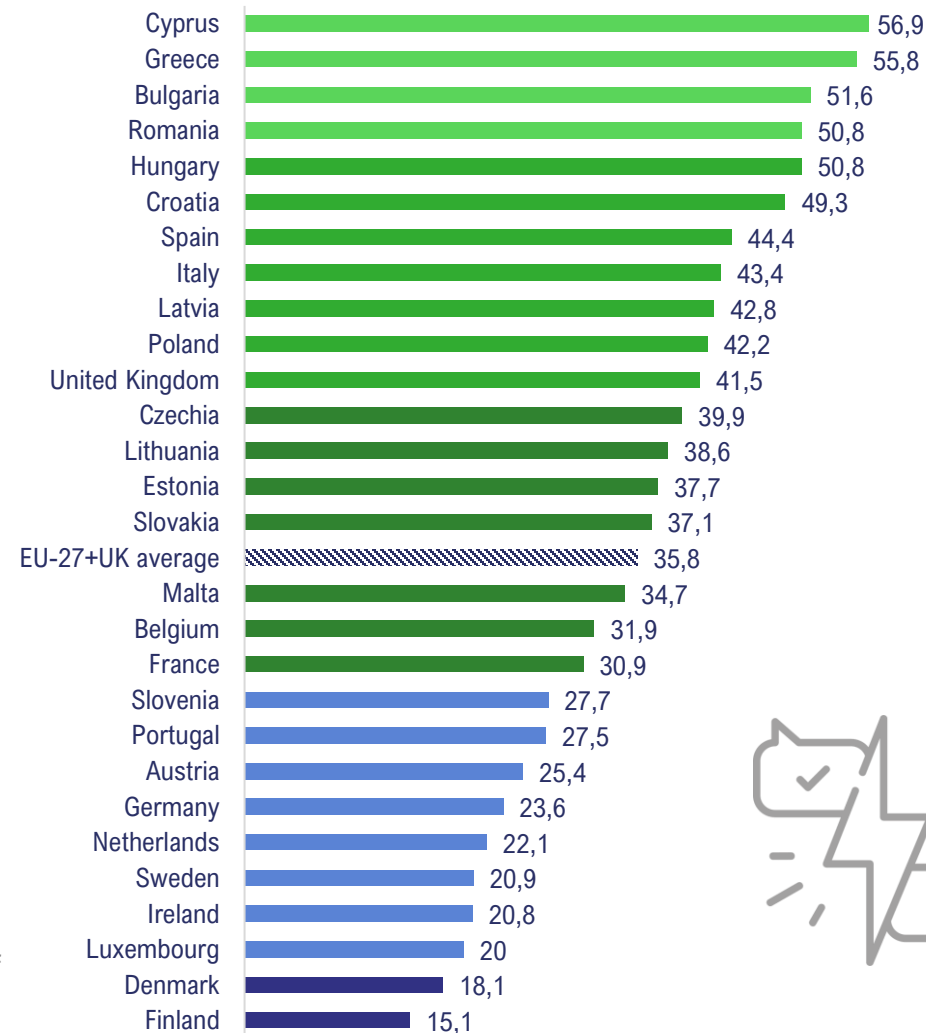
- The **Fragile State Index** is a critical tool in highlighting not only the normal pressures that all states experience, but also in identifying when those pressures are **outweighing a states' capacity to manage them**. It considers **12 key political, cohesion, economic and social indicators and over 100 sub indicators to score each country**.*
- According to the Index, **Finland** is the **most sustainable country** in the world in 2022. Most European Countries rank in the **sustainable and very/more stable** categories. **Cyprus, Greece, Bulgaria** and **Romania** are the only European Countries to rank in the **stable** range.
 - Greece** is one of the **most worsened** Countries both in the 2012-2022 period (+5.4) and in the last year (+1.3).
- The **Ukrainian conflict** and its ripple effect will have an additional negative impact on the ranking of **nearby Countries like Romania and Poland, as well as on Europe in general**.



(*) Indicators include, for example: government debt, wealth concentration, presence of religious persecution, existence of guerrilla forces, brain drain, confidence in government, systemic violation of rights, freedom of speech, influx of refugees.

Source: The European House – Ambrosetti on Fragile State Index 2022, 2022

Conflicts, migration, economic recession (Fragile State Index), 2022



- The incidence of criminal activities is dependent on neighborhood characteristics and the effects on the individuals are dependent on the **degree of exposure and on personal characteristics**. Exposure to crime, violence and vandalism can be experienced at various levels:



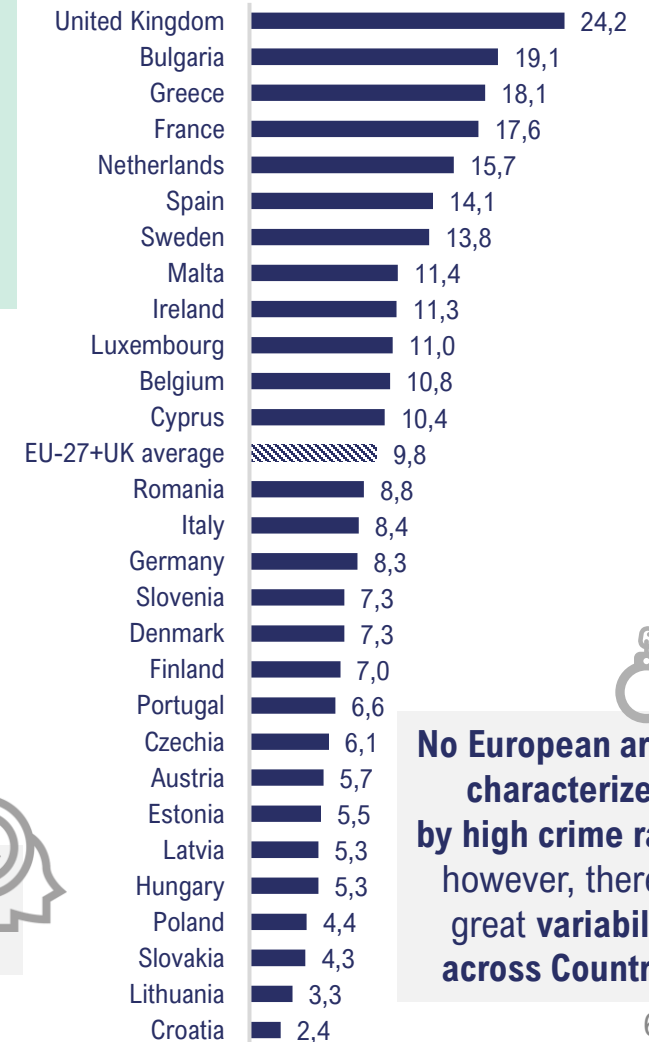
- By being the **victims**;
- By **witnessing** the act;
- By **hearing about** the events from other individuals or the news.

- It has been shown that **repeated exposure to crime and violence is potentially linked to an increase in negative health outcomes and mental distress and reduced quality of life**.
- One alarming aspect is the discovery of **reduction of physical activity** due to fear of crime which, in turn, leads to poorer self-rated physical and mental health. The main effects on mental health are **behavioral problems**, including unsafe sexual and driving behaviors, **depression, anxiety, and PTSD**.
- The effects of violence, no matter whether experienced, witnessed, or heard of, negatively impacts **children** who are more likely, as adults, to engage in and experience **intimate partner violence**, to engage in **substance abuse**, to show **depressive and anxiety symptoms**.

People reporting **greater fear of crime** were **1.93 times more likely to have depression**, they **exercised less and spent less time in social activities and gatherings**



Crime, violence or vandalism in the area (% annual measure), 2020



No European area is characterized by high crime rates, however, there is great variability across Countries



Index

- **Introduction on Mental Health**
 - Mental Health in the UN Sustainable Development Goals
 - WHO and EU's main initiatives and action plans
- **An update on the impacts of the COVID-19 pandemic on Mental Health**
- **«Headway 2023 – Mental Health Index 2.0»**
 - Environmental determinants of Mental Health
 - **Mental Health status of the population**
 - Responsiveness to Mental Health needs in healthcare
 - Responsiveness to Mental Health needs in workplaces, society and schools
- **Results and conclusion**

- This area aims at evaluating the **outcomes related to the Mental Health of citizens** achieved by different European Countries by analyzing different **indicators**:
 - **Prevalence** (rate per 100,000 inhabitants) of depression, anxiety, schizophrenia, bipolar disorders, autism, attention deficit hyperactivity disorder - ADHD (for <20 years), conduct disorders (for <20 years) and intellectual disorders (for <20 years). It measures the proportion of a population with a specific characteristic in a given time period;
 - **Disability** measured in YLD (Years Lived in Disability) per 100,000 inhabitants of mental and behavioral disorders (general population and <20 years). It quantifies the burden of living with a mental disorder;
 - **Age-standardized mortality rate** of mental and behavioral disorders and suicide. It measures mortality net of the demographic structure of different European Countries;
 - **Risk factors**, including:
 - **Smoking**: percentage of the population smoking more than 20 cigarettes per day;
 - **Alcohol abuse**: percentage of young and adult population who report heavy episodic drinking in the previous 30 days;
 - **Drug abuse**: percentage of the population having used any illicit drug over lifetime;
 - **Bullying**: percentage of the young population who reported being bullied at least twice at school in the previous 2 months;
 - **Sexual abuse**: YLDs per 100,000 inhabitants due to sexual abuse (<20 years)

KPI	Unit of measure	Source
Prevalence (depression, anxiety, schizophrenia, bipolar disorder, autism, ADHD, conduct disorders and intellectual disorders)	Rate per 100,000 inhabitants	Global Burden of Disease, databases of National Statistic Institutes of Member States, official platforms of scientific associations
Disability - Years Lived with Disability (mental and behavioral disorders for general population and <20 years)	Rate per 100,000 inhabitants	Global Burden of Disease
Mortality (mental and behavioral disorders and suicide)	Standardized rate per 100,000 inhabitants	Eurostat and databases of National Statistic Institutes of Member States, official platforms of scientific associations
Risk factors (smoking and drug use in adults and adolescents, alcohol abuse in adults, bullying in young people and sexual abuse)	% Rate per 100,000 inhabitants	Eurostat, European Monitoring Center for Drugs and Drug Addiction, Global Burden of Disease and databases of National Statistic Institutes of Member States, official platforms of scientific associations

Prevalence of Mental Health disorders in Europe

- Mental Health started receiving attention previous the **COVID-19 pandemic**, but, considering the disruptive effect of the latter, the **relevance increased substantially**. The share of individuals reporting having mental health conditions has increased, especially among young individuals and people with a lower socioeconomic status.
- According to WHO-Europe estimates, **over 110 million** people are living with some kind of **Mental Health disorder in Europe**. The pandemic and the associated restrictive measures heavily impacted on depression and anxiety disorders for which an increase has been registered in all Countries. Furthermore, Mental Health conditions are among the **top 10 most common non-communicable diseases**.
- It is complicated to address the challenges posed by Mental Health disorders considering the high **variability among European Countries**. For example, **Eastern European Countries, Finland and Ireland** present prevalence rates of mental health distress around **5%**, in **Croatia and Portugal** the rates are **around 20%**. The rates might even be higher considering that underreporting is a common phenomenon among many Countries.

Source: The European House – Ambrosetti on OECD and Global Burden of Disease (GBD) data, 2022

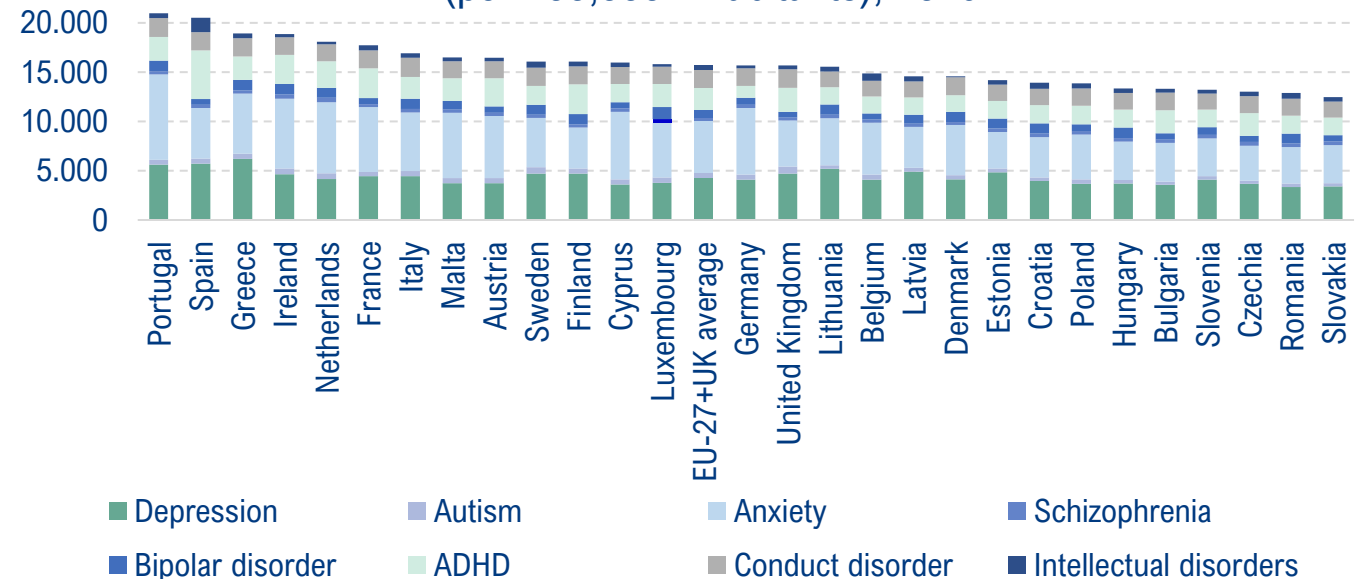
In Europe, COVID-19 pandemic triggered a **+25% increase in prevalence of anxiety and depressive disorders.**

>1 out of 6 people



are affected by Mental Health disorders

Prevalence of Mental Health disorders in Europe
(per 100,000 inhabitants), 2019**

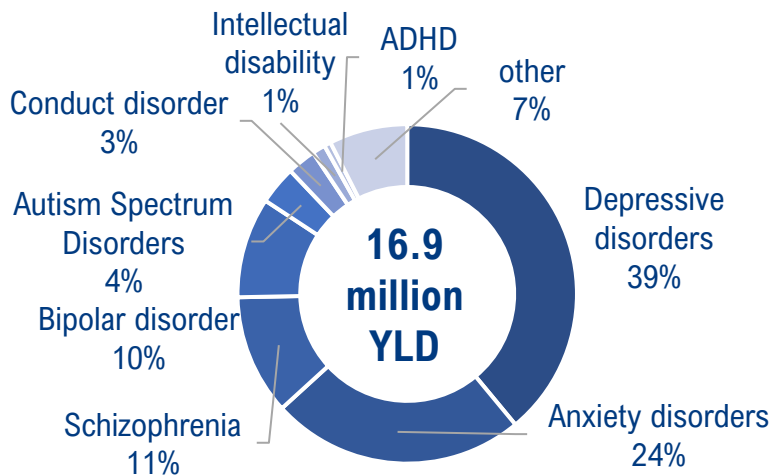


(*) Dlouhy, Martin, "Mental Health policy in Eastern Europe: a comparative analysis of seven Mental Health systems", 2014. (**) For ADHD, conducts disorders and intellectual disorders, the prevalence among <20 years old is considered.

