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Prevention and management of mental health conditions in

Jordan

The case for investment

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Prevention and management of mental health conditions in Jordan – The case for investment

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Abbreviations and acronyms

COVID-19	coronavirus disease 2019
GDP	gross domestic product
JOD	Jordanian dinars
NCD	noncommunicable disease
ROI	return on investment
SDG	Sustainable Development Goal
SEL	social–emotional learning
UNDP	United Nations Development Programme


القيام بما يهم في أوقات
الضغط النفسي:
دليل مصور
ارتكاز
الإنفكاك
التصرف وفق القيم
إفساح المجال

Photo: © WHO

Foreword

It has become evident that mental disorders represent a neglected priority public health concern, and that the emotional, social, and economic related burden is enormous, and affects not only individuals, but their families and communities as well. Data also suggests that despite the availability of cost-effective treatments, most people who suffer from severe mental disorders do not receive any kind of care. Furthermore, the stigma and discrimination attached to mental disorders, and to people who suffer from them call for urgent and significant actions in mental health worldwide.

In Jordan, the mental health system needs to be strengthened and decentralized. Investing in community-based mental health services is necessary to reach people in need in the communities where they live, and to provide them with comprehensive and effective care. The adoption of the bio-psychosocial approach will orient the mental health services towards the recovery of people who suffer from mental disorders, their rehabilitation, empowerment, and full integration in the community.

Over 10 years ago and under the Royal Patronage and support of HRH Princess Muna-al Hussein, Jordan's Ministry of Health with support from WHO and stakeholders joined forces to support the reform of the mental health system, based on evidence and best practices.

This reform included scaling up mental health and substance use services in Jordan which has been materialised through the launch of the first Mental Health Policy, in addition to the development of several consecutive National Mental Health and Substance Use Action Plans which follows the Regional Framework to Scale up action on Mental Health in the Eastern Mediterranean Region. These strategic guiding documents are oriented towards the need to redirect resources from the tertiary psychiatric interventions towards community-based and integrated mental health services in general health services and primary healthcare. Also, emphasis continues to be given to holistic and comprehensive mental health and psychosocial support interventions that are responding to individuals needs in a comprehensive approach.

We are very confident that the same collaboration that led to the development of this mental health investment case with all stakeholders will materialise into ensuring that more resources will be invested in the implementation of its recommendations with the same commitment and enthusiasm. In particular, supporting and maintaining a health system in Jordan that is responsive, financially fair and efficiently uses available resources and allocations.

Minister of Health
H.E Professor Firas Ibrahim Al-Hawari

Jordan

Key findings

CURRENT BURDEN OF MENTAL HEALTH CONDITIONS

251.8 million JOD per year (US$ 355.1 million)

0.75% of GDP

53.1 million JOD direct costs (US$ 74.8 million)

due to healthcare expenditures

198.7 million JOD indirect costs (US$ 280.1 million)

due to loss of workforce and reduced productivity

INVESTMENT REQUIRED OVER 2023–2040

1018.9 million JOD (US$ 1436.6 million)

(90.2 JOD per capita or US$ 127.1)

Investment required for selected clinical packages and population-based preventive interventions over a 2023-2040

ANXIETY DISORDERS	DEPRESSION	PSYCHOSIS	BIPOLAR DISORDER	EPILEPSY
124.3 million JOD (US$ 175.2)	**176.5** million JOD (US$ 248.8)	**216.8** million JOD (US$ 305.6)	**458.6** million JOD (US$ 646.6)	**10.8** million JOD (US$ 15.2)

ALCOHOL USE DISORDER	UNIVERSAL SCHOOL-BASED INTERVENTIONS
10.8 million JOD (US$ 15.2)	**21.1** million JOD (US$ 29.7)

RETURN ON INVESTMENT OVER 2023–2040

1614.4 million JOD (US$ 2277 million)

includes productivity gains and social value of health

	ROI*	Healthy life-years gained	Total productivity gained
Anxiety disorders	**3.6**	82 261	183.0 million JOD (US$ 258.0 million)
Depression	**4.6**	161 866	282.7 million JOD (US$ 398.6 million)
Psychosis	**0.2**	6112	13.7 million JOD (US$ 19.3 million)
Bipolar disorder	**0.1**	8851	19.6 million JOD (US$ 27.6 million)
Epilepsy	**15.1**	29 761	66.3 million JOD (US$ 93.4 million)
Alcohol use disorder	**5.3**	8372	30.4 million JOD (US$ 42.8 million)
Universal school-based SEL** interventions	**2.5**	15 915	-

*Presented as benefit : cost ratio.
**SEL = social emotional learning

Executive summary

Mental, neurological and substance use conditions pose a significant challenge in Jordan, not only because of the human suffering and public health burden they cause or to which they contribute but also because they have substantial social and economic consequences, such as on workforce productivity. This report provides an assessment of the current mental health situation in Jordan, challenges and opportunities for development of the mental health system, and economic evidence of the attributable and avertable burden of six mental, neurological and substance use conditions (psychosis, bipolar disorder, depression, anxiety disorders, epilepsy and alcohol use disorders). Intervention costs, health gains and economic benefits were estimated for these conditions and also for a school-based intervention for preventing depression and suicide. In 2023, mental health conditions are estimated to have cost the Jordanian economy 251.8 million Jordanian dinars (JOD) (US$ 355.1 million), equivalent to 0.75% of its gross domestic product (GDP), which is about 22 JOD per capita. The annual costs comprise 53.1 million JOD in health-care expenditure and 198.7 million JOD in lost productivity due to premature mortality, disability and reduced productivity in the workplace. These productivity losses indicate that many sectors could benefit from investing in mental health.

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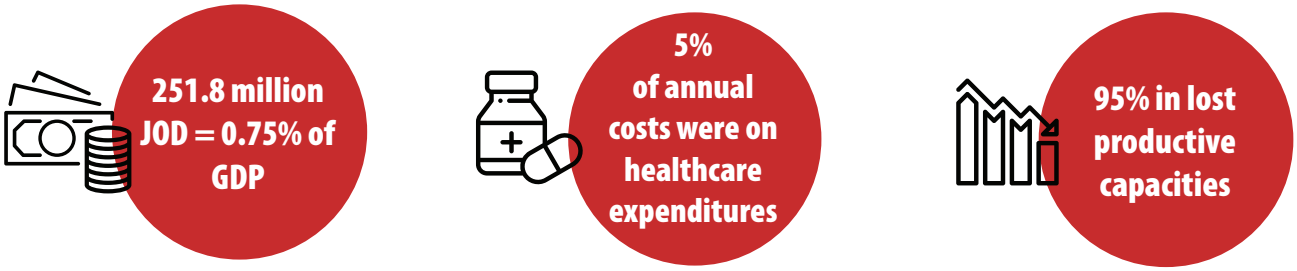
Main findings

The cost of mental health conditions



Mental health conditions take a significant toll on the economy and on social and sustainable development in Jordan every year. The investment case modelled an estimate of the total economic burden of mental health conditions and suicide in Jordan at 251.8 million JOD in 2023. The losses include 53.1 million JOD in direct Government expenditure and 198.7 million JOD in indirect productivity losses. The total is equivalent to 0.75% of Jordan's GDP.

As mental health conditions can occur throughout life and have a strong impact on productivity, they represent an impediment to the country's broader development priorities of strengthening and diversifying the economy to create more sustainable economic growth. Furthermore, the high prevalence of mental health conditions among young people in Jordan distracts from work to address youth unemployment and to provide education and training opportunities for the next generation.

While the results of the investment case confirm the large impact of mental health conditions on health and the economy in Jordan, they also show a viable path forward. Investment in a number of evidence-based interventions can significantly reduce the adverse consequences of mental health conditions and increase people's mental health and well-being, their life expectancy and quality of life, while decreasing national productivity losses. Thus, these investments could contribute to the overall socioeconomic development of the country, with positive effects across society, and accelerate economic growth and social development.

Why invest in interventions

By acting now, Jordan can reduce its burden of mental health conditions. The findings of the investment case demonstrate that investment in evidence-based, cost-effective mental health interventions would, over the period until 2040:

Save over 2529 lives

By investing in mental health now, Jordan could save more than 2529 lives and result in nearly 313 138 healthy life years gained by reducing the incidence, duration or severity of the assessed mental health conditions. Implementation of intervention packages will further contribute to achievement of Sustainable Development Goal (SDG) target 3.4 — to reduce by one third premature mortality (under age 70) from noncommunicable diseases (NCDs) and promote mental well-being.

Provide economic benefits

By investing in mental health now, Jordan could gain an economic benefit of 595.8 million JOD through sustained investment. The intervention packages for scaled-up treatment of epilepsy, alcohol use disorder and depression offer the highest returns on investment (ROIs) during the period 2023–2040. Every 1 JOD invested in the epilepsy intervention package is expected to return 6.2 JOD; every 1 JOD invested in the alcohol use disorder intervention package is expected to return 2.8 JOD; and every 1 JOD invested in the depression intervention package is expected to return 1.6 JOD. The benefit–cost ratio of most of the intervention packages was > 1.0 over the long-term scaling-up period between 2023 and 2040. This indicates that the total monetised health and productivity gains would exceed total implementation costs but would require sustained, long-term investment to have economic benefits.

The results of the study demonstrate that Jordan could reduce the socioeconomic consequences of mental health conditions with a set of evidence-based interventions. In the context of current policy reforms towards universal health coverage, Jordan should ensure that mental health services and treatment are accessible and are covered by national health insurance. Local governments, workplaces, schools and other community organizations should prioritize mental health prevention, promotion and treatment.

Recommendations for consideration

The institutional context analyses identified current developments, challenges and opportunities in the Jordanian mental health system. The economic analysis indicates a range of evidence-based care and prevention strategies that could be scaled up to move towards universal health coverage of people with mental health conditions. Jordan could take the following actions to translate the projected benefits of scaled-up mental health investment into policy and practice.

- Strengthen implementation and adoption of existing practices and laws in Jordan's policy framework.
- Establish and strengthen monitoring and surveillance to estimate the prevalence of mental health conditions, track patient outcomes and be aware of total expenditure on mental health.
- Direct allocation of mental health budgets to primary health-care centres.
- Invest in evidence-based, cost-effective clinical and population-based mental health interventions.
- Increase awareness about mental health conditions in communities to reduce stigmatization and ensure that individuals who need help can access it without fear or discrimination.


1
Introduction

1. Introduction

Mental health is an integral part of health and well-being as it affects people's capacity to lead fulfilling, productive lives. Mental health and psychosocial well-being are influenced by numerous interactions of genetic and other biological characteristics as well as by societal, cultural and environmental factors. Increased exposure to adverse determinants of mental health, ageing and the coronavirus disease 2019 (COVID-19) pandemic have been associated with a 30% increase in the global prevalence of mental health conditions during the past three decades *(1)*.