The burden of Mental Health in Europe (1/2)

- Mental Health disorders rank **2nd** among the most **common disabling non-communicable diseases** and are **responsible for 16.9 million YLD in Europe**. In absence of effective treatments and proper support, these disorders lead to devastating effects on people's lives.
- Depressive disorders account for **5.4%** of all Years lived with Disability (YLD), making it the **4th leading cause of YLD** in the EU. The scenario is projected to worsen given the increased prevalence rate due to the COVID-19 pandemic. Depression is followed by **anxiety disorders and schizophrenia** (6th and 19th respectively).

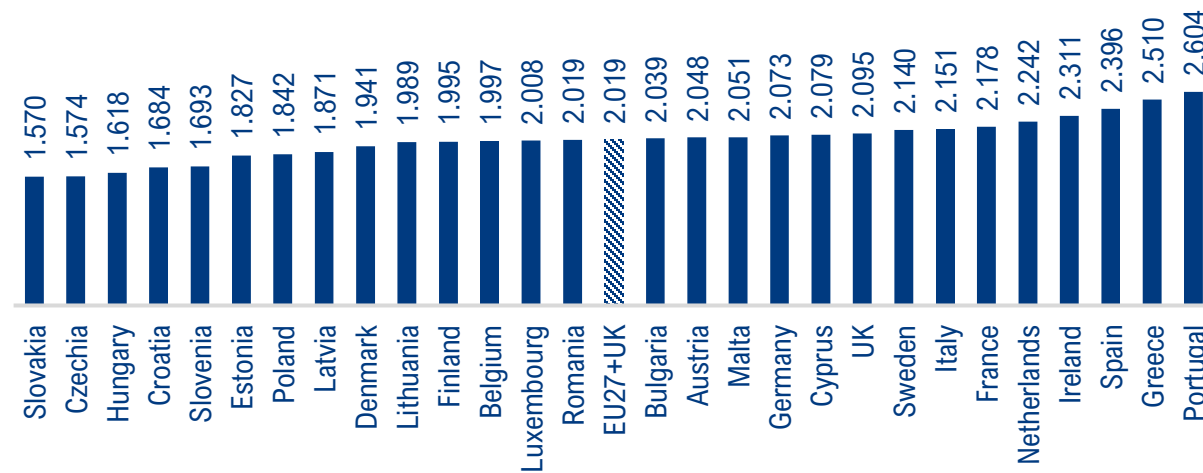
Distribution of YLD by disorder (%), 2019



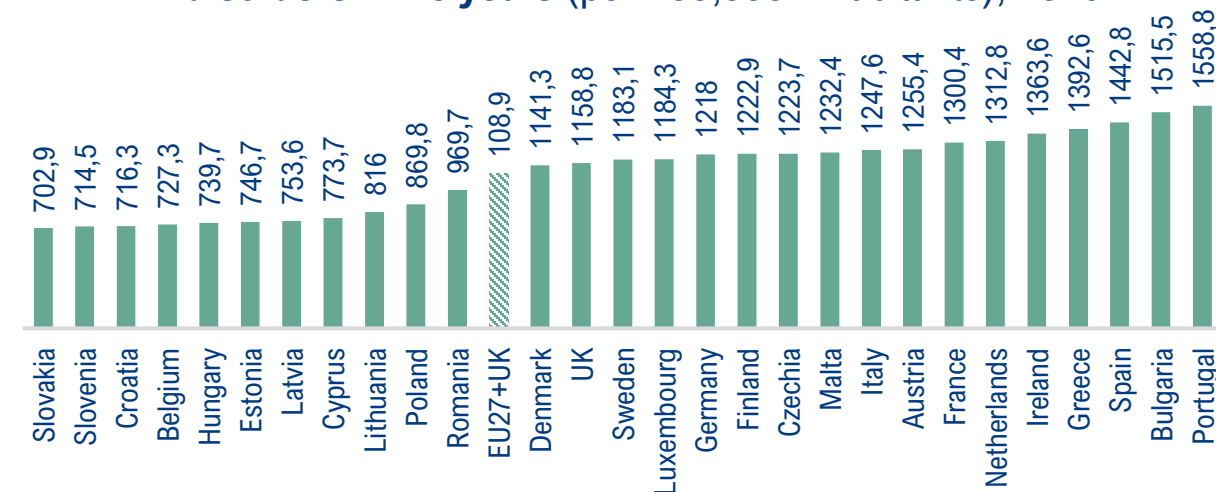
The EU+UK area registers **1,986 YLDs per 100,000 inhabitants** in the overall population **due to mental disorders**.

Considering the **under-reporting phenomenon** common in certain Countries, the value is expected to be higher.

Years lived with disability (YLD) of Mental Health disorders - total population (per 100,000 inhabitants), 2019



Years lived with disability (YLD) of Mental Health disorders - <20 years (per 100,000 inhabitants), 2019

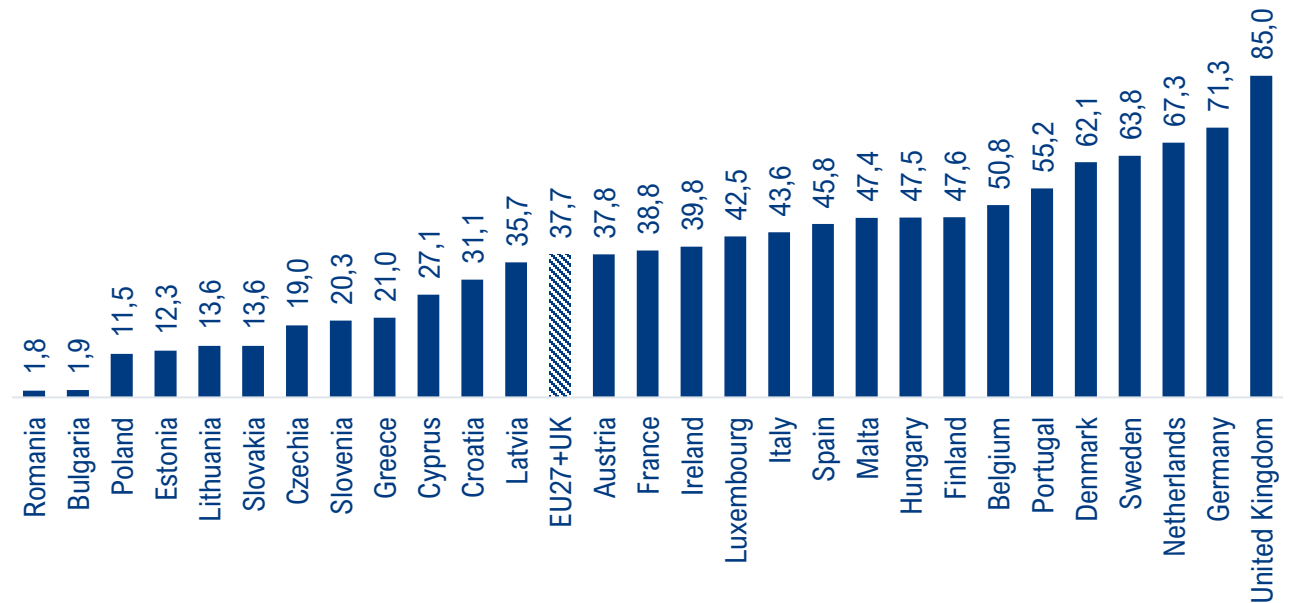


The mortality of Mental Health disorders in Europe

- In Europe, **approximately 4% of all deaths** are caused by mental and behavioral disorders.
 - According to some studies, people with severe mental health conditions **have a higher premature mortality rate with respect to the general population** due to preventable physical conditions. It has been shown that people with mental health conditions experience higher mortality from COVID-19.
 - The EU27+UK area registers high levels of **heterogeneity**. According to the most recent available data, Countries with the highest number of deaths due to mental and behavioral disorders are the United Kingdom, Germany, the Netherlands, Sweden, Denmark, Portugal, Belgium, Finland, Hungary, Malta and Spain. Also in this case, the risk is the one of **under- or mis-reporting**.
- In the EU-27, **4.5% of deaths among women are due to mental and behavioral disorders**. Also, men are interested by this pattern, but it less common (**2.8%**).
- Regarding age groups, deaths due to mental disorders are **more common in individuals aged-65 years** or older with respect to younger age groups.



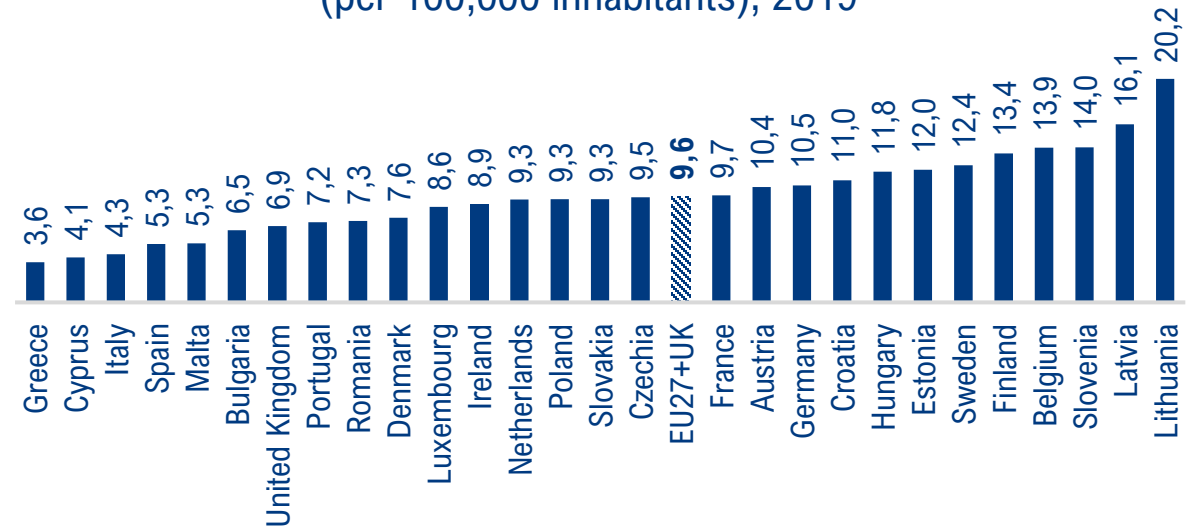
Standardized death rate of mental and behavioral disorders in European Countries (per 100,000 inhabitants), 2020 or last available data



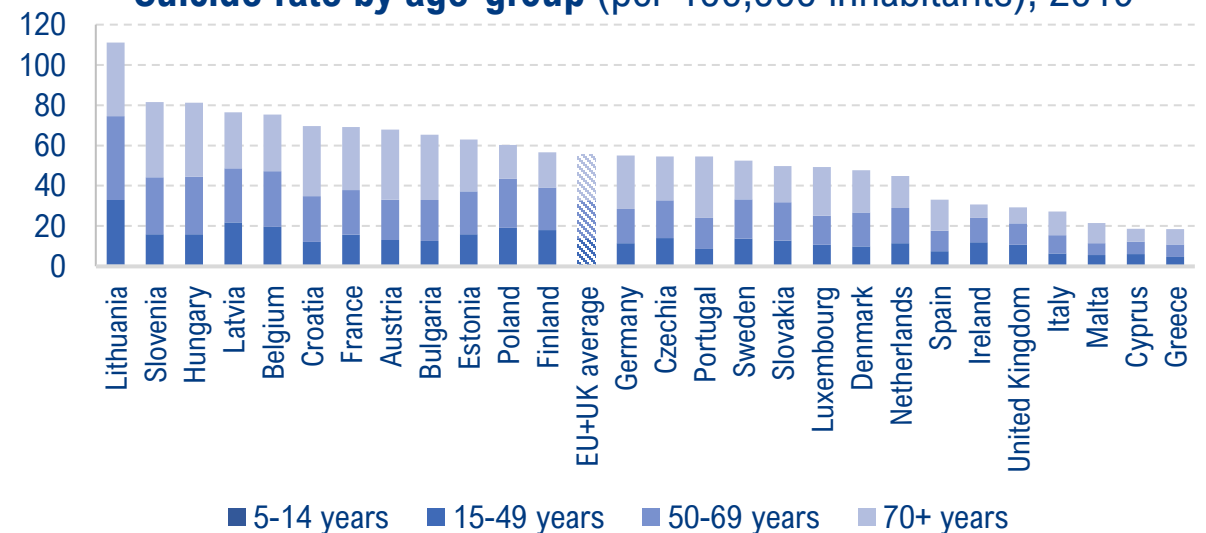
2 Focus on suicide rates

- In the WHO-Europe region, poor mental health is responsible for **140,000 deaths per year by suicide**:
 - 6th cause of death** in the population aged less than 70 years;
 - 4th cause of death** in the population below <20 years.
- There is **high heterogeneity** across European Countries with Lithuania (20.2) and Latvia (16.1) having the **highest suicide rates per 100,000 inhabitants** and Greece (3.6) and Cyprus (4.1) the lowest.
- Mental health and behavioral disorders are an important driver of **suicide among younger age groups** with male adolescents aged 15-19 reported higher suicide rates. According to 2017 data, over 1,000 15-19-year-olds died of suicide across EU Countries in 2017, and most of these deaths were among boys. Despite the relatively low absolute number of suicides among adolescents, suicide is one of the leading causes of death in this age group.
- The pandemic and the war in Ukraine** are responsible for increased uncertainty, insecurity, grief and loss. The effects of these impactful events on people's mental health are significantly high. As it was projected at the beginning of the pandemic, suicide rates due to increased mental health conditions are likely to increase.

Age-standardized suicide rate (per 100,000 inhabitants), 2019



Suicide rate by age-group (per 100,000 inhabitants), 2019



Addictive behaviors, bingeing and episodes of abuse of alcohol, tobacco and drugs are frequently related and represent **major signaling factors of incoming or ongoing Mental Health disorders.**

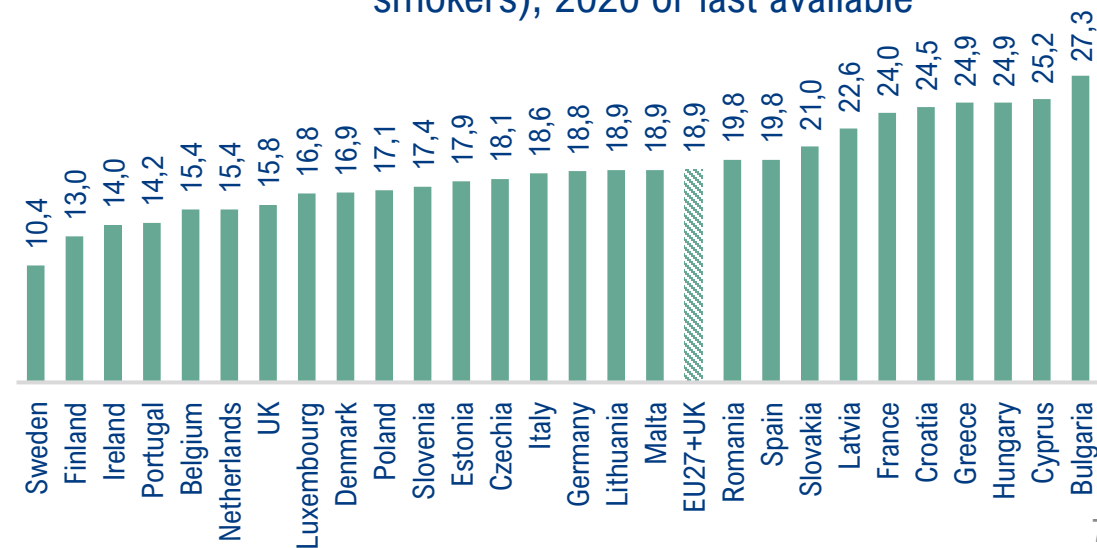
- Alcohol-related harm is a **major public health issue** in the European Union. **Alcohol Use Disorder (AUD)** is among the most common Mental Health disorders, whereas high alcohol consumption is associated with **increased risk of accidents and injuries, violence, homicide and suicide.**
- In 2020, more than **140 million** people in Europe (**32.9%** of the total population) reported having had **heavy episodic drinking** in the previous month, with men being heavier consumers than women.
- Tobacco consumption** is largest avoidable and one of the deadliest behavioral risk factors, responsible for over **700,000 deaths per year** across EU Countries.
 - On average, approximately **25%** of men and **16%** of women report daily smoking.
- Bulgaria registers the **highest consumption levels.** Conversely, Nordic Countries, and especially Sweden and Finland, the lowest.



Alcohol abuse (% of the population who report heavy episodic drinking in the previous 30 days), 2020 or last available



Smoking (% of population aged >15 years who are daily smokers), 2020 or last available



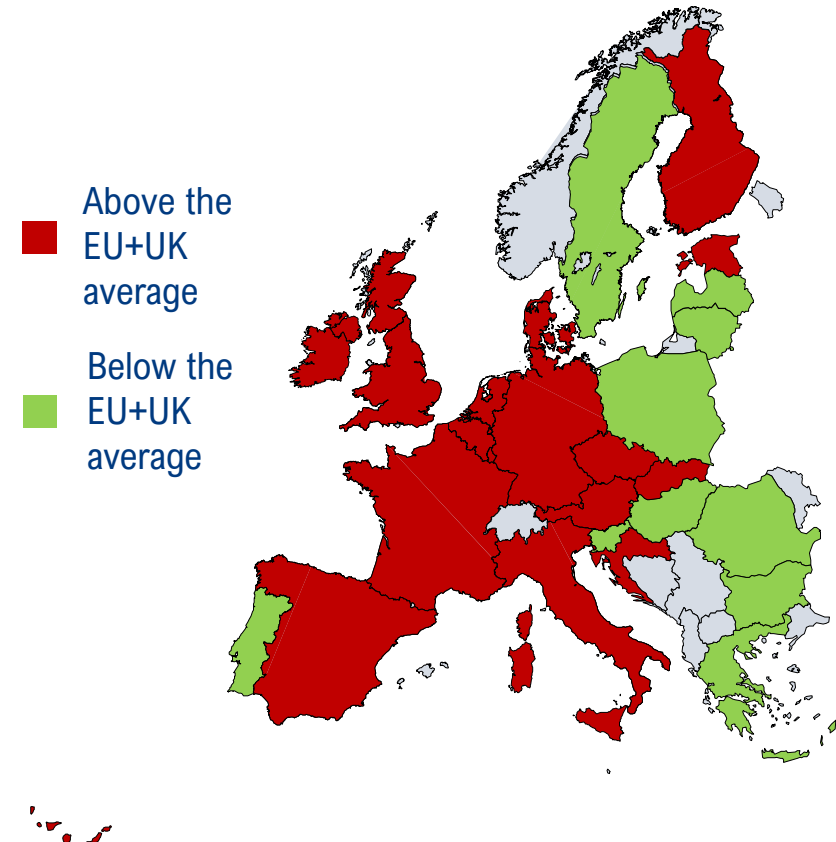
Risk factors: drug use and addiction

- Around **83.4 million** people aged 15-64, equal to **29%** of the population, in the European Union are estimated to have used illicit drugs **at least once in their lifetime**. The number of users increased from 2020 to 2021.
- **As for tobacco, drug abuse and drug addiction is often associated with addictive behaviors** which potentially lead to the development of more serious mental disorders. The scenario is complicated even more by the co-occurring disorder. Indeed, people with Mental Health issues often **consume drugs as a coping mechanism**. However, the effects of drug abuse affect individuals with its unique forms and increase the difficulties faced by the individuals. For example, the consumption is associated, to list a few, with cardiovascular diseases, accidents, violence and suicide.
- The most consumed drug are cannabis, cocaine, ecstasy, amphetamines, and other drugs.
- Male tend to make use of drugs more often with respect to women (**50.5 million vs. 33 million**). **Younger individuals are more likely to use drugs**, specially in the age range 15-34. With regard to most recent data, in 2021, the share of youths who used drugs was 16.9%, equal to 17.4 million individuals.
- There is variability across the EU+UK area: **France, Spain and Denmark** have the highest consumption rates (45% and 38.9% respectively); **Hungary and Malta** the lowest (7.9% and 1.4% respectively).

Almost **16.9%** of young adults make use of **illicit drugs** regularly



Drug use (% of the population having used any illicit drug over lifetime), 2021



BULLYING

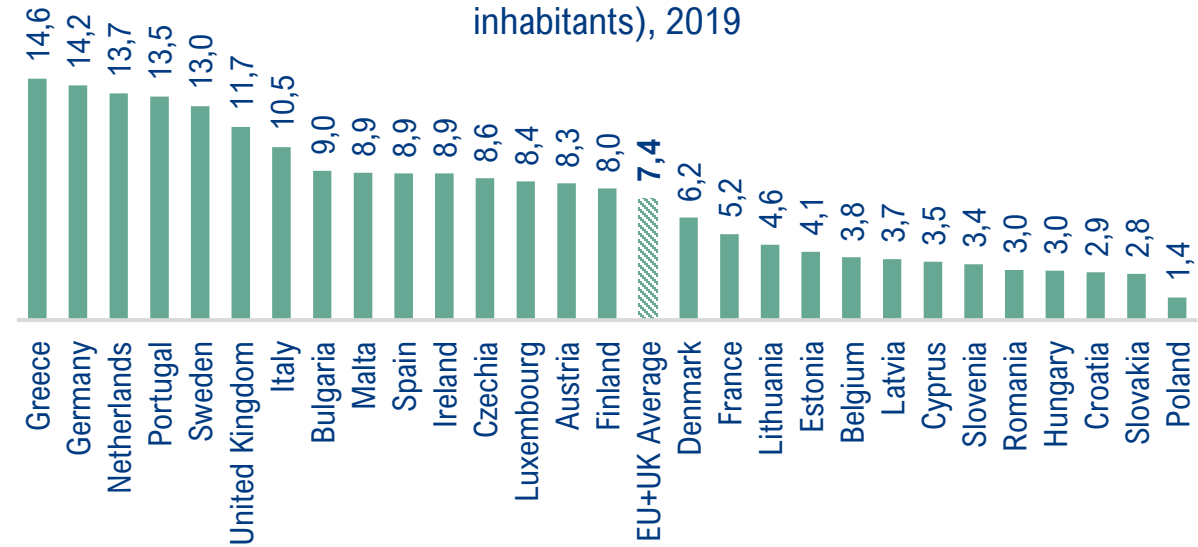
Bullying (% of young population reporting being bullied at least twice at school in the past months), 2020 or last available data



- **Bullying** affects thousands of children and adolescents in the European Union and represents a major **risk factor for Mental Health disorders**. Verbal and relational bullying are the most common types of bullying. However, the prevalence is dependent on age, culture, and country. On average, **28.2%** of young people reported having **experienced bullying on a monthly basis**.
- Cyber bullying incidence is increasing. In the European Union, among the 9–16-year-old population, **80% reported to be a victim of cyber-bullying**. Females are more likely to report being cyberbullied.

SEXUAL ABUSE

Burden of sexual abuse (YLDs rate per 100,000 inhabitants), 2019



- **Sexual abuse victims** at risk of developing a mental disorder. On average, in the EU+UK, the **burden of sexual abuse** in terms of its Mental Health consequences amounts to **7.4 Years Lived with Disability (YLDs)** each 100,000 inhabitants.
- In 2020, **22 million** individuals **reported child sexual abuse in the EU**; social media and Internet combined with the COVID-19 pandemic led to a surge in cases. The Countries with the highest incidence are France, Latvia, Luxembourg, and the Netherlands.
- The results of different Countries may be **biased by lack of available data** and heavy **mis- and under-reporting**.

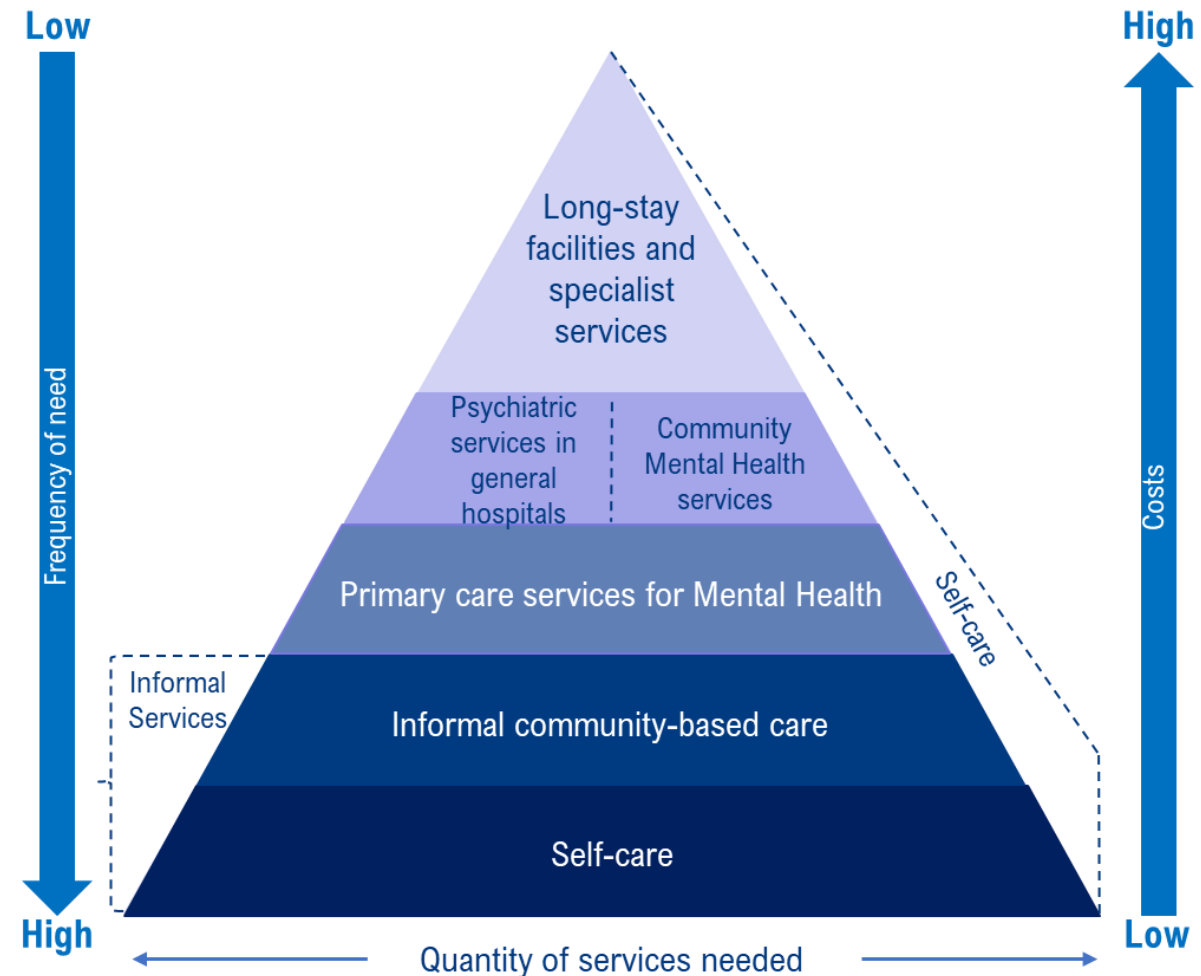
Index

- **Introduction on Mental Health**
 - Mental Health in the UN Sustainable Development Goals
 - WHO and EU's main initiatives and action plans
- **An update on the impacts of the COVID-19 pandemic on Mental Health**
- **«Headway 2023 – Mental Health Index 2.0»**
 - Environmental determinants of Mental Health
 - Mental Health status of the population
 - **Responsiveness to Mental Health needs in healthcare**
 - Responsiveness to Mental Health needs in workplaces, society and schools
- **Results and conclusion**

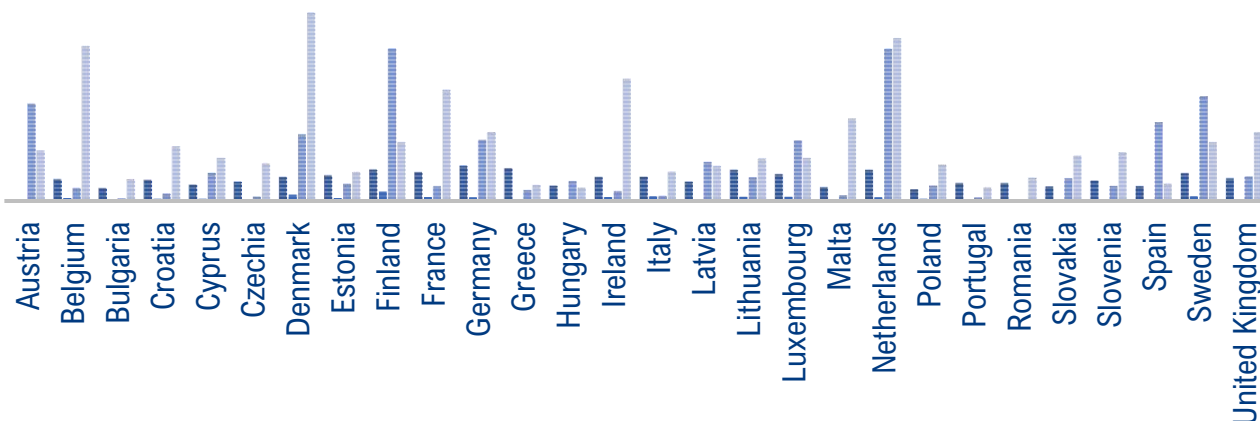
- The aim of this area is to assess the **ability of healthcare systems to improve** (or at least not worsen) **current Mental Health outcomes** in the near future. The indicators considered are:
 - Availability of healthcare professionals specialized in Mental Health** (rate per 100,000 inhabitants) such as psychiatrists, child neuropsychiatrists, psychologists and nurses;
 - Availability of structural resources for Mental Health at hospital and community level** (rate per 100,000 inhabitants) such as hospital beds and number of facilities at community level;
 - Appropriateness of Mental Healthcare** such as hospitalizations, length of stay and psychological/psychiatric consultations, number of scientific publications.
 - Economic resources for Mental Health** measured as the % on total healthcare expenditure.
- Some of the European Countries **lack data** on some of the above-mentioned indicators, signaling a **major problem in monitoring** the capacity to respond to Mental Healthcare needs. Thus, in the analysis, **estimates** were made based on available knowledge of specific Countries and based on the average performance of the EU27+UK Countries.