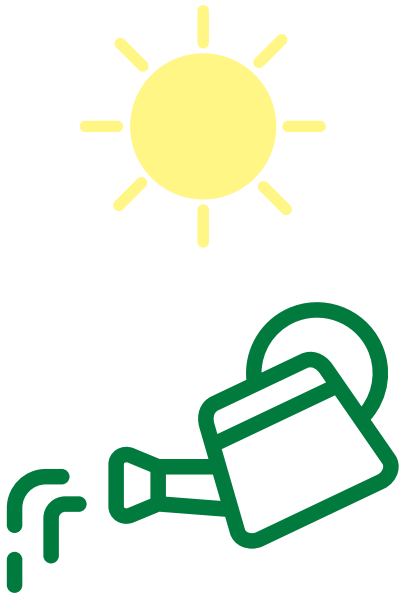
Mental, neurological and substance use conditions cause individual human suffering and have economic implications for households and countries, including a financial burden on health systems and loss of productivity in the workforce, as individuals with mental health conditions are more likely to leave the labour force due to premature death or disability, miss days of work ("absenteeism") or work at reduced capacity ("presenteeism"). WHO has estimated that mental health conditions and neurological conditions (such as epilepsy and Alzheimer disease) account for 28% of the non-fatal disease burden worldwide and 10% of the overall burden of death and disability *(2)*.

Mental, neurological and substance use conditions have important social implications, including suicide, violence and accidents related to alcohol use disorders; negative impacts on education (dropout, poor performance) and on carers (such as lost opportunities for girls and women); and stigmatization of and discrimination against people with mental health conditions. Although most of these conditions are treatable, the challenge in many parts of the world is lack of access to affordable, high-quality health and social care services. Promotion and prevention are also important, as they can encourage or increase protective factors and healthy behaviour that can prevent the onset of mental health conditions.

Mental health evolves throughout life and is strongly influenced by social and economic determinants (e.g. income, employment status, educational level, material standard of living) and also physical health and exposure to adverse life events, ranging from natural disasters and civil conflict to sexual violence, child abuse and neglect. Many cases of the most common mental health conditions could be prevented by preventing exposure to adversity.

Strengthening policy and increasing attention to and investment in mental health are major goals for public health and sustainable development. This is reflected in the 2030 Agenda for Sustainable Development *(3)*, in which target 3.4 is to reduce by one third premature mortality from NCDs and promote mental health and well-being by 2030. Beyond health and well-being, investment in evidence-informed mental health interventions will have co-benefits for other SDGs, notably 4 (education), 5 (gender), 8 (employment/economic growth), 10 (equality), 11 (safe cities), 16 (violence) and 17 (partnership, capacity- building, domestic resource mobilization). Improving mental health is critical to the SDG vision of realizing a just, inclusive, equitable society. Addressing the social and economic challenges posed by mental health conditions was highlighted during the High-level Meeting of the United Nations General Assembly on the Prevention and Control of NCDs *(4)* in 2018 and even more strongly in the recent High-level Meeting on Universal Health Coverage in September 2023 *(5)*.

Strengthening policy and increasing attention to and investment in mental health are major goals for public health and sustainable development.



In addition, WHO's Thirteenth General Programme of Work (2019–2023) *(6)* includes interventions to combat mental health conditions, and WHO's Fourteenth General Programme of Work (2025–2028), recognising the need for increased mental health services, will have a dedicated indicator to monitor the increase of coverage for persons living with mental, neurological and substance use conditions *(57)*.

Building on work on the NCD investment cases and in view of a strong demand from Member States to understand the attributable and avertable economic impacts of mental health conditions, WHO and the United Nations Development Programme (UNDP) developed a method and guidance for conducting national mental health investment cases *(7)* to quantify the cost of mental health conditions to the health sector and to the economy and of the benefits of scaled-up action. The method includes an analysis of ROI, in which the costs of mental health conditions in a country are compared with the estimated health and economic returns of implementing a package of cost-effective interventions (both scaled-up treatment of mental health conditions and population-based preventive programmes) over a defined period of investment (such as 5, 10 or 20 years). The method also includes an analysis of the institutional context for scaling up mental health promotion, prevention and care in the country.

After the launch of the WHO Special Initiative for Mental Health assessment report for Jordan in 2020 *(8)*, the country expressed interest in a deep analysis of mental health in Jordan. The present report is the result of the work of a multidisciplinary team that analysed and modelled data and information collected during several engagements with the Ministry of Health and other sectors and stakeholders in Jordan in 2023.

The report is divided into four sections. Section 2 presents the mental health situation in Jordan and the current and planned responses by the Government. Section 3 describes the methods and tools used in the economic analyses. Section 4 presents the results, including total costs and the expected health and economic benefits (such as healthy life-years gained, mortality averted and productivity gained) of implementing clinical and population-based preventive mental health interventions. Section 5 outlines the conclusions to be drawn from these findings and provides recommendations for Jordan to strengthen and scale up cost-effective preventive and clinical interventions for mental health conditions.

SITUATION ANALYSIS	METHODS	RESULTS	CONCLUSION
Presents the mental health situation in Jordan and the current and planned responses by the Government.	Describes the methods and tools used in the economic analysis.	Presents the results, including total costs, and the expected health and economic benefits.	Outlines the conclusions to be drawn from these findings and provides recommendations for Jordan.

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2
Situation analysis

2. Situation analysis

2.1 Mental health situation in Jordan

As in many countries, mental health conditions in Jordan are a significant public health concern. According to data from the Global Burden of Disease study in 2019 *(9)*, the prevalence of mental health conditions in Jordan was approximately 15.18%, representing 10.2% of the total disease burden in the country. The estimated prevalence was 4.19% for depressive disorders, 5.37% for anxiety disorders, 0.83% for bipolar disorder and 0.26% for schizophrenia. Suicide accounted for 0.81% of all deaths, and the prevalence of substance use disorders was estimated to be 0.91%. In specific contexts, such as among refugees, the prevalence could be even higher, especially for conditions such as depression, anxiety and post-traumatic stress disorder, due to the stresses associated with forced displacement and conflict *(58)*.

As Jordan is surrounded by several conflict-affected countries, the country receives many migrants *(10)*: As of March 2023, Jordan is estimated to be hosting over 3 million international migrants, including over 2 million registered Palestinian refugees and 750 000 registered refugees and asylum seekers from the Syrian Arab Republic (88.5%), Iraq (8.8%), Yemen (1.7%), Somalia and Sudan (< 1%) *(10)*. The influx of refugees in Jordan has placed pressure on the national health system. Although in 2014 the Government granted Syrian refugees the same access to free public health services as Jordanian citizens, this policy was reversed from 2018 to 2022, except for maternal and child health services including vaccines. Since 2022, registered Syrian refugees are treated like the uninsured Jordanian population. Given the change in policy and the different citizenship status of international migrants, the group has varying levels of coverage and access to health services. Many refugees rely on international aid organizations, such as the United Nations Relief and Works Agency for Palestine Refugees in the Near East, the International Medical Corps and Médecins Sans Frontières for mental health counselling, psychoeducation and other mental health services in an estimated 17 clinics spread throughout the Kingdom.

The rate of fatal suicide in Jordan was reported to be 1.6 per 100 000 in 2019, which was an increase from 1.5 per 100 000 in 2017 *(11)*. Suicide ideation is an emerging issue in Jordan and anecdotal reports to the Jordanian Department of Statistics indicate that the rate of suicide increased by 10% between 2017 and 2021 *(12)*; however, there is no official registry of such data. The increase in the rate of suicide ideation is due to the burden of mental health conditions in the country, and the declared number of suicides is probably an underestimate, as social stigmatization and the recent criminalization of public suicide in Jordan (in May 2022) might dissuade people from identifying suicide as the cause of death within their communities.

Tobacco use is a significant public health concern in Jordan and contributes to the development of mental health conditions *(13)*. Jordan has one of the highest smoking rates in the world, cigarette and shisha smoking being very common. According to the latest national "stepwise survey" by the Ministry of Health and the WHO Country Office in Jordan, 66.1% of male Jordanians smoke

tobacco and 15.9% use electronic cigarettes *(14)*. Despite Government efforts to curb smoking, including banning smoking in public places and requiring warning labels on cigarette packs, the prevalence of smoking remains high. In 2019, WHO, UNDP and the Ministry of Health conducted an investment case for tobacco control in Jordan as a part of a project within the WHO Framework Convention on Tobacco Control for 2030 *(15)*. While prevention, treatment and harm reduction services are available, their reach and effectiveness vary. In September 2023, His Majesty King Abdullah II called for intensified efforts to combat tobacco use, including culturally sensitive campaigns and actions to educate the public on the risks of tobacco use *(14)*.

The prevalence of mental health disorders among adolescents and young adults < 20 years in Jordan is estimated to be 12.23% *(16)*. Jordanian young people face various stressors, such as a high unemployment rate, academic pressure and regional instability. Many have been exposed to violence and trauma, which increases their risk to a range of mental health conditions, including but not limited to depression, anxiety and post-traumatic stress disorder. The rates of depression are also a concern, and a significant portion of the young population who are refugees from neighbouring countries have been exposed to violence and trauma, which increases their risk to a range of mental health conditions, including but not limited to depression, anxiety and post-traumatic stress disorder *(56)*. The COVID-19 pandemic has probably exacerbated many existing mental health issues among young people by increasing stress, disrupting routines and shifting to online learning *(17)*. The pandemic reportedly exacerbated domestic violence globally, including in Jordan, due to increased stress and confinement at home during lockdowns *(18)*. Although the exact prevalence of domestic violence is unknown, as many cases are not reported, a significant portion of women have experienced some form of domestic violence in their lifetime *(19)*. Jordan has addressed domestic violence in its Law Regarding Protection from Domestic Violence (Law No. 15/2017) *(20)*, which provides some protection and resources for victims. Implementation and enforcement of this law have, however, been difficult, and some critics have argued that it does not go far enough to protect victims and prosecute the perpetrators *(19)*.

Priorities in the field of health in Jordan include building the capacity of all health-care providers for mental health care, improving access to mental health services, improving services for young people and enhancing policies and increasing investment in line with the SDGs, especially after the COVID-19 pandemic. In attaining these goals, there has been strong collaboration between WHO and the Jordanian Ministry of Health since 2008 to integrate mental health care into primary health care, consistent with the WHO Mental Health Gap Action Programme *(21)*. In addition, the WHO Special Initiative for Mental Health (8) was launched in Jordan in 2020 to increase access to and coverage of mental health services by including mental health in primary and secondary health care.

The Ministry of Health is the leading public health provider in Jordan. It operates a network of hospitals and primary health-care centres throughout the country, offering a broad range of services, from general practice and preventive care to specialized treatment and surgery. Approximately 30% of primary health care services in the Ministry of Health are currently providing mental health services, in addition to three inpatient units in three Ministry of Health hospitals.

The Royal Medical Services provide health care to military personnel and their families and also operate a network of hospitals and medical centres. There are several university hospitals, such as the University of Jordan Hospital and the King Abdullah University Hospital, which provide a range of medical services and conduct medical education and research.

As in many low- and middle-income countries, however, there are considerable challenges, including lack of resources, stigmatization of mental health problems and a shortage of trained mental health professionals, due primarily to high rates of transfer of physicians to the private sector and emigration for better overseas opportunities *(22)*.

Among the foremost challenges for mental health services is poor linkage to the health system. Some health professionals in Jordan are reported to be unaware of the mental health care referral system, require training in identifying people who are experiencing mental disorders and are unaware of the recommended approach to referrals *(23)*.

Other opportunities for improving mental health services include ensuring access to services at community level, which would require more investment in personnel and better training of existing human resources. All health-care providers should be trained in mental health care referrals and other opportunities for patient care including mental health services available at the secondary level *(23)*. Mental health issues are commonly stigmatized in Jordanian society, which may discourage people from seeking help. This problem is exacerbated by lack of awareness about the available services and a shortage of services, particularly in rural areas.

2.2 Mental health policy and legislation

There is no dedicated legislation on mental health in Jordan; however, provisions for mental health are included in two laws: the Public Health Law *(24)* and the Law on the Rights of Persons with Disabilities Act *(25)*. The country is also a signatory to the United Nations Convention on the Rights of Persons with Disabilities, which commits it to uphold the rights and dignity of all its citizens, including those with mental health conditions.

In May 2022, a new law criminalizing public suicide was passed in Jordan, in which suicide attempted in a public place is punishable by 6 months' imprisonment and/or fine a fine of 100 JOD (US$ 141) *(26)*, reflecting the belief that life is sacred and suicide is a crime against oneself and society. Criminalization of suicide can, however, increase social stigmatization and discourage people from seeking help for fear of legal consequences. Many mental health professionals and advocates have therefore argued for decriminalization of suicide, emphasizing the need for compassion, understanding and mental health support rather than punishment *(27)*. In September 2023, WHO issued a policy brief addressing the health aspects of decriminalization of suicide and suicide attempts *(28)*. The brief states that:

"…criminalization of suicide perpetuates an environment that fosters blame and stigmatization towards people who attempt suicide, and at the same time fails to recognize the role of social, economic and cultural factors that play a role in suicide and suicide attempts."

Mental health is mentioned in the Ministry of Health Strategic Plan (2023–2025) *(29)*, and the National Mental Health and Substance Use Action Plan (2022–2026) *(30)* is guided by the WHO Global Mental Health Action Plan 2013–2030 *(31)*. The National Mental Health and Substance Use Action Plan highlights mental health as key to universal health coverage and stresses the importance of mental health in public health emergency preparedness, response and recovery. It prioritizes reduced dependence on care in facilities and greater integration into primary and secondary health care.

2.3 Mental health governance and access

Within the Jordanian public mental health services, the Ministry of Health operates three inpatient facilities under the umbrella of the National Centre for Mental Health, including the Centre's hospital, the National Centre for the Rehabilitation of Addicts, and Al-Karama Hospital, which have a total of 402 beds. Several psychiatric inpatient units have been established at general Ministry of Health hospitals (Ma'an Governmental Hospital, New Zarqa Governmental Hospital) and university hospitals (King Abdullah Hospital, Jordan University Hospital). The Ministry of Health also operates four community mental health centres, which deliver outpatient mental health services according to a biopsychosocial approach to treatment and support (Al-Istishariyya, Al-Hashmi, Princess Basma, Al-Karak). In addition, the National Centre for Mental Health has a network of psychiatrists who provide services at 52 Ministry of Health psychiatric outpatient clinics at health centres, prisons, shelters and other facilities.

Jordan has taken various measures to provide mental health services for its population. One of the most important is integration of such services into primary health care in order to increase access to mental health services and to reduce long stays in institutions. Primary health-care providers are trained to screen for and manage a variety of mental health conditions, and the mental health workforce is being extended and improved by providing both pre and post service training for psychiatrists, psychologists and other mental health professionals. Specialized mental health facilities, including the National Centre for Mental Health and several private clinics and hospitals, provide outpatient and inpatient services.

Public awareness about mental health issues has been raised to reduce the stigmatization of patients with mental health conditions. The Royal Health Awareness Society, in collaboration with the Ministry of Health, is promoting mental health through community clinics in about 200 primary health-care centres in the country, and public education campaigns and initiatives have been conducted in schools and workplaces. The Jordanian Ministry of Education has been integrating aspects of mental health and well-being into the national curriculum, and almost all of the 4072 public schools in Jordan now have a school counsellor and a facilitator for safe environments. The 2600 school counsellors and 1400 facilitators have been trained to play a supportive role similar to that of a social worker. The WHO school package curriculum *(32)* has been implemented in public schools since 2022, and UNICEF has been implementing the "Together for a Safe Environment" programme *(33)* in Jordan since 2009. The Ministry of Education continues to work with WHO and

UNICEF to equip teachers with the knowledge and skills for identifying and managing mental health issues among students; however, there is currently lack of funding for this programme and referral mechanisms remain limited.

Several nongovernmental organizations work with schools to deliver mental health programmes. For instance, the International Rescue Committee has implemented a programme providing psychosocial support to students in both formal and informal educational settings in Jordan *(34)*. As there are many refugee children in Jordan, specific programmes have been established to address their mental health needs *(35)*, often by providing psychosocial support and addressing the effects of trauma. Despite these initiatives, insufficient resources, stigmatization of mental health problems and lack of comprehensive mental health training for school staff limit mental health programmes for schoolchildren.

Psychiatric medication in Jordan can be obtained at pharmacies, which are widespread in urban areas and also exist in smaller towns and rural areas. Psychiatric medications are also available through the public health system, typically at lower cost than in the private sector; however, the range of available medications may be limited, and some specialized drugs might not be available in all public health facilities.

To overcome challenges such as limited access to specialized services, especially in remote areas, telepsychiatry and digital health solutions have been used, which help service providers to reach people in need and to increase access to services. Remaining challenges include a shortage of mental health professionals, limited resources and stigmatization. Furthermore, access to and the quality of services vary, and services are often concentrated in urban areas.

2.4 Financing

In Jordan, health care is financed through Government spending, mandatory contributions of civil and mandatory servants, out-of-pocket payments by individuals and contributions from private insurance companies and donors. The health sector is being reformed to improve the efficiency and effectiveness of health-care services, including budgetary considerations. The Ministry of Health provides health insurance coverage for many segments of the Jordanian population, including public-sector employees, individuals above 60 years, individuals with certain chronic diseases, orphans and people living below the poverty line. The insurance provides access to health-care services at facilities run by the Ministry of Health free of charge, except for minimal copayment. The Royal Medical Services, which are a part of the Jordanian Armed Forces, provide comprehensive medical services to military personnel, veterans and their families. About 7% of Jordan's population is covered by private health insurance, which is usually provided through employers or purchased individually *(55)*. Private insurance often allows access to a broader range of services and facilities than public insurance; however, as of December 2022, mental health services were not covered by private health insurance plans *(36)*.

The Ministry of Health allocates funding for mental health services in the public sector from its overall health budget. The funding supports public mental health clinics and psychiatric departments in public hospitals at tertiary level. Given mental health budgets are traditionally negotiated according to staffing and facility costs, nearly all of Jordan's mental health budget is allocated to the running of its psychiatric hospitals and related outpatient services. This results in limited to no budget allocated to community-based mental health services provided at primary health care levels, and possibly explains the zero mental health budget allocated to Jordan's Mental Health and Disabilities Directorate. The Ministry of Finance sets the budget amount for the Ministry of Health in a highly centralized process, which is negotiated according to health-care staff costs and facility overheads. The final decision is made by the Prime Minister. Approval of the budget by the House of Representatives and the Senate is required before its execution. The overall national budget is about 11 billion JOD, approximately 11% of which is allocated to health. For the past 3 years, because of the COVID-19 pandemic, the Ministry of Health has received the highest allocation.

While the national health budget pays mainly for medications and health-care providers who are salaried employees of the Ministry of Health and Royal Medical Services, mental health community-based services at primary care level is funded largely by international donors, which is in the long-term, unsustainable.

2.5 Development priorities and international response

Jordan's development priorities reflect the country's commitment to sustainable growth and improving the well-being of its population, as stated in its national vision and strategic plan for development, such as in economic and social development, environmental sustainability and good governance.

International aid supports many mental health initiatives in Jordan. Given its geopolitical situation, including hosting large numbers of refugees, various United Nations agencies provide support for mental health. For example, the United Nations High Commissioner for Refugees provides psychosocial support and mental health services for refugees, and the United Nations Relief and Works Agency for Palestine Refugees in the Near East provides mental health services for Palestinian refugees in Jordan. WHO offers technical support and guidance to the Jordanian Ministry of Health and other stakeholders to strengthen the mental health system. It also contributes to raising awareness about mental health issues. Many international and nongovernmental organizations provide crucial mental health services, funded by a mix of private donations, grants and international aid. Some countries provide bilateral aid, which includes support for mental health initiatives. In addition, entities such as the Global Fund to Fight AIDS, Tuberculosis and Malaria sometimes support programmes that include mental health components in view of the interconnectedness of health issues.

International aid is therefore critical in supplementing domestic resources to extend mental health services, although the demand often exceeds the available resources, given the high demand for mental health care in vulnerable populations such as young people, women of childbearing age and refugees. It additionally means that changes to Jordan's refugee context, or that of funding priorities by international donors (for example, if humanitarian funding shifts away from Jordan to other countries in need), financial support for community-based services will also reduce. This will impact both vulnerable groups as well as Jordanian citizens who have benefited from those externally-funded services.

2.6 Perspectives of people who use mental health services and their caregivers

During the data collection mission of the Jordan Mental Health Investment Case, held in Amman from May 16 to 18, 2023 (for more details, please see paragraph 3.1 of the report), people in Jordan who use mental health services, and their caregivers, provided valuable insights during several workshop activities. Tailored focus group discussions on mental health services availability, their provision outside the health system, and financial protection were also explored.

Participants reported that health professionals tended to rely on medications for treatment, following outdated biomedical (as opposed to bio-psychosocial) approaches to care. Service user associations have access to very few specialized mental health counsellors to refer people for support, and their availability for treatment (e.g., therapy) is extremely limited. The alternative—external consulting and private counselling services—is very expensive. Service users viewed the health system as lacking in mental health advisors (including service user/peer support workers), specialized training (i.e., beyond biomedical treatments), proper communication, emergency services, and follow-up care. It was particularly noted that there is no clear role for people living with mental health conditions within the system, who could be employed as service user advocates or support workers.