KPI	Unit of measure	Source
Availability of healthcare professionals specialized in Mental Health (e.g., psychiatrists, child neuropsychiatrists, psychologists, nurses)	Rate per 100,000 inhabitants	Eurostat, WHO and National Institutes of Statistics database and scientific articles
Availability of structural resources for Mental Health at hospital and community level (hospital beds, number of facilities at community level)	Rate per 100,000 inhabitants	Eurostat, WHO and National Institutes of Statistics database and scientific articles
Appropriateness of Mental Healthcare (hospitalizations, length of stay and psychological/psychiatric consultations, n. scientific publications)	Rate per 100,000 inhabitants Days %	OECD, Eurostat, SCImago
Economic resources for Mental Health	% on healthcare expenditure	Eurostat, WHO and National Institutes of Statistics database and scientific articles

- The WHO has developed an **optimal mix of services framework providing Countries with a guidance** on how to organize and manage Mental Health services. As the figure on the right shows, the **plurality of services for Mental Healthcare should be self-managed or managed through informal community care**. Long-term facilities and specialist services should be used least. In addition, mental hospitals and specialist services are those encompassing the highest costs yet are the least frequently needed.
- At European level, most Countries have implemented Mental Health policies and legislation, whereas many are making progress with the **implementation of community-based Mental Health services**, though with significant difference across Europe. The difference in adopting Mental Healthcare strategies across European Countries is emphasized by the fact, that some Countries in the European Region provide a **comprehensive network of community-based Mental Healthcare**, whereas others still heavily rely on the use of large mental hospitals for their Mental Health services and are therefore struggling to implement their strategies.
- Due to the above-mentioned and due to the lack of reliable indicators and valid information, the **elaboration of meaningful comparisons of the provision of Mental Healthcare in Europe is hampered**. However, it is of crucial importance to try to **analyze and compare Mental Healthcare strategies and policies across European Countries**.



Healthcare professionals (rate per 100,000 inhabitants),
2021 or most recent available year*



(* includes both private and public professionals. In case of Italy and Spain, data considers only healthcare professional working in the public sector)

- **Healthcare professional availability varies significantly across the EU.**
- Considering the **rate of psychiatrists**, the worst performing country is Poland, the best performing one is Germany; in **Child neuropsychiatrists**, certain Countries have a value of 0 (also due to monitoring issues), Finland is the best performing; considering the rate of **psychologists**, respectively, Romania and the Netherlands and Latvia; whereas **nurses**, Hungary and Denmark.

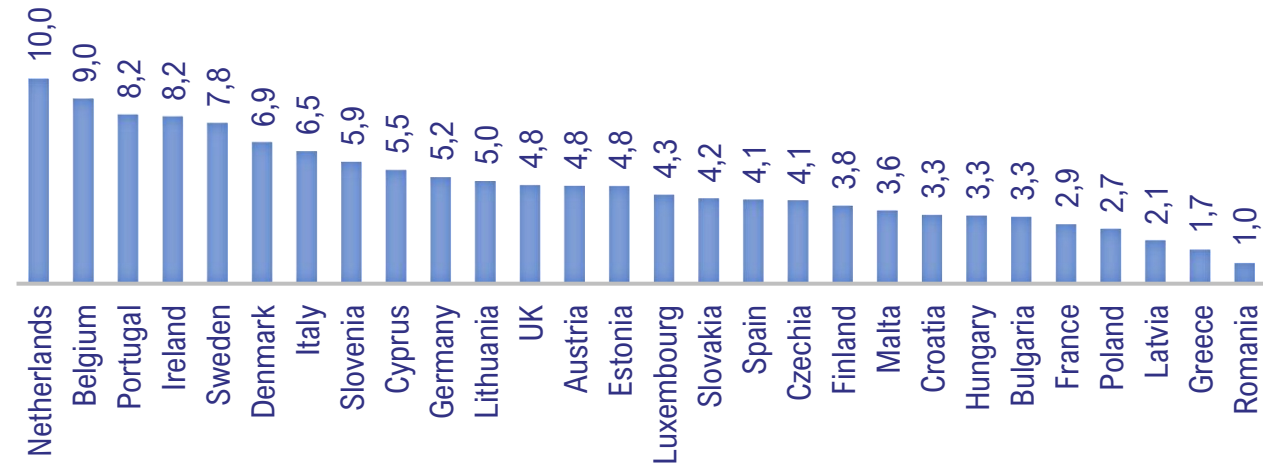
Healthcare infrastructures (rate per 100,000
inhabitants), 2021 or most recent available year

	Psychiatric hospital beds	Child and adolescent specific inpatient beds	Mental Hospitals	Mental Health units in general hospitals	Mental Health outpatient facilities
EU+UK average	0.7 per 100,000 inhabitants	3.4 per 100,000 inhabitants	0.3 per 100,000 inhabitants	0.5 per 100,000 inhabitants	9.1 per 100,000 inhabitants

- The **result of the EU+UK area** along the five dimensions considered to assess the availability of healthcare infrastructures is **medium to low**.
- The overall score is especially **low (3.4/10)** when it comes to the **availability of children and adolescents' specific inpatient beds**, signaling potential **mis-** and **under-treatment**.
- A positive aspect to consider is the **increase** in the **Mental Health outpatient facilities** that moved from an average of 3.9 to **9.1**.

- The **top 3 positions** are gained by the **Netherlands, Belgium, and Portugal**. These Countries have the highest scores in quality of Mental Healthcare. The **lowest 3 positions** feature **Romania and Greece**, with a score of 1 and 1.7, and **Latvia** with a score of 2.5.
- Countries register a **high variability** among all the dimensions forming the quality-of-care score: hospital discharge rates, hospital average LOS, Mental Health Consultations, the highest variability is in discharge rates where the difference between the best (Germany) and worst (the Netherlands) is 1,607.4.
- In terms of **scientific publications** per 100,000 inhabitants, **Ireland** ranks first, while Romania closes the ranking (**UK** would be the first country in absolute values).
- The **average expenditure for Mental Healthcare** is equal **5.4%**. Countries invest differently in Mental Health. Particularly, France (14.5%), Germany (11.3%) and Sweden (10.0%) are the principal investors, significantly exceeding the EU+UK average. There is however a **missing data** issue.
- The results are likely to be influenced by the overall Healthcare System design, **cultural factors** and varying data reporting across Countries.

Quality of care final score (min=1; max=10), 2020



Economic resources (% of total healthcare expenditure), 2021 or latest available year



Index

- **Introduction on Mental Health**
 - Mental Health in the UN Sustainable Development Goals
 - WHO and EU's main initiatives and action plans
- **An update on the impacts of the COVID-19 pandemic on Mental Health**
- **«Headway 2023 – Mental Health Index 2.0»**
 - Environmental determinants of Mental Health
 - Mental Health status of the population
 - Responsiveness to Mental Health needs in healthcare
 - **Responsiveness to Mental Health needs in workplaces, society and schools**
- **Results and conclusion**

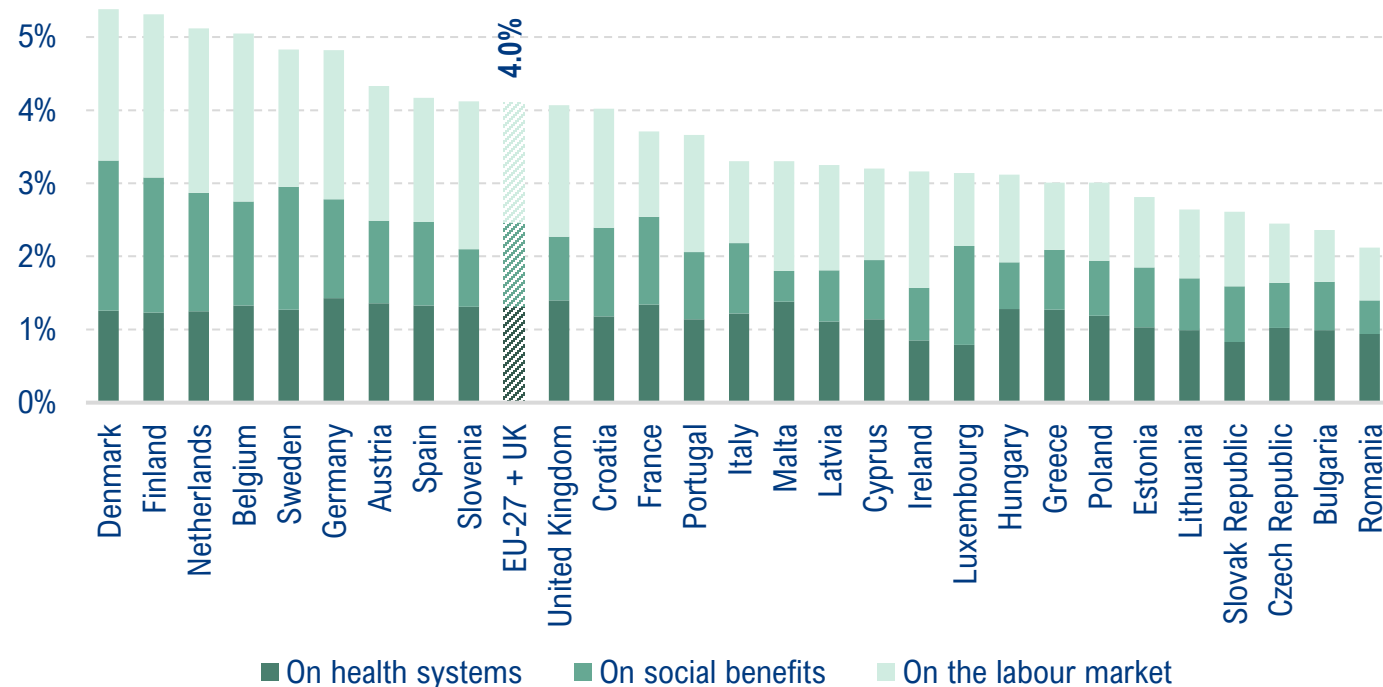
Responsiveness to the needs of individuals with Mental Health disorders in workplaces, society and schools

- The aim of this area is to assess the **responsiveness of the systems to the needs in work, schools and society** of people with Mental Health problems (MHP) through various KPIs.
- Workplaces:**
 - Employment situation of people with MHP such as lost work productivity and employment rate;
 - People with MHP receiving illness and unemployment benefits;
 - Existence of Mental Health promotion programmes in the workplaces to raise awareness and fight stigma and discrimination.
- Society:**
 - Social support evaluated through the number of social workers, social support received and availability of residential and semi-residential centres;
 - People receiving social disability benefits;
 - Existence of Mental Health promotion programmes outside of the working and educational environment.
- Schools:** the overall responsiveness is assessed by monitoring the rate of day centres for young people with a mental disorder, the percentage of youth with mental disorders dropping out of school and the existence of Mental Health promotion programmes in the school environment.
- Various European Countries **lack data** on some of the KPIs taken into account.

	KPI	Unit of measure	Source
WORKPLACES	Employment situation of people with MHD (Average gross wage vs. workers without MHD and employment rate of people with MHD)	%	OECD (Fitter Minds, Fitter Jobs)
	Persons receiving employment benefits (for illness and unemployment)	Rate per 100,000 inhabitants	OECD (Health at a Glance)
	Existence of Mental Health promotion programmes	Number, type	WHO
SOCIETY	Social support (number of social workers, social support received and availability of residential and semi-residential centres)	Rate per 100,000 inhabitants %	Eurostat, WHO
	Persons receiving social benefits (for disability)	Rate per 100,000 inhabitants	OECD (Health at a Glance)
	Existence of Mental Health promotion programmes	Number, type	WHO, EU Compass
SCHOOLS	Day centres for youth with mental disorders	Rate per 100,000 inhabitants	WHO
	Youth dropping out of school also having MHPs	%	OECD (Fitter Minds, Fitter Jobs), Eurostat
	Existence of Mental Health promotion programmes	Number, type	WHO

- Mental health disorders represent an **enormous cost to society** because of healthcare outcomes, insurance payments, loss of productivity, and unemployment, and **have increased markedly since the COVID-19 outbreak**.
- It has been estimated that, by 2030, mental health disorders will account for **more than half of the global economic burden due to non-communicable diseases**.
- According to the last available OECD studies, in Europe the overall **cost related to mental health amounts to more than 600 billion euros (4% of total EU GDP)**. Of these:
 - **190 billion euros** (32% of the total) is **direct spending on healthcare**;
 - **170 billion euros** (28%) is spent **on social security programs**;
 - **240 billion euros** (40% of GDP) is caused by **indirect costs in the labor market**, driven by lower employment rates and reduced productivity due to mental illness.

Direct and indirect costs of Mental Health disorders in Europe (% of GDP), latest data available



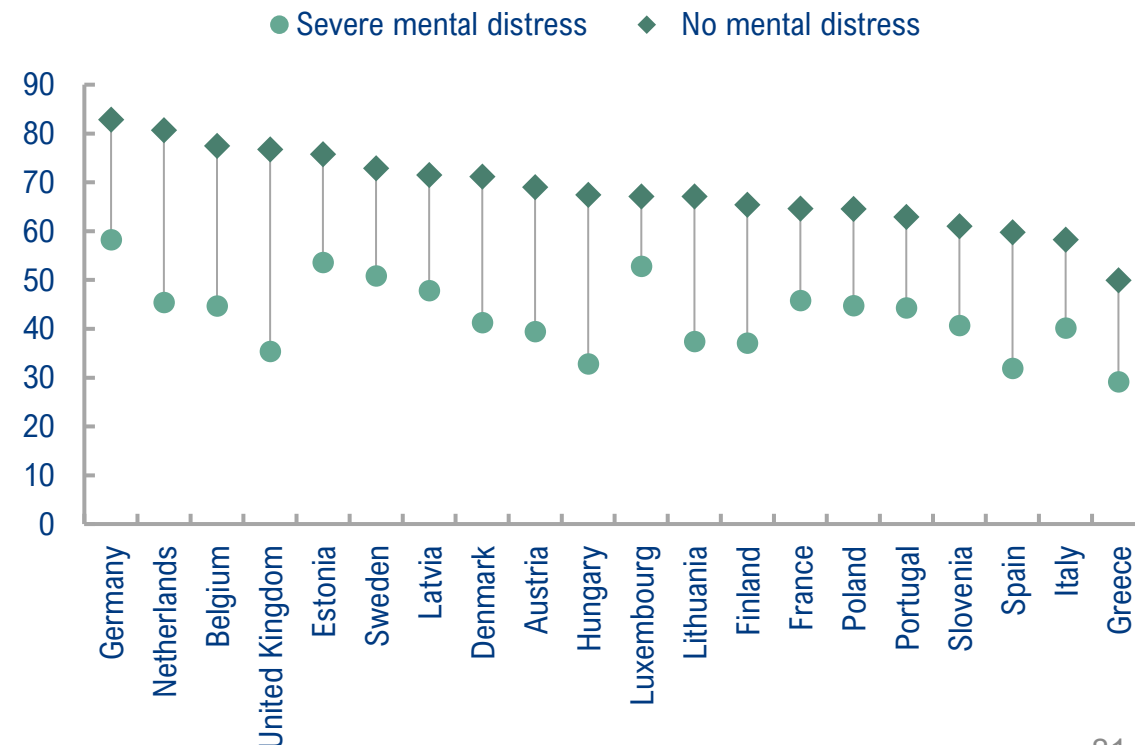
As pointed out by the OECD, the **overall costs are still significantly underestimated**, as several other voices have not been considered, such as social spending and the higher cost of treating a physical illness if the patient also has a mental illness.