> A participant with schizophrenia shared his experience of inadequate care and misdiagnosis, which led him to seek alternative treatments and eventually self-manage his condition with his wife's support. He emphasized the importance of activities that facilitate full reintegration into normal life, which he achieved through being part of a small project grant to a local organisation.

On the other hand, several participants highlighted positive experiences with social system interventions. Scholarships, micro-loans, and support from various associations enabled participants to engage in activities and start small businesses. Associations offered shelters, activities, and funds, although communication and community integration remained challenging. Family involvement in the process was emphasized as crucial.

One participant appreciated an association's holistic approach and recovery programs, which significantly improved her well-being.

Another participant benefited from a cultural centre's awareness activity. However, challenges persist, such as the discontinuation of specialized programs in schools, high costs of private centres, and insufficient attention to individual needs.

Participants noted the variability in medication affordability and availability. While some had professional insurance or access to discounted medications, others faced difficulties, especially refugees without health insurance or identity cards. The lack of specific mental health insurance and the high cost of medications were significant barriers to consistent care.

One participant shared a traumatic experience in which a delay in accessing necessary injections, due to financial unaffordability, led to severe domestic violence.

There was consensus that therapeutic and behavioural treatments were valuable and that integrated, accessible services were needed as part of the health system. Having people who use mental health services involved in the health system would help to advocate for such resources. The importance of listening to patients directly rather than relying solely on family input was stressed. Participants also called for more projects promoting societal reintegration and income generation for mental health service users. The health system's focus on medication over dialogue-based behavioural therapy was criticized.

Overall, the need to inform, scale up, and improve service availability and accessibility clearly emerged, along with the necessity to build capacity for social workers and psychiatrists, particularly in behavioral therapy, as a crucial step forward. Nonetheless, a cross-cutting theme that emerged during all workshop activities was that of social stigmatization, with reference to mental health conditions in general, and disability and suicide in particular, especially at the community level and against specific population groups, such as foreign workers. Social stigma emerged as one of the main barriers to mental health service access. Recruitment and training of health professionals in primary health care settings emerged as a possible solution to fight against social stigma, along with the direct involvement and story-sharing of people with lived experience and their caregivers.


3
Methodology

3. Methodology

A multiagency, multidisciplinary team comprising staff from Jordan's Ministry of Health, WHO, the United Nations Inter-Agency Task Force on the Prevention and Control of NCDs, UNDP, R-Health Consult and Jordanians with lived experience of mental health conditions participated in data collection for this mental health investment case, complemented by an institutional context analysis. The team included health economists, social development specialists, mental health and public health experts, and service users.

This section briefly describes the methods for the institutional context analysis and outlines the methods and economic models used at various stages of the economic analysis to:

- estimate the economic burden attributable to mental health conditions in terms of both direct costs (i.e. Government health-care expenditure) and indirect costs (i.e. productivity losses due to absenteeism, presenteeism and premature death);
- cost interventions;
- assess the impact of interventions on health; and
- determine ROIs.

3.1 Institutional context analysis

The economic analysis was complemented by an institutional context analysis conducted by the investment case team during a 3-day United Nations mission in May 2023. The analysis was based on discussions with representatives of the following institutions:

- the Ministry of Health,
- the WHO Regional Office for the Eastern Mediterranean,
- the WHO Country office,
- WHO headquarters,
- the United Nations Inter-Agency Task Force on the Prevention and Control of NCDs,
- UNDP,
- mental health specialists,
- mental health care providers,
- people with lived experiences of mental health conditions,
- developmental partners and nongovernmental organizations,
- community and religious leaders,
- media,
- health councils,
- professional associations, and
- investors in the health sector.

The discussions addressed the impact of mental health conditions on the national development agenda, the priorities of various sectors and stakeholders and how they could support a strengthened whole-of-Government response, including implementation of the recommended interventions. The insights gained from these discussions are reflected in the findings and conclusions of the report.

3.2 Estimating the economic consequences of mental health conditions

A model was developed to estimate the current economic burden attributable to both direct and indirect costs of six mental health conditions and of suicide in Jordan. Population data were obtained by age and sex for the period 2023–2040 from the Jordan Department of Statistics and the United Nations Department of Economic and Social Affairs World Population Prospects study *(39)*. The OneHealth tool (Box 2) was used to model prevalence and mortality rates by age and sex for six mental health conditions: depression, anxiety, psychosis, bipolar disorder, epilepsy and alcohol use disorder. The model enabled estimation of the projected number of prevalent and mortality cases of each condition for two scaling-up periods, while holding current rates constant. The scaling-up periods were a short-term (2023–2030) and a long-term period (2023–2040). Projections for each period were summarized as the total numbers of prevalent and mortality cases in the entire population and in the working-age population (aged 15–64 years).

Box 1. OneHealth tool and its mental health module

The OneHealth tool is software designed for national strategic health planning in low- and middle-income countries. Development of the tool is overseen by a group consisting of experts from United Nations agencies and development institutions. A mental health module was devised as part of the tool for estimating the costs and health impacts of mental health services and interventions at population level. The module allows estimation of the number of people living with mental health conditions in a country and linkage of the epidemiology of mental health conditions to national life tables for estimation of the numbers of cases averted and healthy life-years gained over time at population level.

The direct and indirect economic burdens of mental health conditions and suicide in Jordan were estimated with the following approach.

The direct economic burden of mental health conditions and suicide comprises all health-care expenditure related to the management and care of people living with a mental health condition. An estimate of total mental health expenditure was imputed by: (1) estimating the proportion of total expenditure attributable to mental health in all hospitals administered by Jordan's Ministry of Health and (2) applying this proportion to estimates of total health expenditure in all Government hospitals, private hospitals and outpatient services in Jordan. Expenditure by Ministry of Health hospitals was obtained from a Ministry of Health report in 2021, while total health expenditure by Government hospitals, private hospitals and outpatient services were obtained from the National

Health Accounts for 2019 (converted to 2023 JOD). Mental health expenditure in primary health care was excluded from the imputed estimate of total mental health expenditure because relevant data were not available. Non-health care costs, such as transport, waiting times and informal care, were also excluded.

The indirect economic burden of mental health conditions and suicide in Jordan is due to lost productivity resulting from impaired mental health. Lost productivity can result from: (1) absenteeism, when people take days from work because of a mental health condition; (2) presenteeism, when people's job performance is impaired due to a mental health condition; and (3) premature death, which comprises lost productivity of people who die due to a mental health condition. The steps involved in estimating the indirect economic burden are described below.

1 ESTIMATION OF TOTAL EMPLOYED LABOUR FORCE

The annual value (in terms of economic output) of each full-time worker in Jordan was calculated from the GDP per employed person, defined as the country's GDP (33.6 billion JOD in 2023) divided by the total employed labour force. Local data on the total labour force aged ≥ 15 years, the unemployment rate and the labour force participation rate were used to determine the total employed labour force.

2 ESTIMATION OF REDUCTION IN WORKER PRODUCTIVITY DUE TO MENTAL HEALTH CONDITIONS

Secondly, data were obtained to quantify the reduction in worker productivity due to each mental health condition. As in a previous global ROI study *(38)*, rates from World Mental Health Surveys *(39)* were used to describe: (i) the reduction in labour force participation due to each of the six mental health conditions; (ii) the reduction in full-time hours worked due to mental health-related absenteeism; and (iii) the reduction in productivity due to mental health-related presenteeism.

3 ESTIMATION OF NUMBER OF WORKERS WITH MENTAL HEALTH CONDITIONS

Thirdly, the number of workers in Jordan with a mental health condition during 2023 was estimated after adjustment for labour force participation, unemployment and mortality. This involved subtraction from the total number of people aged 15–64 years with a mental health condition those who were not participating in the labour force (e.g. still at school or university), were unemployed, could not participate in the labour force because of a mental health condition or were no longer alive.

4 CALCULATING ECONOMIC LOSSES

Finally, the economic losses attributable to absenteeism, presenteeism and premature death due to a mental health condition were calculated by applying the reductions in productivity quantified for each mental health condition to the total number of workers in Jordan with a mental health condition and then multiplying the result by the GDP per employed person. This calculation resulted in the total indirect economic burden of mental health conditions in Jordan.

3.3 Calculating the costs and health effects of scaling up clinical and population-based intervention packages

Two broad categories of interventions were examined in the economic analysis: clinical interventions and a population-based intervention.

The **clinical interventions** comprised various evidence-based intervention packages (i.e. collections of related interventions) for identification and management of mental health conditions. The packages were derived from the intervention guide of the WHO Mental Health Gap Action Programme *(21)*. Examples of clinical interventions in the intervention guide include: "basic psychosocial support", which comprises psychoeducation, stress reduction, social support and promotion of functioning in daily activities and community life; "psychological treatment", which comprises evidence-based, structured psychological treatment such as cognitive behavioural therapy and interpersonal psychotherapy; and combined psychological and pharmacological treatment for people with a more severe mental health condition.

The **population-based intervention** to prevent the onset of mental health conditions and/or suicide deaths by targeting the broader population was a universal social–emotional learning (SEL) programme to increase the psychological resilience of adolescent students and, in turn, reduce the risk of mental health problems later in life.

The OneHealth tool was used to estimate the costs of selected clinical interventions for each of the six mental health conditions. A custom-built Excel® model was then used to estimate the costs associated with each intervention, such as universal delivery of SEL programmes to adolescents in schools to prevent depression, anxiety and suicide. Each intervention modelled in the OneHealth tool and the custom-built Excel® model included assumptions made by WHO experts about the quantity of resource items required for implementation and enforcement at national level. In line with the methodological guidance for mental health investment cases, the main categories of cost were for:

- **inpatient care:** people with mental health conditions who require hospitalization (e.g., 5% of moderate–severe cases of depression, for an average stay of 14 days);
- **outpatient and primary care:** outpatient and primary care, from four visits per case per year for basic psychosocial support or pharmacological management to monthly or bi-monthly visits for moderate–severe cases for psychological treatment;
- **medication:** essential psychotropic medications that include anti-psychotics, antidepressants and anti- epileptics; and
- **programme costs and shared health system resources:** including programme management, administration, training and supervision.

Unit costs for each resource item were obtained from Hammad et al. *(40)*, information provided by Jordanian experts and the WHO-CHOICE database *(41, 42)*. Interventions were assumed to be provided both in communities and in facilities.

To estimate the health impact of the interventions, a population-based model was used in the OneHealth tool to calculate the number of healthy years of life lived in the population at current and target levels of coverage (Table 1). Healthy life years include both expected changes in life expectancy (e.g. as a result of a decrease in the case fatality rate due to fewer cases of depression) and non-fatal health outcomes (e.g. reduced incidence or duration of depressive episodes after treatment). Default effect sizes for the modelled interventions were obtained from WHO's cost-effectiveness work programme *(40)* and are summarized in Table 1.

Table 1. Interventions considered in the mental health investment case*

Intervention	Baseline coverage (2023) (%)	Target coverage (2030) (%)	Target coverage (2040) (%)	Health impacts assessed
Anxiety disorders *(Service delivery: Primary health care)*				
Basic psychosocial support for mild cases	20	40	60	Improved functioning or level of disability (7–12%) and rate of remission (36–42%) among people with anxiety disorder aged ≥ 15 years, after adjustment for non-adherence (30–40%) *(38)*
Basic psychosocial support plus anti- depressant medication for moderate- severe cases[a]	23	33	53	
Psychological treatment plus anti-depressant medication for moderate–severe cases[a]	12	17	27	
Depression *(Service delivery: Primary health care)*				
Basic psychosocial support for mild cases	20	40	60	Improved functioning or level of disability (4–9%) and rate of remission (15–25%) among people aged ≥ 15 years with depression, after adjustment for non-adherence (30–40%) *(43)*
Basic psychosocial support plus anti- depressant medication for first episode of moderate–severe cases[b]	23	33	53	
Psychological treatment plus anti-depressant medication for first episodes of moderate–severe cases[b]	12	17	27	
Psychological treatment plus anti-depressant medication for recurrent moderate–severe cases episodically	35	50	80	
Psychological treatment plus anti-depressant medication for recurrent moderate–severe cases for maintenance	35	50	80	As above, plus reduced incidence of recurrent episodes (28%), after adjustment for non-adherence (30%)
Psychosis *(Service delivery: Secondary health care)*				
Basic psychosocial support plus anti-psychotic medication[c]	40	47	57	Improved functioning / level of disability (21–35%) among people aged ≥ 15 years with psychosis, after adjustment for non-adherence (30–35%) *(44)*
Psychological treatment plus anti-psychotic medication[c]	20	23	28	

*It should be noted that the non-inclusion of drug use disorders is solely due to the lack of interventions for drug use disorders in the OneHealth tool, which is used to generate population-level health impact estimates.

Table 1. contd

Intervention	Baseline coverage (2023) (%)	Target coverage (2030) (%)	Target coverage (2040) (%)	Health impacts assessed
Bipolar disorder *(Service delivery: Secondary health care)*				
Basic psychosocial support plus mood- stabilizing medication[d]	40	47	57	Improved functioning / level of disability (22–29%) among people aged ≥ 15 years with bipolar disorder, after adjustment for non-adherence (28–35%) *(45)*
Psychological treatment plus mood-stabilizing medication[d]	20	23	28	
Epilepsy *(Service delivery: Primary health care)*				
Basic psychosocial support plus antiseizure medication	50	70	85	Improved functioning or reduced level of disability (47%) and rate of remission (60%) among people aged ≥ 1 year with epilepsy, after adjustment for non-adherence (30%) *(46)*
Alcohol use disorder *(Service delivery: Secondary health care)*				
Identification and assessment of new cases of alcohol use disorder	10	40	60	Improved rate of remission (10–15%) among people aged ≥ 15 year, after adjustment for non-adherence (50%) (47)
Brief interventions and follow-up for alcohol use disorder	10	40	60	
Management of alcohol withdrawal	10	40	60	
Population-based mental health interventions				
Universal school-based SEL intervention to prevent depression/ anxiety and suicide in adolescents aged 12–17 years	5	50	80	Reduced rates of incidence of depression and anxiety (16%) and reduced rate of suicide mortality (5.8%) among adolescents attending school (48)

[a] Total coverage of interventions for moderate–severe anxiety disorder is 35% in 2023, 50% in 2030 and 80% in 2040. Two thirds of moderate–severe cases receive basic psychosocial support plus anti-depressant medication, while one third receive psychological treatment plus anti-depressant medication.
[b] Total coverage of interventions for a first episode of moderate–severe depression is 35% in 2023, 50% in 2030 and 80% in 2040. Two thirds of moderate–severe cases receive basic psychosocial support plus anti-depressant medication, while one third receive psychological treatment plus anti-depressant medication.
[c] Total coverage of interventions for psychosis is 60% in 2023, 70% in 2030 and 85% in 2040. Two thirds of psychosis cases receive basic psychosocial support plus anti-psychotic medication, while one third receive psychological treatment plus anti-psychotic medication.
[d] Total coverage of interventions for bipolar disorder is 60% in 2023, 70% in 2030 and 85% in 2040. Two thirds of cases of bipolar disorder receive basic psychosocial support plus mood- stabilizing medication, while one third receive psychological treatment plus mood-stabilizing medication.

Universal school-based SEL interventions are described in Box 3.

Box 3. School-based SEL interventions *(48)*

The onset of depression and suicide increases rapidly during adolescence (10–19 years). Prevention of depression and suicide during these crucial developmental stages could result in substantial health gains during the life-course of an individual. School-based SEL interventions to prevent depression and/or suicide typically involve a trained facilitator (e.g. a teacher, health professional or lay worker) who delivers a series of modules to teach psychotherapeutic strategies to improve overall well-being and/or reduce their risk of poor mental health outcomes. Evidence has been published that school SEL interventions targeting adolescents are effective in reducing the incidence of depression and/or suicide. Schools are increasingly being recognised as an important platform for population delivery of preventive mental health interventions to young people. School psychological interventions are usually delivered to all students, regardless of their underlying risk profile.

3.4 Analysis of return on investment

An Excel® model was developed by WHO to perform the analysis of ROI. The model can provide estimates of the economic gains that accrue from investing in the cost-effective mental health interventions identified by WHO. The interventions are outlined in Table 1. Estimates were made of how each intervention would improve national productivity, measured in terms of GDP. For all the interventions except those for psychosis, bipolar disorder and epilepsy, in which an alternative "imputed method" was used (described below), restored productivity was estimated by a "direct method" for explicit calculation of the increased productivity attributable to: (1) increased labour force participation through avoided mortality and illness; (2) reduced absenteeism; and (3) reduced presenteeism. An "imputed method" was used to indirectly quantify productivity gains attributable to interventions for psychosis, bipolar disorder and epilepsy because data limitations obviated application of the direct method for these three conditions.

In the direct method for estimating restored productivity, the economic value of increases in the healthy labour force due to avoided mortality was calculated by: adjusting the total number of deaths avoided to account for those who are currently employed and then multiplying by the net present value of foregone GDP per capita over the model time horizon (8 years for the 2023–2030 period and 18 years for the 2023–2040 period). The economic value of increases in the healthy labour force due to avoided cases of illness was calculated by: applying the same employment-related adjustments as above to the total number of prevalent cases averted; multiplying by the annual GDP per employed person; and then further multiplying the result by 5% (the increase in labour force participation among those with a mental health condition who receive treatment). The 5% increase in labour force participation was based on the findings from a previous global ROI study, in which 5% restored productivity was applied after mental health treatment *(38)*. The economic value of reducing absenteeism and presenteeism was estimated in a similar manner. In this case, however, multiplication by 5% represented the decrease in absenteeism

and presenteeism among those with a mental health condition who received treatment. The 5% reductions in absenteeism and presenteeism were based on findings from the previous ROI study (38), in which 5% restored productivity was applied after mental health treatment.

Productivity gains resulting from each mental health intervention (excluding interventions for psychosis, bipolar disorder and epilepsy) were calculated with the direct method as the sum of the productivity gains attributable to increased labour force participation (by avoided mortality and illness) and reduced absenteeism and presenteeism. In the case of SEL interventions for adolescents, only productivity gains due to increased labour force participation could be estimated, as productivity gains due to reduced absenteeism and presenteeism are not relevant to people of non-working age. Moreover, methods for determining how impacts on educational attainment during adolescence (which can be improved by preventing mental ill health) translate into better earnings potential later in life have yet to be added to the current model.

The "imputed method" was used to estimate restored productivity resulting from the treatment of psychosis, bipolar disorder and epilepsy. A Lancet Commission on investing in health determined that the value of a healthy life year gained is approximately 1.5 times GDP per capita *(49, 50)*. Two thirds of this value (1.0 times GDP per capita) is attributable to the instrumental value of improved health – increased productivity in the workplace. Conversely, one third (0.5 times GDP per capita) is attributable to the intrinsic value of health – the social value of health as an end in itself. For the current analysis, productivity gains for psychosis, bipolar disorder and epilepsy were estimated by multiplying the total healthy life years gained (see Box 4) by an intervention by the GDP per capita for Jordan and further multiplying the result by a factor of 1.0 to quantify the productivity-related instrumental value of health as a multiple of GDP per capita.

Two base scenarios were examined for the ROI analysis. The first was the impact of including only productivity gains as the main economic benefit (i.e. the instrumental value of health), while the second was the joint impact of including productivity gains and the social value of health (both the instrumental and the intrinsic value). Both the direct and imputed methods for estimating restored productivity require quantification of productivity gains (the instrumental value) attributable to improvements in health. The additional impact of the social value of health was estimated by multiplying each healthy life year gained by 0.5 times GDP per capita and adding this to the total productivity gains estimated with either the direct or the imputed method.

Box 4. Healthy life years gained

"Healthy life years gained" (equivalent to disability-adjusted life years averted) is commonly used in the global health literature as a summary measure of population health. National life tables are used to compute healthy life years, which reflect the combined time spent by the population in a state of health with a known degree (or absence) of disability. A disability weight ranging from 0 (denoting death) to 1 (denoting perfect health) is used to adjust the time spent in a particular health state. For example, if a person lives with disease X for 10 years and the disability weight for disease X is 0.4, the total healthy life years gained for that person is 4 (10 multiplied by 0.4).

The ROI for each intervention was calculated by comparing the productivity gains made with the intervention (measured as an increase in GDP) with the total costs of setting up and implementing the intervention. Projected costs and projected productivity gains were estimated with the net present value approach and applying a 3% annual discount rate. Future impacts on health and productivity and future intervention costs were discounted to their present value to account for the time value of money, whereby a unit of money obtained in the future is worth less than the same unit of money obtained in the present. The ROI resulting from each intervention was presented in terms of two alternative metrics: (1) the benefit-to-cost ratio, defined as the present value of total health and/or productivity gains divided by the present value of total intervention costs; and (2) the ROI ratio, defined as the present value of total health and/or productivity gains minus the present value of total intervention costs, divided by the present value of total intervention costs (51). The formulae used to calculate the benefit–cost ratio and ROI for the two base case scenarios are presented in equations 1 and 2, respectively, where PV is the present value.