Responsiveness to the needs of individuals with Mental Health disorders in workplaces (1/3)

- **Good Mental Health is vital for people to be able to lead healthy and productive lives.** Mental Health disorders, in fact, significantly impact people's everyday life, including their ability to work, and limiting their capacity to participate in the labor market.
- This can lead to a “vicious” circle whereby **the longer people are out of work, the more damaging the consequences are.**
- According to OECD data, mental ill-health, especially of the mild-to-moderate kind, affects as much as **20% of the working-age population** at any given moment in their lives.
- At European level, also due to the negative impact of the COVID-19 crisis, Mental Health and well-being of workers is increasingly recognized as a relevant issue for stakeholders in the workplace, both from the perspective of **employees** – in terms of **loss of pay, stigma, recovery and reintegration into work** – and of **employers** – in terms of **absenteeism, presenteeism and lower productivity**, and **less tangible aspects** such as low workforce morale.
- The indicators analyzed show a **considerable and systematic disadvantage** of persons with mental health issues in terms of participation and inclusion into the labor force and work outcomes. Even if there are wide differences between Countries, the findings suggest there is a **long way to go to eliminate the stigma underlying this disadvantage.**

Evidence suggests that there are two main issues concerning labor market: **employment and unemployment gaps** on the one hand, and **job quality and work performance** issues on the other.

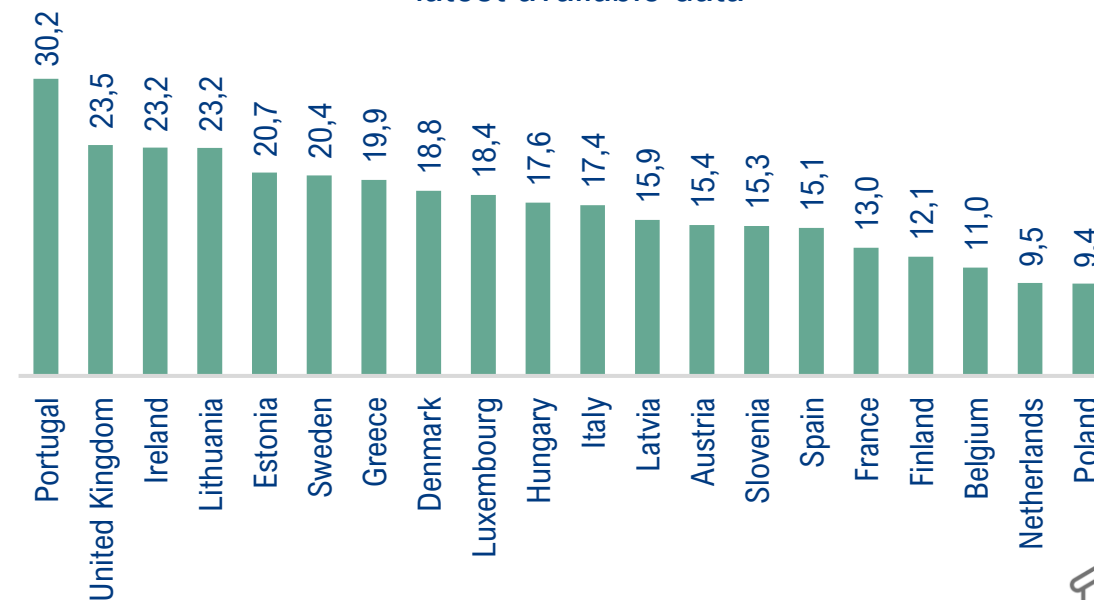
Employment rate of people with mental distress in EU27+UK*
(% of total population aged 25-64), latest data available



Responsiveness to the needs of individuals with Mental Health disorders in workplaces (2/3)

- Across OECD Countries, the **unemployment rate** was, on average, **7.7 percentage points higher** for people reporting a mental health condition than for those not reporting such condition.
- The difference in unemployment rates also suggests either that people with poorer mental health are **looking for jobs without success**, or that they are **transitioning more frequently into and out of work**, or both.
- Individuals reporting a mental condition are **also more likely to take early retirement** (up to **80%** in some Countries of central Europe and the Baltics).
- In terms of job quality, people with mental health conditions receive **lower wages than those without**. On average, in the EU Countries for which data is available, workers earn **82.5% of workers without mental health**. **Portugal** presents the largest gap, equal to 30%.
- Workers with mental health conditions are also **more likely to work part-time**, though this difference was minimal in some Countries. On average **19.5%** of workers with mental health conditions work part-time hours vs. **13.6% of the remaining working population**.

Gap between average gross wage for full-time workers with a mental health condition and those without EU27+UK* (%), latest available data



Poorer labor contracts are also reflected in **lower incomes** and **worse social conditions**. According to OECD data, in fact, individuals with moderate mental health conditions are **31% more likely to live in lower-income households**, a percentage that reaches **83%** in case of severe mental health conditions.

(*) Only available data. Data has been collected through survey responses.



Responsiveness to the needs of individuals with Mental Health disorders in workplaces (3/3)

- A key component of the **societal burden of mental health** is **reduced productivity** in the form of lost working hours (**absenteeism**) and reduced capacity while working (**presenteeism**).
- Mental health conditions, in fact, may drain workers of their motivation and capacity to work effectively.
- The shares of sickness absence and early retirement for Mental Health disorders have increased across Europe over the past few decades. The consequence is an increased burden of unemployed people that receive specific **unemployment benefits** that, however, are often **not enough to allow them to have an independent life as autonomous individuals**.



On average, **half (47.6%)** of workers with a mental health condition have been **absent from work** during the past year, vs. **30.4%** of those without

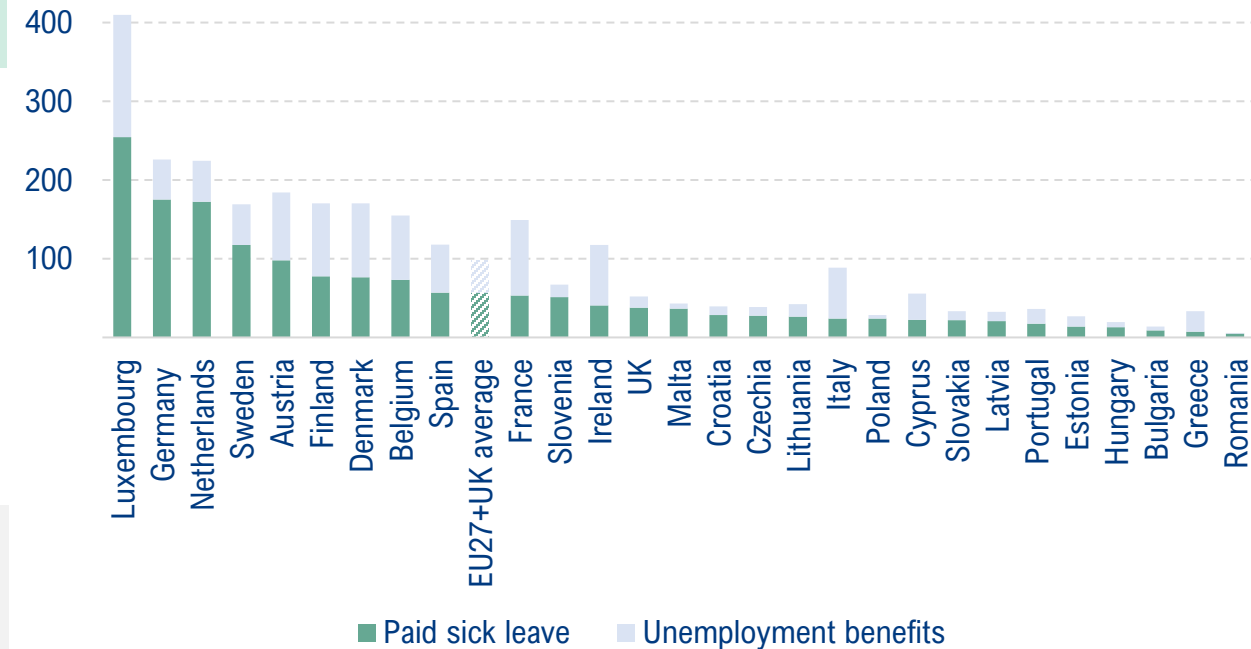


Workers with mental health conditions take on average **33.6 days of leave** per year, vs. 21.4 days of those without of leave



Mental health conditions are frequently comorbid with other limiting health conditions: **39.5%** of individuals with mental health conditions **face activity-limiting chronic health problems**, vs. 12.2% of those without

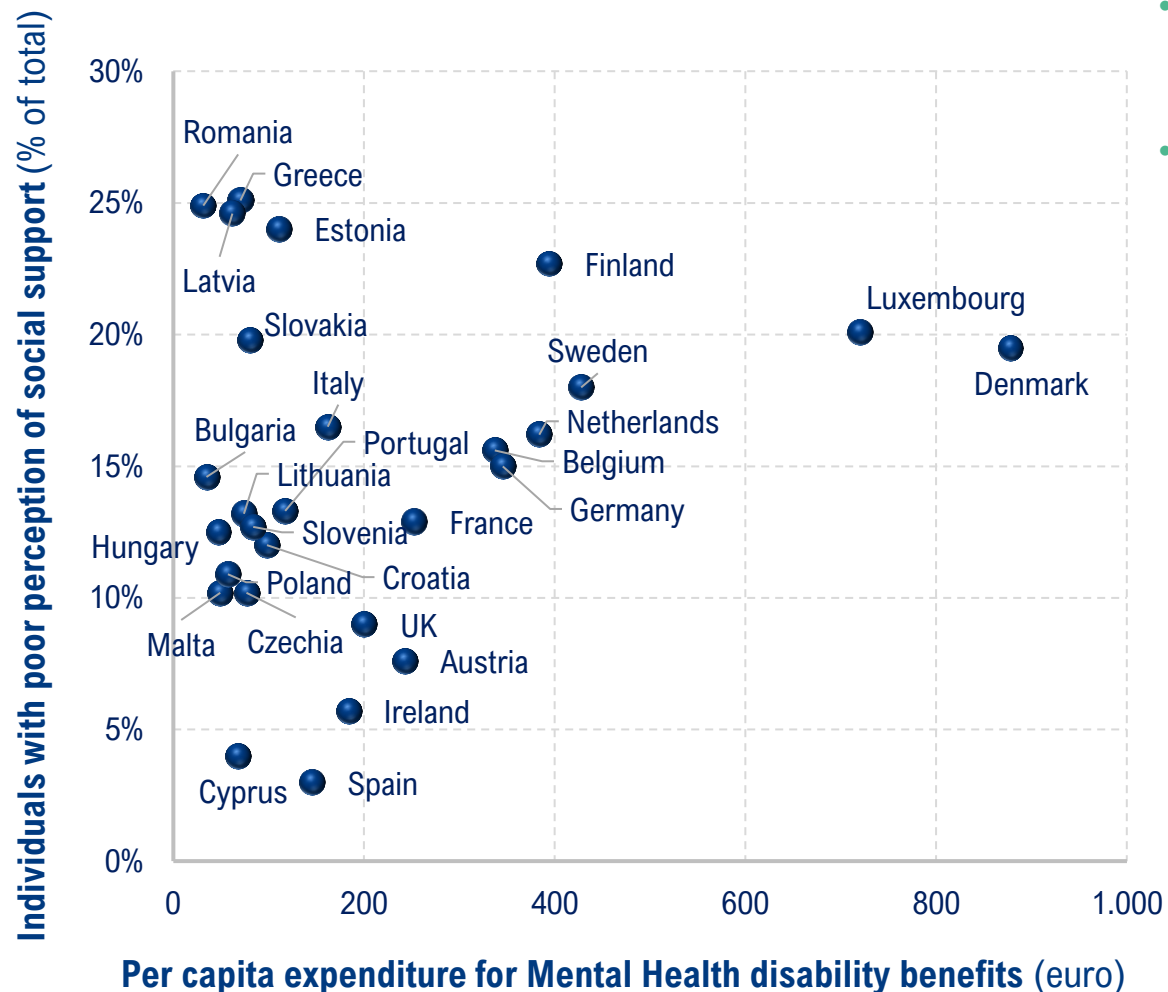
Paid sick leave and unemployment benefits for Mental Health disorders in EU27+UK (euro PPP per capita), 2019



According to the last WHO data available, among EU27+UK, **45.8%** of the Countries have implemented **work-related mental health prevention and promotion programs**. In the majority of cases the program is managed directly by the Government, while in other, rarer cases by the private or through a public-private partnership.

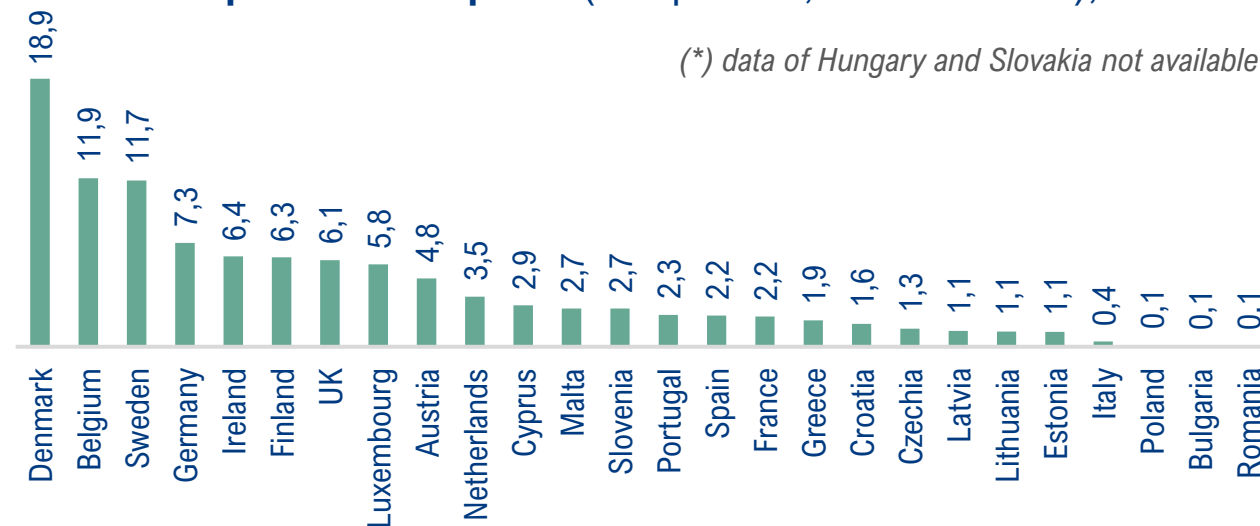
Responsiveness to the needs of individuals with Mental Health disorders in society (1/2)

Social support positioning, latest available data



- Beyond health services, **social benefits** are key mechanisms through which Governments provide support. Social support is mediated, among others, by the **expenditure for Mental Health disability benefits**.
- Human resources also vary widely. For example, **occupational therapists** are above 100 per 100,000 inhabitants in Denmark, Belgium and Sweden, while are almost absent in other Countries like Bulgaria and Romania. The presence of other professional profiles, such as **rehabilitation specialists**, **social workers** and **vocational therapists**, varies from country to country depending on the design of the overall health-and social care system.