Eq. 1a

$$\text{Benefit-to-cost ratio (productivity only)} = \frac{\text{PV of productivity gains}}{\text{PV of intervention costs}}$$

Eq. 1b

$$\text{Benefit-to-cost ratio (productivity + social)} = \frac{\text{PV of productivity gains + PV of social value}}{\text{PV of intervention costs}}$$

Eq. 2a

$$\text{ROI ratio (productivity only)} = \frac{\text{(PV of productivity gains -PV of intervention costs)}}{\text{PV of intervention costs}}$$

Eq. 2b

$$\text{ROI ratio (productivity + social)} = \frac{\text{((PV of productivity gains + PV of social value)-PV of intervention costs)}}{\text{PV of intervention costs}}$$

Photo: © WHO


4
Results

4. Results

This section describes the economic burden of mental health conditions and suicide; summarizes the components of the ROI analysis (including health impacts, economic gains and total costs); and discusses the benefit–cost ratio and ROI for each intervention package.

4.1 Economic burden

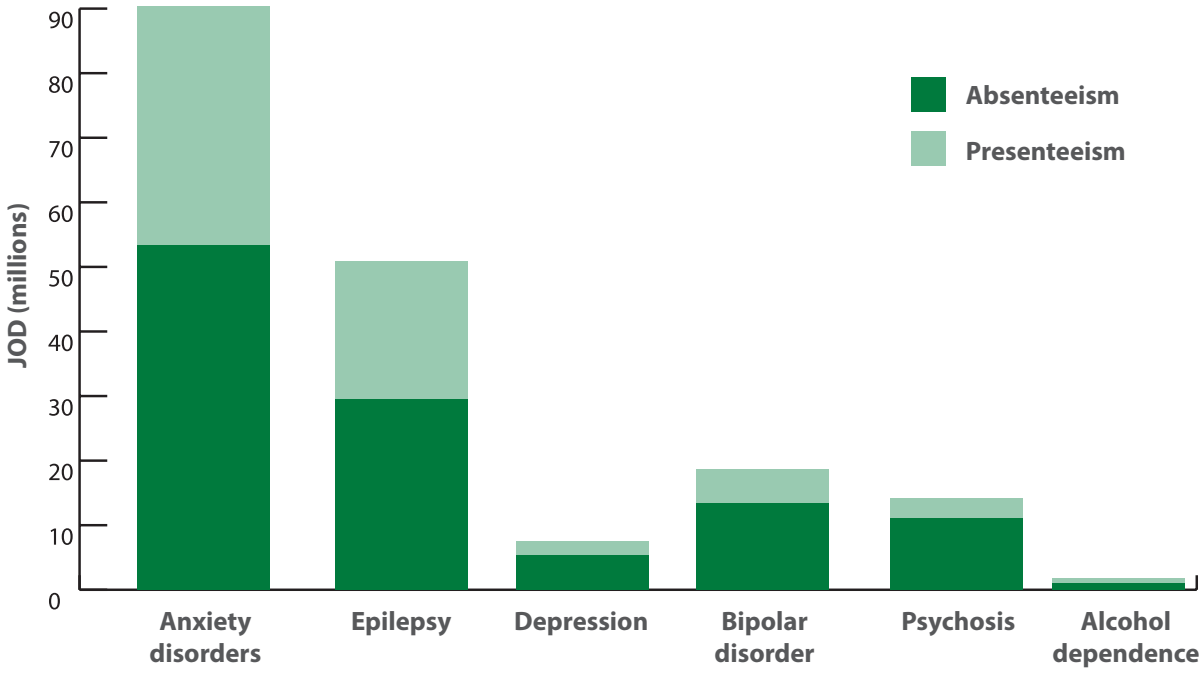
Direct costs

The total health expenditure for mental health in Jordan in 2023 was estimated to be 53.1 million JOD. This represents about 2.2% of all health expenditure in Jordan and is below the target allocation of 5.0% recommended for low- and middle-income countries by the 2018 Lancet Commission for Global Mental Health *(52)*. Total mental health expenditure was imputed and reflects mental health-related expenditure in Government hospitals, private hospitals and outpatient services. Total expenditure in all mental health hospitals administered by the Ministry of Health, via the National Centre for Mental Health and the National Centre for the Rehabilitation of Addicts, amounted to 10.0 million JOD in 2021 and 10.6 million JOD in 2023. It follows that expenditure on mental health in hospitals represented about 3% of all hospital expenditure by the Ministry of Health. Data from the 2019 National Health Accounts indicated that total health expenditure (in 2023 JOD) was: 909.5 million JOD for Government hospitals, 394.6 million JOD for private hospitals and 484.3 million JOD for outpatient services. Total mental health expenditure was, in turn, imputed to be: 27.0 million JOD for Government hospitals, 11.7 million JOD for private hospitals and 14.4 million JOD for outpatient services. Lack of data prevented estimation of total mental health expenditure in primary health care. Furthermore, total mental health expenditure could not be disaggregated by mental health condition.

Indirect costs

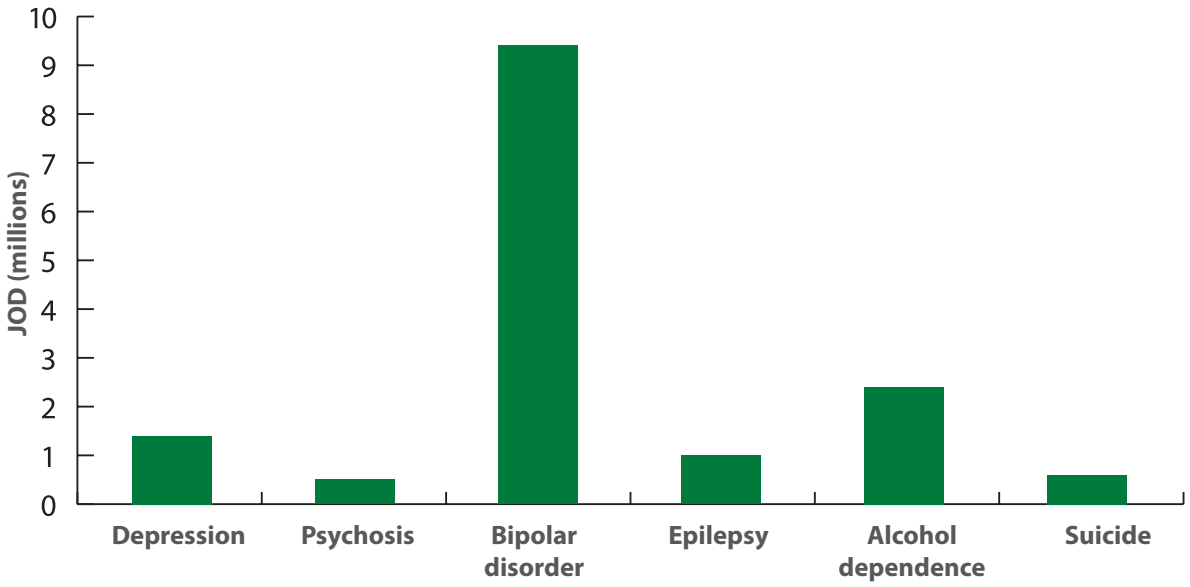
The indirect economic losses due to mental health conditions and suicide were estimated as the sum of losses due to absenteeism, presenteeism and premature death. The total combined cost of absenteeism and presenteeism in Jordan is presented in Fig. 1. The total number of working days absent was estimated to be 1.88 million for absenteeism and 1.15 million for presenteeism, which resulted in a total cost of 183.4 million JOD in 2023. Absenteeism and presenteeism costs were highest for anxiety disorders. Although anxiety is associated with fewer days off work than depression for the average individual, the estimated prevalence of anxiety in Jordan was higher than that for depression.

Fig. 1. Costs of absenteeism and presenteeism for mental health conditions (2023 JOD, millions)



The total cost of premature death due to mental health conditions was estimated to be 15.3 million JOD in 2023 (Fig. 2).

Fig. 2. Costs of premature death for mental health conditions (2023 JOD, millions)



Bipolar disorder and alcohol use disorder are the costliest mental health conditions in terms of premature death, because of the high mortality estimated for these two conditions in the Global Burden of Disease study (53), which is the source of epidemiological data used in OneHealth Tool (i.e. at least six times more deaths in the population due to bipolar disorder and alcohol use disorder than those due to depression and psychosis). High mortality among cases of alcohol use disorder was due to causes of death ranging from cancers to injuries (e.g. traffic accidents and falls). Fewer deaths are due to anxiety disorders than to other mental health conditions (and they were subsequently excluded from the analysis), but, as described above, anxiety disorders are associated with a high economic burden due to absenteeism and presenteeism. It should be noted that the data do not account for known co-morbid conditions with alcohol use disorder, such as major depression, bipolar and anxiety disorders *(54)*, which are likely to influence mortality results.

Total economic costs

The indirect economic costs of mental health conditions are much higher than the direct costs. Total expenditure on care for mental health conditions was 53.1 million JOD, while losses to the economy due to absenteeism, presenteeism and premature death amounted to 198.7 million JOD. The direct cost of mental health conditions and suicide in Jordan was 53.1 million 2023 JODs. The indirect costs (in million 2023 JODs) were 113.8 for absenteeism, 69.7 for presenteeism and 15.3 for premature deaths, for a total of 198.7.

The total economic burden of selected mental health conditions and suicide on the Jordanian economy was estimated to be 251.8 million JOD in 2023. This is equivalent to 0.75% of the national GDP in 2023. Despite this large economic burden, the treatment gap remains substantial. Total mental health care expenditure represented 21% of all mental health-related costs, while the cost of absenteeism was 45%, that of presenteeism was 28%, and that due to premature deaths was 6%.

4.2 Costs of intervention

The costs of the interventions were estimated for the periods 2023–2030 and 2023–2040. Table 2 shows the absolute costs during the first 5 years of the period 2023–2030, plus the net present value of total costs during 2023–2030 and 2023–2040. Table 3 shows the corresponding per capita costs.

Table 2. Estimated absolute costs of interventions (JOD, millions), 2023–2030 and 2023–2040

Mental health intervention package[a]	2023	2024	2025	2026	2027	Total for 2023–2030[b]	Total for 2023–2040[b]
Clinical interventions							
Anxiety disorders	4.7	5.2	5.7	6.1	6.6	44.3	124.3
Depression	7.2	7.8	8.4	9.0	9.6	64.9	176.5
Psychosis	10.6	11.2	11.8	12.4	13.0	88.9	216.8
Bipolar disorder	23.4	24.5	25.6	26.8	28.0	191.9	458.6
Epilepsy	0.5	0.5	0.6	0.6	0.7	4.5	10.8
Alcohol use disorder	0.2	0.3	0.4	0.5	0.6	3.7	10.8
Population-based interventions							
Universal school-based SEL intervention	0.5	0.7	1.0	1.2	1.4	9.1	21.1
Total	**47.2**	**50.2**	**53.4**	**56.6**	**60.0**	**407.2**	**1018.9**

[a] The packages of clinical interventions include several interventions (e.g. basic psychosocial support, psychological treatment and medications) delivered at primary and secondary levels of health care.
[b] Totals are presented as a net present value, discounted at a 3% annual rate.

Table 3. Estimated per capita costs of interventions (JOD), 2023–2030 and 2023–2040

Mental health intervention package[a]	2023	2024	2025	2026	2027	Total for 2023–2030[b]	Total for 2023–2040[b]
Clinical interventions							
Anxiety disorders	0.42	0.46	0.50	0.54	0.58	3.92	11.0
Depression	0.64	0.69	0.74	0.80	0.85	5.75	15.6
Psychosis	0.94	0.99	1.04	1.10	1.15	7.86	19.2
Bipolar disorder	2.07	2.17	2.27	2.37	2.48	17.0	40.6
Epilepsy	0.04	0.05	0.05	0.06	0.06	0.40	0.95
Alcohol use disorder	0.02	0.03	0.03	0.04	0.05	0.32	0.96
Population-based interventions							
Universal school-based SEL intervention	0.04	0.06	0.09	0.11	0.13	0.80	1.87
Total	**4.18**	**4.44**	**4.72**	**5.01**	**5.31**	**36.0**	**90.2**

[a]The packages of clinical interventions include several interventions (e.g. basic psychosocial support, psychological treatment and medications) delivered at primary and secondary levels of health care.
[b]Totals are presented as a net present value, discounted at a 3% annual rate.

The clinical intervention for bipolar disorder incurred the largest estimated costs because of the requirements for care and support. Implementation of the entire package of clinical interventions (except population-based interventions) would cost 407.2 million JOD (or 36.0 JOD per capita) over the 2023–2030 scaling-up period and 1018.9 million JOD (or 90.2 JOD per capita) over the 2023–2040 scaling-up period.

The clinical interventions for alcohol use disorder and epilepsy incurred the lowest estimated costs, which would be 3.7 million JOD and 4.5 million JOD, respectively, over the 2023–2030 scaling-up period and 10.8 million JOD and 10.8 million JOD, respectively, over the 2023–2040 period. The total cost of the population-based mental health interventions (universal school-based SEL) was also among the lowest of all the intervention packages. It would cost 9.1 million JOD (or 0.80 JOD per capita) in 2023–2030 and 21.1 million JOD (or 1.87 JOD per capita) in 2023–2040.

Interventions involving psychological treatment and anti-depressant medication have high planned costs; however, numerous low-cost interventions exist for anxiety disorders and depression, such as basic psychosocial support.

4.3 Health impacts

All the interventions significantly increase the total number of healthy life years gained (absolute results presented in Table 4). As defined in Box 4, healthy life years gained is a measure of the additional years of healthy life due to an intervention after adjustment for disease-related states by application of disability weights. The greatest impacts were observed with interventions for depression (22 435 healthy life years gained over 2023–2030), anxiety disorders (10 179), epilepsy (5804) and universal school-based SEL interventions (3734).

Table 4. Estimated absolute health impacts

Mental health intervention package[a]	Total healthy life-years gained		Prevalent cases averted		Total deaths avoided	
	2023–2030	2023–2040	2023–2030	2023–2040	2023–2030	2023–2040
Clinical interventions						
Anxiety disorders	10 179	82 261	38 312	379 370	NA[b]	NA[b]
Depression	22 435	161 866	67 349	486 381	112	892
Psychosis	917	6112	NA[b]	NA [b]	NA[b]	NA[b]
Bipolar disorder	1046	8851	444	5355	161	1028
Epilepsy	5804	29 761	3919	30 201	20	185
Alcohol use disorder	1356	8372	4214	22 796	65	416
Population-based interventions						
Universal school-based SEL intervention	3734	15 915	17 858[c]	7070[d]	3[d]	8[d]
Total	**45 471**	**313 138**	**132 096**	**1 001 173**	**361**	**2529**

NA: not applicable
[a] The packages of clinical interventions include several interventions (e.g. basic psychosocial support, psychological treatment and medications) delivered at primary and secondary levels of health care.
[b] Mental health outcomes involving deaths due to this condition cannot be estimated with the OneHealth Tool as intervention effect sizes for this outcome are not included in the tool.
[c] Prevalent cases of depression or anxiety.
[d] Deaths due to suicides attributable to depression.

Several interventions also reduce mortality by decreasing the prevalence of mental health conditions that lead to excess mortality (e.g. depression, bipolar disorder and alcohol use disorder). Bipolar disorder and psychosis are less common than depression and anxiety; however, they are severe mental health conditions that usually persist throughout life and often result in substantial suffering and human rights abuses. In the case of psychosis, the primary impact on healthy life years gained is a reduction in the severity of symptoms and improved daily functioning (quantified by

reductions in the disability weight) and not reductions in the number of prevalent cases or deaths. It should be further noted that effective management and community support for individuals living with a severe mental health condition (such as psychosis or bipolar disorder) can reduce hospital admissions and related health-care costs.

4.4 Productivity gains

The total net present values of productivity gains due to the mental health intervention packages are presented in Table 5. When the direct method was used to estimate restored productivity, reduced mortality had a large impact on productivity due to increased labour force participation (with productivity gains worth 10.4 million JOD over 2023–2030), followed by increased labour force participation due to avoided cases of illness, reduced presenteeism and reduced absenteeism (66.0 million JOD, altogether). When the implicit method was used, productivity gains were seen due to treatment of psychosis (2.5 million JOD), bipolar disorder (2.9 million JOD) and epilepsy (15.9 million JOD). The packages resulted in a net present value of 97.5 million JOD in productivity gains over 2023–2030, which would accrue to 595.8 million JOD over 2023–2040.

Table 5. Estimated productivity gains due to the mental health intervention packages (JOD, millions), 2023–2030 and 2023–2040

Method used to estimate restored productivity	Total productivity gains[a]	
	2023–2030	2023–2040
Direct method[a]		
Increased labour force participation due to avoided mortality	10.4	61.3
Increased labour force participation due to avoided cases of illness	22.0	145.0
Reduction in absenteeism	22.0	145.0
Reduction in presenteeism	22.0	145.0
Implicit method[b]		
Productivity gains for psychosis	2.5	13.7
Productivity gains for bipolar disorder	2.9	19.6
Productivity gains for epilepsy	15.9	66.3
Total	**97.5**	**595.8**

[a] Totals are presented as a net present value, discounted at a 3% annual rate.
[b] The direct method for estimating restored productivity was applied to the mental health intervention packages for anxiety disorders, depression, alcohol use disorders and universal school-based SEL. Restored productivity is presented here by the type of productivity gain. Restored productivity is presented by mental health intervention package in Table 6.
[c] The implicit method for estimating restored productivity was applied to the mental health packages for psychosis, bipolar disorder and epilepsy.

4.5 Return on investment

Table 6 demonstrates that most mental health intervention packages have a benefit–cost ratio > 1.0 for the long-term scaling-up period 2023–2040. These intervention packages therefore have a positive ROI, such that total productivity gains exceed total costs. For some interventions, the ratio is lower, largely because of comparatively high intervention costs (e.g. for psychosis, bipolar disorder) or methodological limitations in quantifying long-term productivity (i.e. universal school-based SEL). Additionally, the mental health intervention packages for anxiety disorders and depression had benefit–cost ratios < 1.0 for the short-term scaling-up period of 2023–2030, which suggests that sustained, long-term investment is required to have positive economic benefits for the management of depression and anxiety disorders in Jordan.

Table 6. Costs, benefits (productivity gains only) and benefit–cost ratios for the scaling-up periods 2023–2030 and 2023–2040, by intervention package (2023 JOD, million)

Mental health intervention package[a]	Total costs[b]		Total productivity gains[b]		Benefit–cost ratio (productivity gains only)		Return on investment ratio (productivity gains only)	
	2023–2030	2023–2040	2023–2030	2023–2040	2023–2030	2023–2040	2023–2030	2023–2040
Anxiety disorders	44.3	124.3	22.8	183.0	0.5	1.5	-0.5	0.5
Depression	64.9	176.5	47.1	282.7	0.7	1.6	-0.3	0.6
Psychosis[c]	88.9	216.8	2.5	13.7	0.0	0.1	-1.0	-0.9
Bipolar disorder[c]	191.9	458.6	2.9	19.6	0.0	0.0	-1.0	-1.0
Epilepsy	4.5	10.8	15.9	66.3	3.5	6.2	2.5	5.2
Alcohol use disorder	3.7	10.8	6.3	30.4	1.7	2.8	0.7	1.8
Universal school-based SEL intervention[d]	9.1	21.1	0.0	0.0	0.0	0.0	-1.0	-1.0

[a] The packages of clinical interventions include several interventions (e.g. basic psychosocial support, psychological treatment and medications) delivered at primary and secondary levels of health care.
[b] Totals are presented as a net present value, discounted at a 3% annual rate.
[c] The ROI for the psychosis and bipolar disorder intervention packages was lower than those for other intervention packages, because the cost of treatment for these conditions is higher than the monetized health impacts. There may be strong non-economic reasons for choosing to invest in an intervention package with a low ROI, such as to protect human rights or to respect the rule of rescue.
[d] These results exclude productivity gains for students because of methodological limitations to estimating future productivity gains for students with improved mental health.

The highest benefit–cost ratio was for the epilepsy intervention package: for 1 JOD invested in the package of these interventions, the expected return is 3.5 over 2023–2030 and 6.2 JOD over 2023–2040. The next highest was for the alcohol use disorder intervention package, which has a benefit–cost ratio of 1.7 over 2023–2030 and 2.8 over 2023–2040. During the short-term scaling-up period (2023–2030), the intervention packages for anxiety disorders, depression, psychosis, bipolar disorder and the universal school-based SEL interventions were found to have negative ROIs (< 1.0), indicating that, for these intervention packages, total costs exceeded total productivity gains in the short-term period. The implications of the low ROIs for some packages are discussed in Box 5.

Box 5. Economic value of mental health care beyond productivity gains

The economic analysis has focused on quantifying the productivity gains made due to reductions in absenteeism, presenteeism and premature mortality. The evaluation of economic value in this analysis is therefore strongly directed to quantifying changes in GDP and/or job earnings as a result of increasing coverage of mental health care. Numerous other benefits can result from increasing investment in the provision of mental health care, beyond increasing GDP or job earnings. This is a particularly important consideration when evaluating the economic value of mental health intervention packages with a low ROI (e.g. for psychosis, bipolar disorder and the SEL interventions). For example, increased investment in the provision of care of people with psychosis or bipolar disorder may be required to achieve ethical objectives such as protection of human rights, meeting immediate health needs according to the rule of rescue and improving social cohesion by compassionate care of the most vulnerable members of society. The SEL interventions may increase productivity in the future, after students have graduated from secondary school, which were not quantified in the present study. Improvement of mental health literacy among young people in a society can encourage de-stigmatizing attitudes and behaviour towards people with mental health conditions and encourage others to seek appropriate mental health care at an early stage.