Occupational therapists* (rate per 100,000 inhabitants), 2022



Responsiveness to the needs of individuals with Mental Health disorders in society (2/2)

- The responsiveness to Mental Health needs in society has been assessed also by looking at the **existence of national strategies and programmes** focusing on mental health promotion and prevention. According to the last WHO Mental Health Atlas data, a mapping of the existent functioning programmes* has been conducted along **different dimensions**, including suicide prevention, anti-stigma campaigns, etc.

Presence of programs for Mental Health promotion and prevention in society, 2020 or latest available data

	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IE	IT***	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	SP	SE	UK	
Suicide prevention	Present	Present	Present	Present	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	N.A.	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present
Mental Health Awareness/ Anti-stigma	Present	Present	Present	Present	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	N.A.	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present
Parental/ maternal mental health promotion	Present	Present	Present	Present	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	N.A.	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present
Disaster preparedness**	Present	Present	Present	Present	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	N.A.	N.A.	Present	Present	Present	Present	Present	Present	Present	Present	Present

Present
 Absent

(*) The analysis takes into consideration only programs with dedicated financial & human resources; a defined plan of implementation and documented evidence of progress and/or impact.

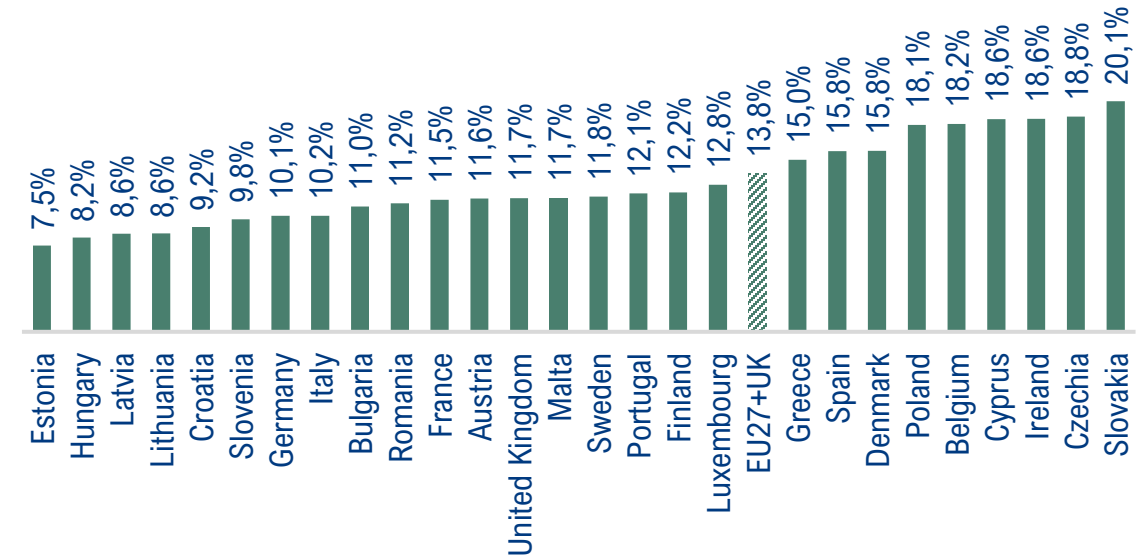
(**) Plans and actions to safeguard mental health and tackle the psychosocial aspects after natural or human disasters (e.g., tsunami, war, ...).

(***) In June 2022, to fill the regulatory gap, Italy passed a motion committing the Government to adopt a national suicide prevention plan.

Responsiveness to the needs of individuals with Mental Health disorders in schools (1/2)

- Mental health issues often manifest themselves at a young age – at least **50% of Mental Health disorders** debut **before the age of 15** and **80%** of the latter happen **before the age of 18** – and can remain an ongoing issue throughout a person's life In this scenario.
- Childhood is also a critical time for the **promotion of well-being and the formation of skills** that prepare students for their work life. For this reason, the **school system represents a major player** in the development of good Mental Health for children and adolescents.
- Scientific research shows that the onset of mental health conditions such as depression and anxiety are linked with **decreased school performance**: mental illness may cause some students to perform poorly or drop out of school. On average, across the EU27+UK, students indicating mental distress are **24% more likely to have repeated a grade**.
- In general, European Countries widely diverge in the ability to organize **awareness programs in schools**. While some European Countries poorly use such programs, other Countries like Denmark and Finland make wide use of them.
- To create protective and favorable development environments, educational settings should also be **well connected with other facilities**, such as day centers (on average **0.947 every 100,000 inhabitants in EU27+UK**, ranging from 5.630 in the Netherlands to 0.004 in Spain).

Share of school dropouts of students with a Mental Health disorder (% of total school dropouts), latest available data**



(**) Data estimated and updated using OECD, "Fit Mind, Fit job: from evidence to practice in mental health and work", 2015

For children and adolescents with mental health needs, **school closures** during the pandemic meant a **loss of daily routines**, which represent important coping mechanisms. In a survey conducted in the UK*, which included young participants with a mental illness history, **83%** said **the pandemic had made their conditions worse**.

Responsiveness to the needs of individuals with Mental Health disorders in schools (2/2)

- The last WHO Mental Health Atlas maps the **existent national strategies and programs** focusing on mental health promotion and prevention for children and adolescents. According to these data, among EU27+UK, **68%** of the Countries have implemented **at least one program** dedicated to these categories.
- The importance of adopting a **whole-school approach** – integrated with the other facilities and social services – lies in the possibility of mobilizing the various resources of its community, including the active engagement and voices of students, staff, parents and professionals, towards a **collaborative effort** to promote the mental health and well-being of all members of the community.

Presence of programs* for Mental Health promotion and prevention for children and adolescents and schools, 2020 or latest available data

	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	SP	SE	UK	
Early Child Development	Present	Absent	Present	Absent	N.A.	Absent	Present	Absent	Present	Present	Present	Absent	Present	Present	Absent	Present	Present	Absent	N.A.	N.A.	Present	Present	Absent	Present	Absent	Absent	Absent	Present	Present
School based programs	Absent	Absent	Absent	Present	N.A.	Present	Present	Absent	Present	Present	Present	Absent	Present	Present	Present	Present	Present	Absent	N.A.	N.A.	Present	Present	Absent	Present	Absent	Absent	Absent	Absent	Present
Scope				National	N.A.	National	National		National	National	District		National	National	Regional	National	National		N.A.	N.A.	National	National		National					National

Present
 Absent

(*) The analysis takes into consideration only programmes with dedicated financial & human resources; a defined plan of implementation and documented evidence of progress and/or impact.

Index

- **Introduction on Mental Health**
 - Mental Health in the UN Sustainable Development Goals
 - WHO and EU's main initiatives and action plans
- **An update on the impacts of the COVID-19 pandemic on Mental Health**
- **«Headway 2023 – Mental Health Index 2.0»**
 - Environmental determinants of Mental Health
 - Mental Health status of the population
 - Responsiveness to Mental Health needs in healthcare
 - Responsiveness to Mental Health needs in workplaces, society and schools
- **Results and conclusion**

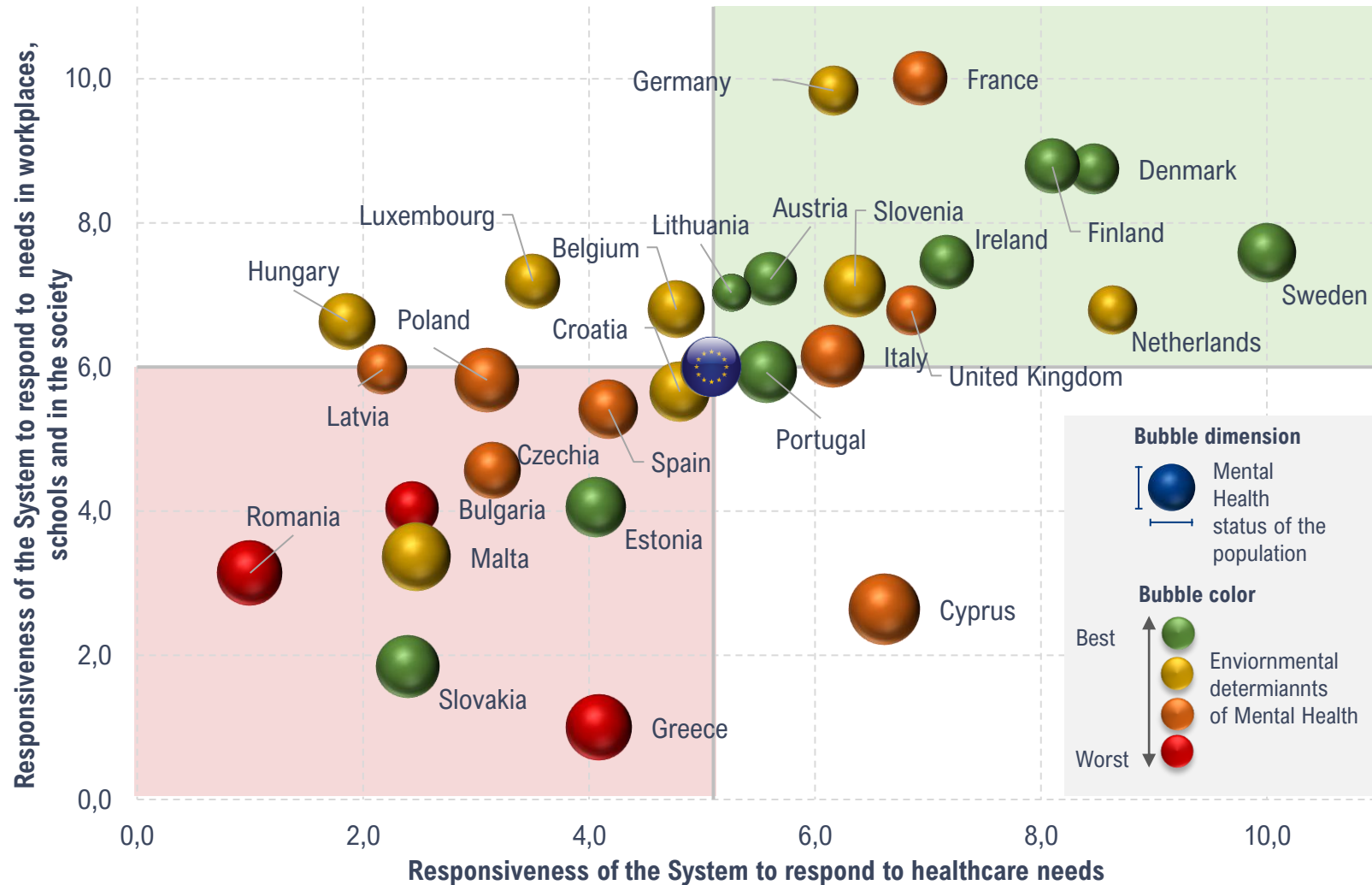
“Headway - Mental Health Index 2.0”: an overview

- The aim of the “Headway - Mental Health Index 2.0” is to provide a **multi-dimensional** and **holistic overview** of the support provided by different Countries to the Mental Healthcare needs of the population. The responsiveness of Countries in the EU+UK area is assessed along **4 dimensions**: the **Environmental determinants of Mental Health**, the **Mental Health status of the population** and the **responsiveness of the system to the Mental Healthcare needs and needs in workplaces, schools and in the society** of the population.

Within the continent, a **variety of environmental health, social and economic systems** co-exist. That is why, during the analysis, standardizations have been conducted and estimates have been used when data were missing.

- Summary statistics are provided for each **Country along the 4 dimensions of the Mental Health Index**. As it can be observed, the results achieved by **Northern European Countries are higher than the ones obtained by Eastern European Countries**.

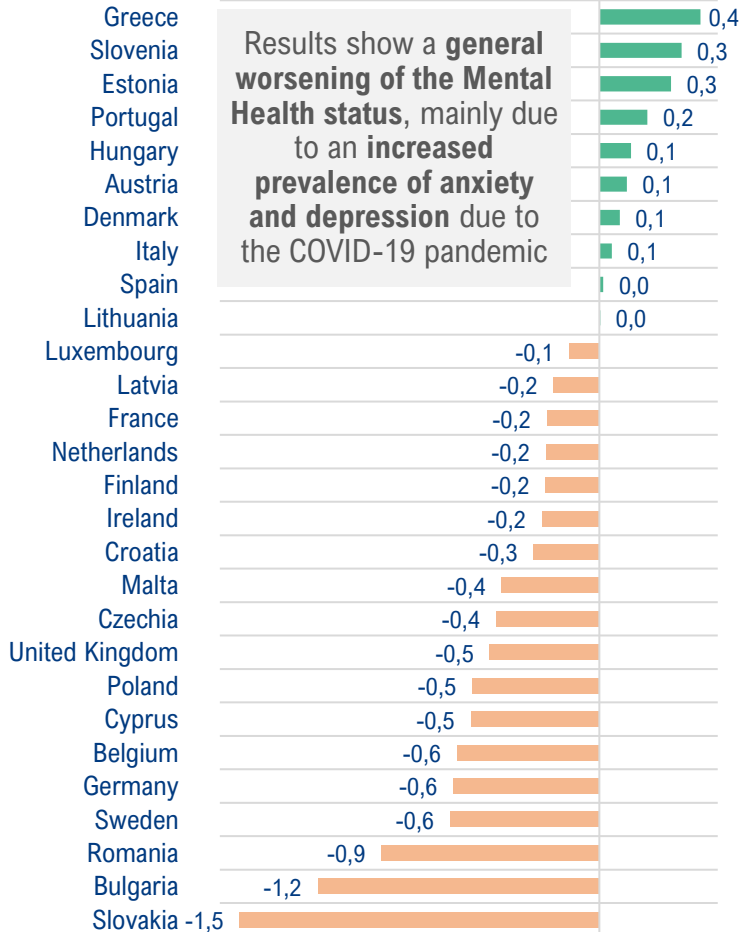
“Headway – Mental Health Index 2.0” matrix (score min=1; max=10), 2022



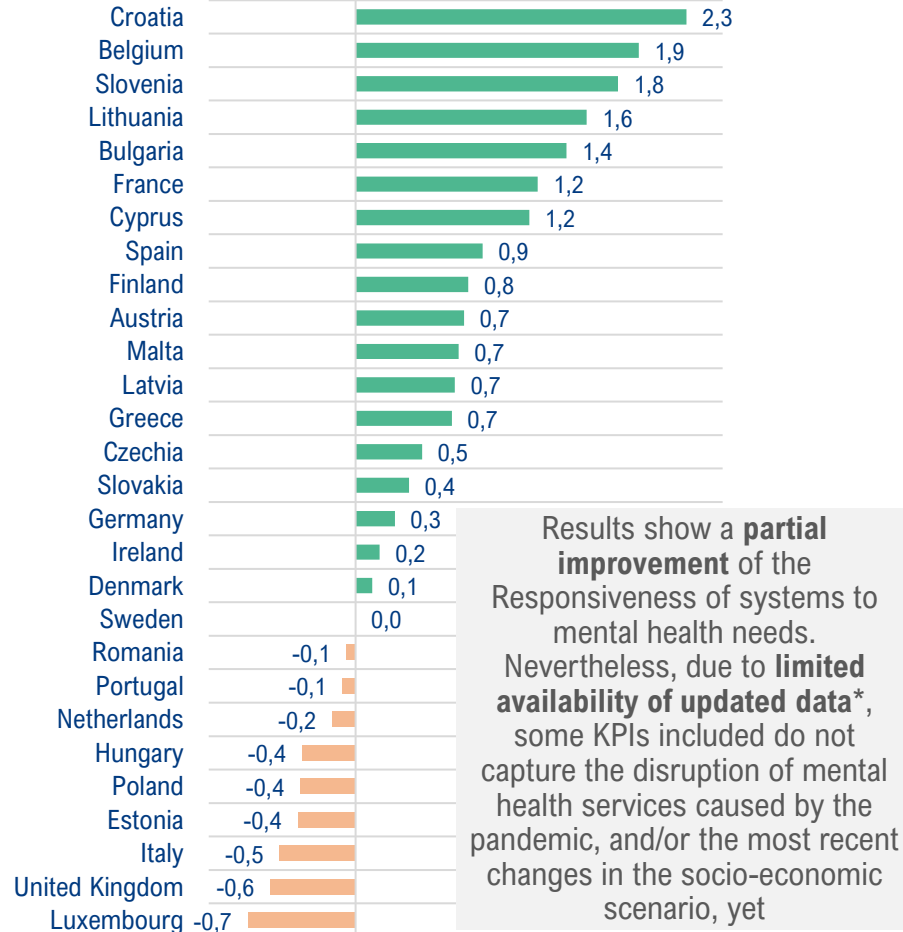
A comparison with the results of the previous edition of the Headway Mental Health Index - HMHI (1/2)

Mental Health status of the population (final score variation, HMHI 2022 vs. HMHI 2021)

Results show a **general worsening of the Mental Health status**, mainly due to an **increased prevalence of anxiety and depression** due to the COVID-19 pandemic

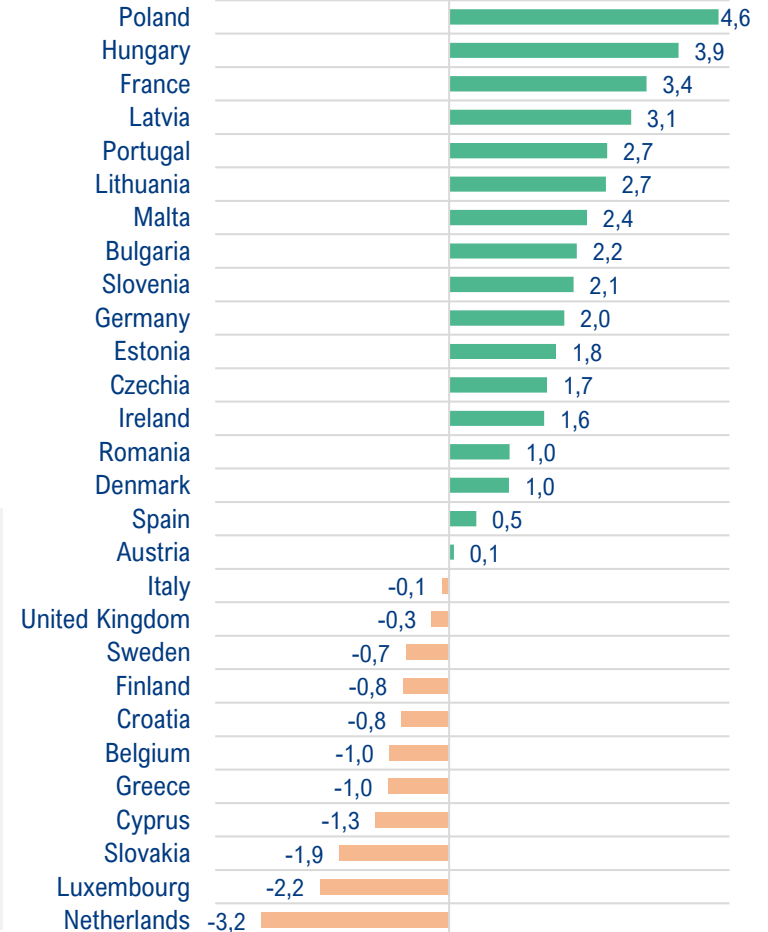


Responsiveness of the system to Mental Healthcare needs (final score var. HMHI 2022 vs. HMHI 2021)



Results show a **partial improvement** of the Responsiveness of systems to mental health needs. Nevertheless, due to **limited availability of updated data***, some KPIs included do not capture the disruption of mental health services caused by the pandemic, and/or the most recent changes in the socio-economic scenario, yet

Responsiveness of the system to Mental Health needs in schools, workplaces and society (final score var., HMHI 2022 vs. HMHI 2021)

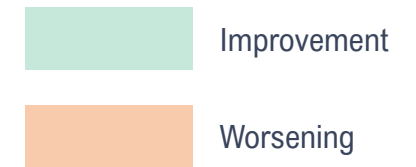


N.B. To ensure data comparability with the previous edition of Headway, only three pillars of the Index were considered, excluding the Environmental determinants of mental health.

A comparison with the results of the previous edition of the Headway Mental Health Index - HMHI (2/2)

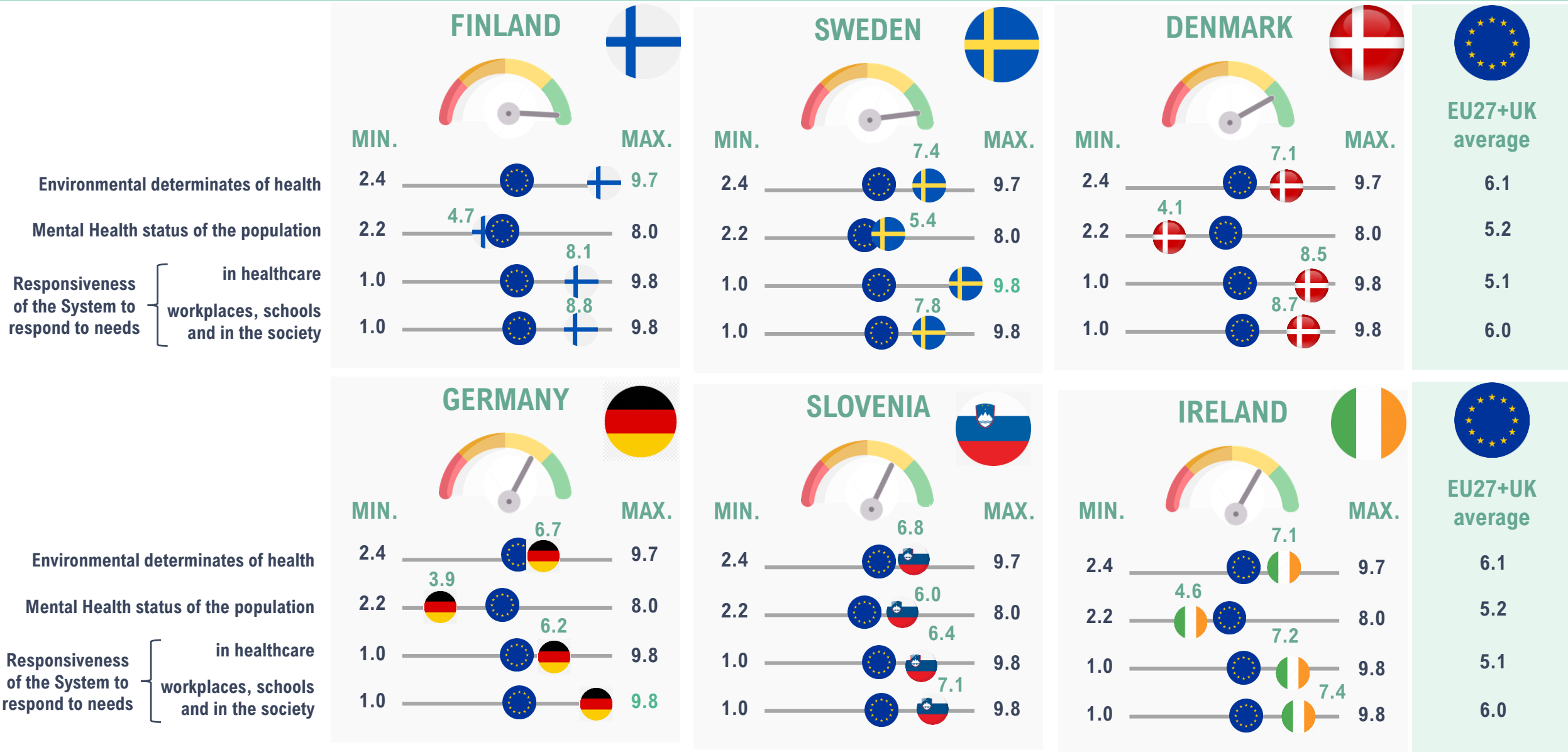
Final scores variations of specific pillars in the Mental Health Index
(final score variation, HMHI 2022 vs. HMHI 2021)

	Mental Health status of the population	Responsiveness of the system to Mental Healthcare needs	Responsiveness of the system to Mental Health needs in schools, workplaces and society
Austria	0.1	0.7	0.1
Belgium	-0.6	1.9	-1.0
Bulgaria	-1.2	1.4	2.2
Croatia	-0.3	2.3	-0.8
Cyprus	-0.5	1.2	-1.3
Czechia	-0.4	0.5	1.7
Denmark	0.1	0.1	1.0
Estonia	0.3	-0.4	1.8
Finland	-0.2	0.8	-0.8
France	-0.2	1.2	3.4
Germany	-0.6	0.3	2.0
Greece	0.4	0.7	-1.0
Hungary	0.1	-0.4	3.9
Ireland	-0.2	0.2	1.6
Italy	0.1	-0.5	-0.1
Latvia	-0.2	0.7	3.1
Lithuania	0.0	1.6	2.7
Luxembourg	-0.1	-0.7	-2.2
Malta	-0.4	0.7	2.4
Netherlands	-0.2	-0.2	-3.2
Poland	-0.5	-0.4	4.6
Portugal	0.2	-0.1	2.7
Romania	-0.9	-0.1	1.0
Slovakia	-1.5	0.4	-1.9
Slovenia	0.3	1.8	2.1
Spain	0.0	0.9	0.5
Sweden	-0.6	0.0	-0.7
United Kingdom	-0.5	-0.6	-0.3

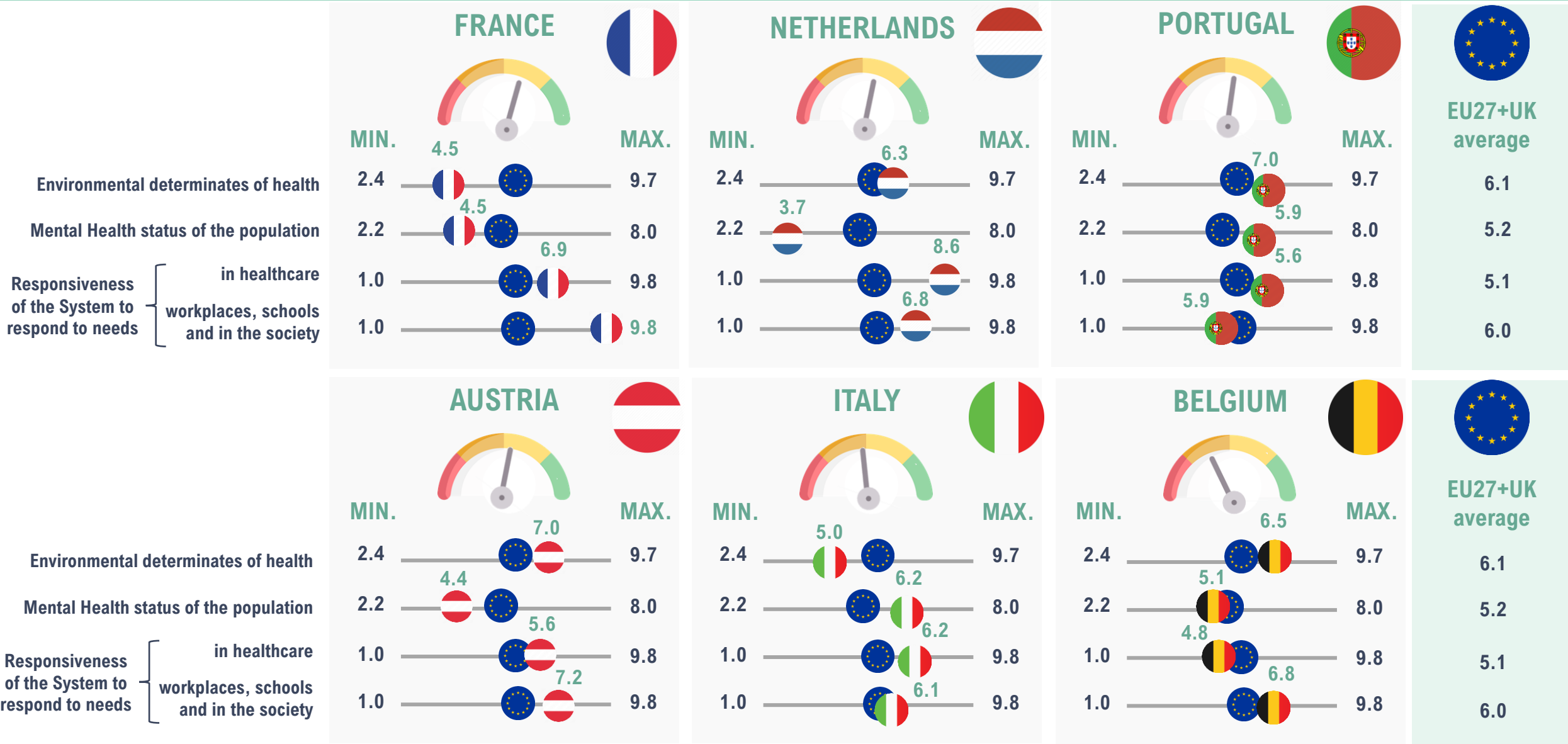


Source: The European House – Ambrosetti on «Headway - Mental Health Index 2.0», 2022

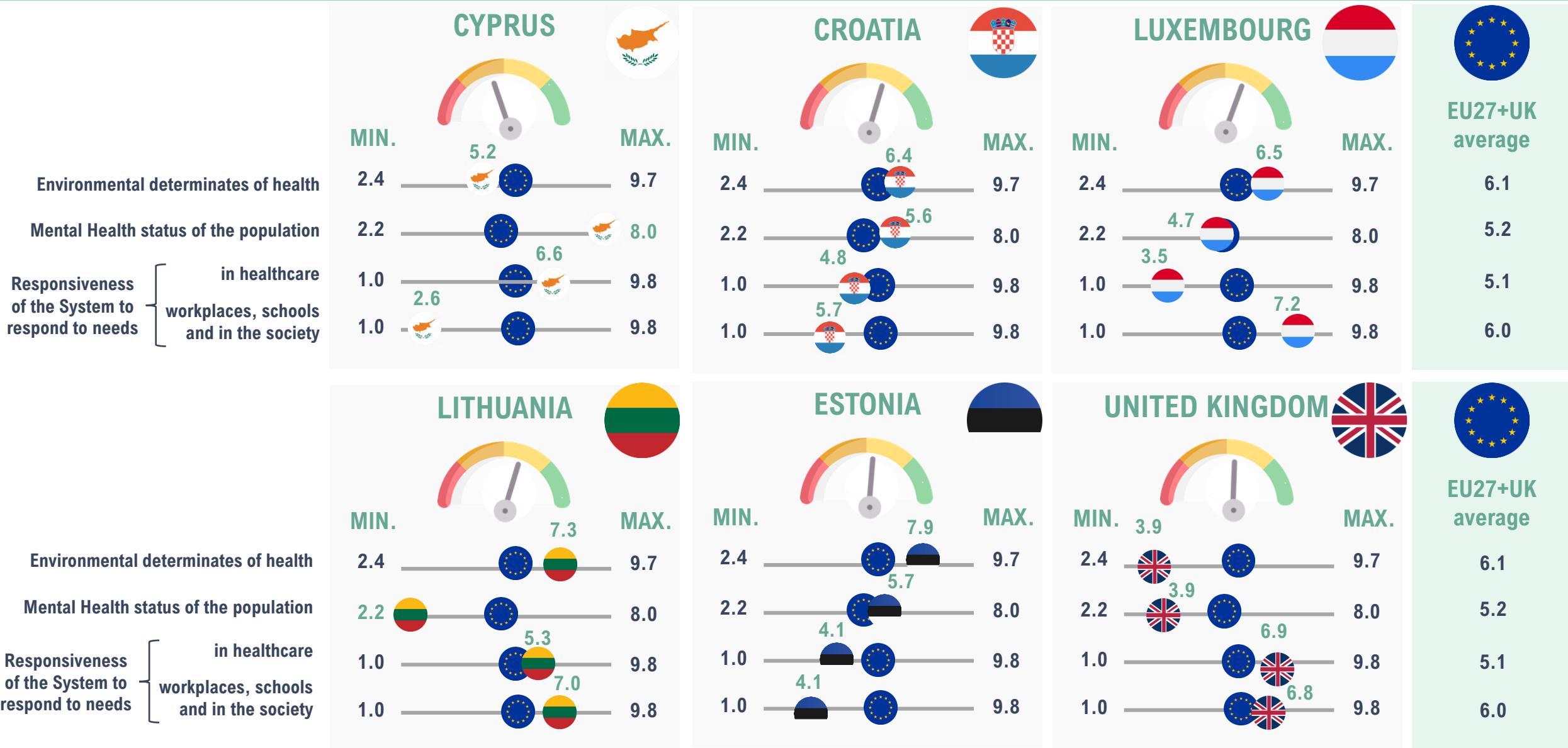
“Headway - Mental Health Index 2.0”: results (1/5)



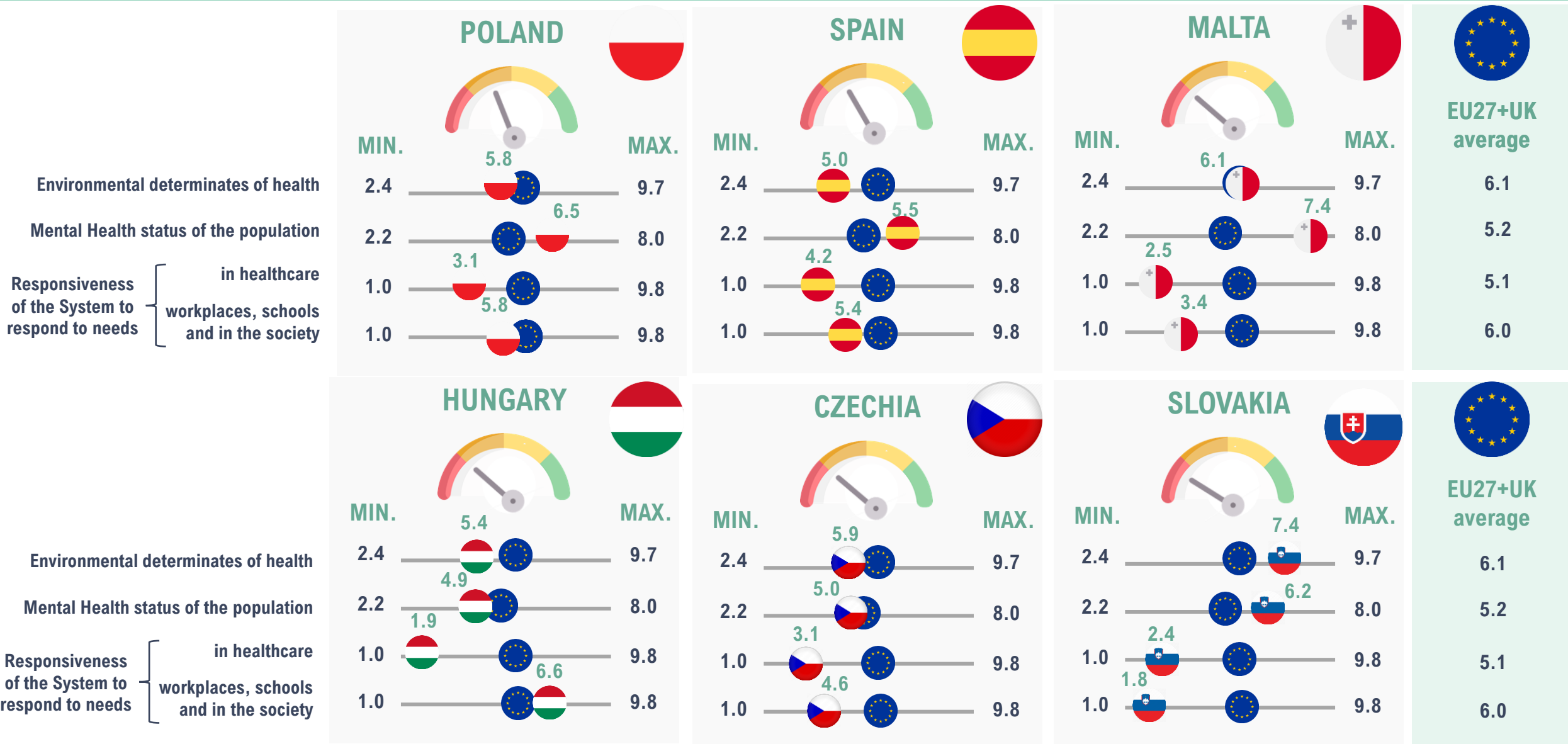
“Headway - Mental Health Index 2.0”: results (2/5)



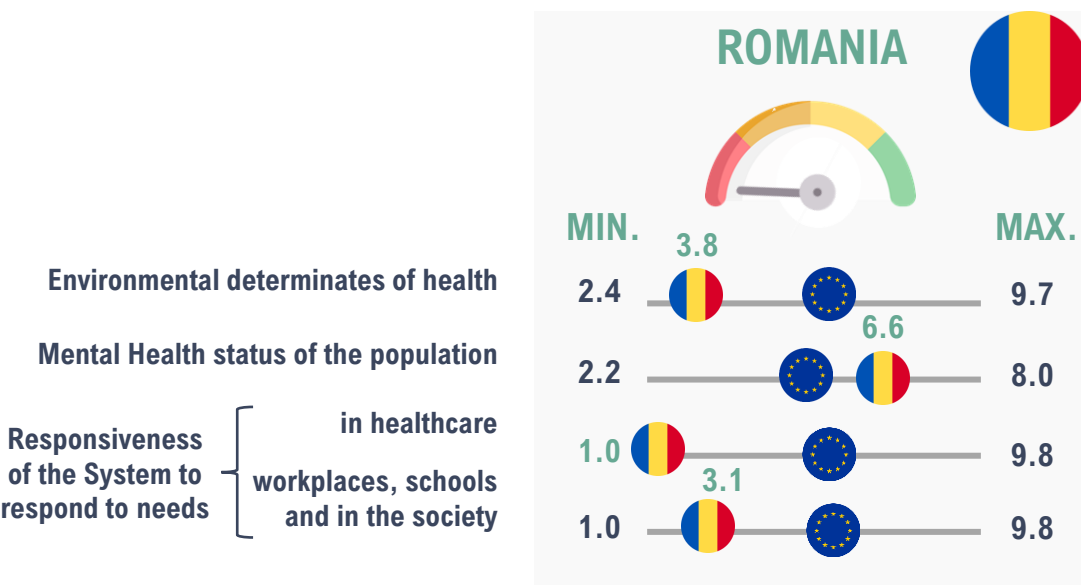
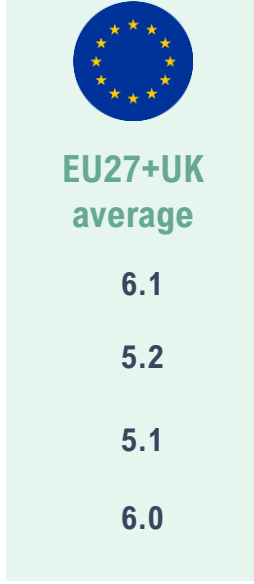
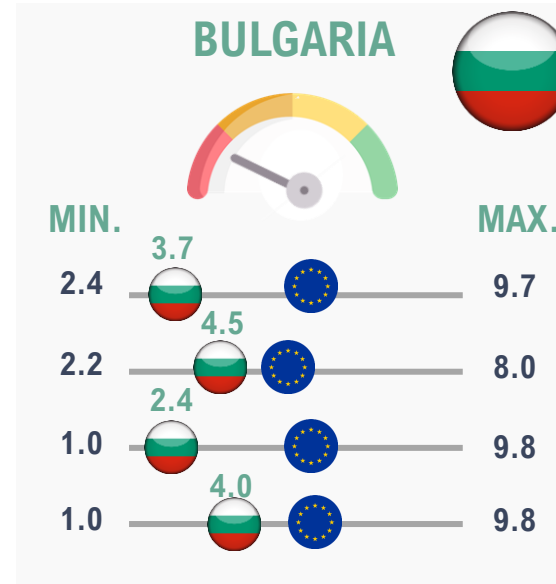
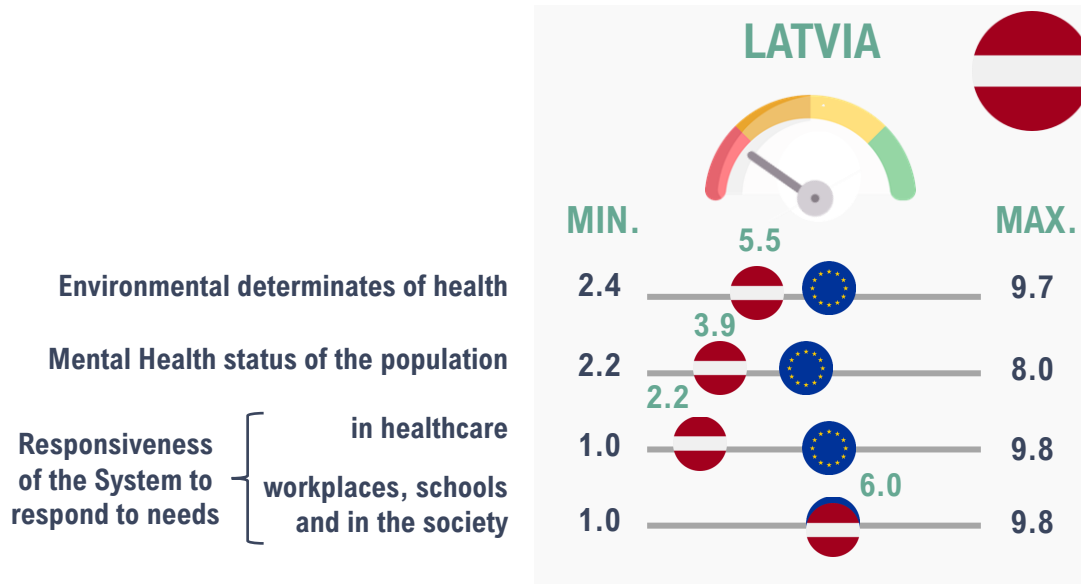
“Headway - Mental Health Index 2.0”: results (3/5)



“Headway - Mental Health Index 2.0”: results (4/5)



“Headway - Mental Health Index 2.0”: results (5/5)



- Socio-economic uncertainty and geopolitical conflicts, in addition to climate crisis and environmental degradation and pandemics significantly impact on the Mental Health of the population, underlining the crucial role the determinants of Mental Health play: **where people live, study, work and age, influences the state of Mental Health wellbeing**. These aspects and their interrelation must all be considered when planning for effective strategies of promotion, prevention, treatment, and rehabilitation of Mental Health disorders. In particular, during 2022, the European population has witnessed the co-occurrence of significantly impacting crisis factors, which included the COVID-19 pandemic, geopolitical factors (starting from the war in Ukraine) generating an unprecedented humanitarian crisis, explosion of socio-economic uncertainties (among others the inflation and the explosion of energy costs) and the disruption of supply chains, adding up to major global challenges, such as the climate crisis, demographic winter and social tensions - which together may lead to a substantial rise in mental disorders.
- Today's scenario provides for the opportunity to **improve European's Mental Health services and policies** by putting in place the lesson-learnt from these emergencies and shifting the perspective towards a true integration between the environmental, health, social and economic ecosystems - it is the occasion to set **Mental Health into the spotlight and at the very top of the European Public Health Agenda**. Some European countries have already started to implement strategic steps towards a better Mental Health of their citizens, but much more can be done to address, manage and promote Mental Health.
- Most importantly, Mental Health strategies and policies must embody **all determinants of Mental Health and use the approach of Mental Health in all policies**. In truth, one of the most important lessons learned of these last months is that, in order to adequately meet societal needs in the Mental Health sector, **Mental Health services need to be able to quickly adapt to changing circumstances and environments so to maintain their continuity even during a state of emergency**. This is only possible through **delivering support in community-based settings and across all sectors** (including environment, workplaces, schools and society in general). Despite the advances achieved in some Member States, other are still lagging behind, as emphasized through the analysis in the "Headway – Mental Health Index 2.0". In this scenario, the updated **"Headway – Mental Health Index 2.0" can be a useful tool for the monitoring and planning for healthcare, welfare, education and environmental policies in Mental Health across European Countries**, in order to improve critical areas and leverage on good practices. Today, not seizing the moment would become a **lost opportunity for decision makers creating a threat to social cohesion, sustainability, and economic growth of the Country-wide System**. It is therefore urgent to address Mental Health through cross-sectorial and integrated policies, as part of a **comprehensive EU Mental Health Strategy and a European Year dedicated to Mental Health in 2023**.

Headway

A new roadmap in Mental Health