It should also be noted that mental health intervention packages involving clinical treatment of mental health conditions assume that treatment occurs in hospital or clinical settings. As such, intervention costs are much higher than they would otherwise be if treatment was delivered in the community through primary health care. Higher treatment costs consequently lead to lower returns on investment for these intervention packages. A higher return on investment could be achieved if intervention packages were delivered in the community, rather than in hospitals or clinics.

Table 7 shows the impact of including the social value of health with productivity gains when calculating benefit–cost ratios. The social value of health is the intrinsic value of improving health as an end in itself, estimated to be one healthy life year gained multiplied by 0.5 times GDP per capita. The benefit–cost ratios for all the intervention packages increased substantially, the greatest gains being observed with the packages for depression and anxiety disorders and the SEL interventions. The highest benefit–cost ratios were found for epilepsy, alcohol use disorders, depression and anxiety disorders. These interventions can result in an economic benefit of 8.7 (epilepsy), 3.2 (alcohol use disorders), 2.1 (depression) and 1.4 (anxiety disorders) JOD for every 1 JOD spent during 2023–2030 and 15.1 (epilepsy), 5.3 (alcohol use disorders), 4.6 (depression) and 3.6 (anxiety disorders) JOD of economic benefit for every 1 JOD spent during the long-term scaling-up period (2023–2040). Inclusion of the social value of health with productivity gains led to positive ROI ratios (> 1.0) for the universal school-based SEL interventions in both the short- and long-term scaling-up periods. Inclusion of the social value of health therefore strengthens the case for investing in interventions that include universal school-based SEL.

Table 7. Costs, benefits (productivity gains plus social value of health) and benefit–cost ratios for the scaling-up periods 2023–2030 and 2023–2040, by intervention package (2023 JOD, million)

Mental health intervention package[a]	Total costs[b]		Total productivity gains plus social value of health[b]		Benefit–cost ratio (productivity gains plus social value of health)		Return on investment ratio (productivity gains plus social value of health)	
	2023–2030	2023–2040	2023–2030	2023–2040	2023–2030	2023–2040	2023–2030	2023–2040
Anxiety disorders	44.3	124.3	63.2	447.9	1.4	3.6	0.4	2.6
Depression	64.9	176.5	136.5	812.1	2.1	4.6	1.1	3.6
Psychosis[c]	88.9	216.8	6.2	33.7	0.1	0.2	–0.9	–0.8
Bipolar disorder[c]	191.9	458.6	7.0	48.1	0.0	0.1	–1.0	–0.9
Epilepsy	4.5	10.8	38.9	162.9	8.7	15.1	7.7	14.1
Alcohol use disorder	3.7	10.8	11.7	57.2	3.2	5.3	2.2	4.3
Universal school-based SEL intervention[d]	9.1	21.1	14.8	52.6	1.6	2.5	0.6	1.5

[a] The packages of clinical interventions include several interventions (e.g. basic psychosocial support, psychological treatment and medications) delivered at primary and secondary levels of health care.
[b] Totals are presented as a net present values, discounted at a 3% annual rate.
[c] The ROI for the psychosis and bipolar disorder intervention packages was lower than those for other intervention packages, because the cost of treatment of these conditions is higher than the monetized health impacts. There may be strong non-economic reasons for choosing to invest in an intervention package with a low ROI (e.g. to protect human rights or respect the rule of rescue).
[d] These results exclude productivity gains among students due to methodological limitations for estimating future productivity gains among students with improved mental health.

The clinical intervention packages for alcohol use disorders and epilepsy showed the best value for money for maximizing productivity gains, as they have the highest ROIs in both scaling-up periods. The ROI for the SEL interventions, however, underestimates the potential economic gains due to adolescents with improved mental health. Methods for calculating the net present value of future gains in productivity or employment due to improved educational outcomes of adolescents after they reach adulthood have been developed only recently and are yet to be included into the economic model used to estimate ROIs. This methodological limitation restricted productivity gains to reductions in premature mortality in the short-term.

The ROIs for the intervention packages for psychosis and bipolar disorder were lower than those for other mental health interventions because the cost of treatment was higher than the monetized health impacts. Despite their low ROIs, these intervention packages are critical to ensure that Jordan has the services necessary to support its human rights objectives and universal access to person-centred health care. These conditions are often highly distressing and disruptive to both the individuals experiencing them and to their families and communities.

Please note that the non-inclusion of substance use disorders, due to the lack of interventions for substance use disorders in the OneHealth tool, represents a major limitation of the present study.


Which population groups (one per row) are more vulnerable to the onset of mental health conditions?
What are the underlying factors for this vulnerability?
MOVENPICK

Photo: © WHO


5
Conclusions and recommendations
for consideration

5.1 Recommendations for consideration

Mental health conditions take a significant toll on the economy and on social and sustainable development in Jordan every year. The investment case modelled an estimate of the total economic burden of mental health conditions and suicide in Jordan at 251.8 million JOD in 2023. The losses include 53.1 million JOD in direct Government expenditure and 198.7 million JOD in indirect productivity losses. The total is equivalent to 0.75% of Jordan's GDP.

As mental health conditions can occur throughout life and have a strong impact on productivity, they represent an impediment to the country's broader development priorities of strengthening and diversifying the economy to create more sustainable economic growth. Furthermore, the high prevalence of mental health conditions among young people in Jordan distracts from work to address youth unemployment and to provide education and training opportunities for the next generation.

While the results of the investment case confirm the large impact of mental health conditions on health and the economy in Jordan, they also show a viable path forward. Investment in a number of evidence-based interventions can significantly reduce the adverse consequences of mental health conditions and increase people's mental health and well-being, their life expectancy and quality of life, while decreasing national productivity losses. Thus, these investments could contribute to the overall socioeconomic development of the country, with positive effects across society, and accelerate economic growth and social development.

The institutional context analyses identified current developments, challenges and opportunities in the Jordanian mental health system. The economic analysis indicates a range of evidence-based care and prevention strategies that could be scaled up to move towards universal health coverage of people with mental health conditions. Jordan could take the following actions to translate the projected benefits of scaled-up mental health investment into policy and practice.

Strengthen implementation and adoption of existing practices and laws in Jordan's policy framework.

Based on the qualitative data collected during the three-day investment case mission to Amman, that saw the involvement of key stakeholders working in mental health at national level (for more details, please see paragraph 3.1 of the report), increasing policy implementation requires a multifaceted approach involving a variety of stakeholders. To achieve this, it is strongly recommended to improve communication and coordination among Government agencies responsible for policy implementation. Enhancing communication channels will ensure all stakeholders are aligned and working towards common goals, thereby reducing inefficiencies and overlap. In addition, investing in training and capacity building for Government employees is essential to ensure they have the necessary skills and knowledge to effectively implement policies.

Moreover, conducting public awareness campaigns is crucial for informing citizens about new policies and their benefits. These campaigns could leverage on several communication channels, such as social media, traditional media, community meetings, and educational programs, to reach diverse audiences. Tailoring the message to different demographic groups and using clear, accessible language will help ensure that information is understood by all citizens. Additionally, engaging with community leaders and local organizations, especially associations that support people living with mental health conditions, can help amplify the message, reduce stigma, and build trust within the community. Overall, a comprehensive approach that includes improved communication, investment in government employee training, especially in the primary health care setting, and public awareness campaigns will significantly enhance the effectiveness of policy implementation. By involving a variety of stakeholders and addressing the needs of both government employees and citizens, this strategy will lead to more successful and sustainable policy outcomes.

Establish and strengthen monitoring and surveillance to estimate the prevalence of mental health conditions, track patient outcomes and be aware of total expenditure on mental health.

As a potential limitation of the present report, it should be considered that limited data availability and accessibility (for example regarding coverage rates per condition, data on costs and primary health care) may have significantly impacted the results of the economic analyses presented in the previous chapter. Given such premise, it is necessary to foster greater collaboration between the Ministry of Health and the World Health Organization to improve the health information systems, especially monitoring and surveillance frameworks and infrastructure, which need strengthening for health data to be available and accessible through public disclosure. Introduction of electronic health records on a single e-health portal would facilitate the collection and tracking of health indicators, including those for mental health. The Ministry needs to work to better understand nongovernmental expenditure on mental health in the community to gain an overall picture of mental health spending in the country. A clearer understanding and transparency of total mental health expenditure and programme impacts would enrich dialogue between policymakers, service planners, service users, and providers.

Direct allocation of mental health budgets to primary health-care centres.

At present, the Ministry of Health allocates funding for mental health services to public mental health clinics and psychiatric departments in public hospitals at tertiary level. This not only prioritizes hospital care but also increases reliance on international donor funding for community mental health care services at primary care level. It is recommended to shift the allocation of MoH budget for mental health services from the tertiary to primary health-care level and reduce hospital care for patients.

Invest in evidence-based, cost-effective clinical and population-based mental health interventions.

Scaled-up interventions for epilepsy, alcohol use disorder and depression would provide the highest estimated benefit–cost ratios, because these conditions are relatively common and are inexpensive to treat. In particular, it would be cheaper to treat these conditions at primary health centres than in hospitals. This is expected to result in considerable gains in population health and work productivity, and to even further ROI. Some interventions may also have a greater impact than expected. For example, the ROI for the SEL interventions is an underestimate of the potential economic gains of adolescents with improved mental health. The investment case considers only direct impacts; however, the positive effects of the SEL interventions include better educational outcomes, higher productivity of students later in life and de-stigmatization in the next generation. The potential of school-based interventions to generate important health, productivity and social gains at relatively low cost represents an opportunity that Jordan should not miss. Also note that, due to data availability, the ROI analysis was based on hospital care costs. This suggests that transitioning treatment for depression and anxiety disorders from hospital settings to primary health care and community-based services could significantly improve the ROI, potentially resulting in positive outcomes. This provides a compelling rationale for investing more in Jordan's primary health care and community-based mental health services, rather than hospital-based services, in financial planning.

Increase awareness about mental health conditions in communities to reduce stigmatization and ensure that individuals who need help can access it without fear or discrimination.

It is strongly recommended to review and amend any legislation or policies that contribute to stigmatization of mental health conditions, including the law on criminalization of public suicide passed in May 2022. In addition, the Ministry of Health needs to provide more training for healthcare professions on mental health issues and on providing empathic, responsive care. People with lived experience should be included as useful cadres in the health and social support sectors of mental health. They should be encouraged to become peer support specialists to assist new service users receiving treatment, and to actively participate in community campaigns; providing opportunities to share experiences and for meaningful conversations about mental health. The Ministry of Health needs to work with community organizations, including associations representing people with lived experience of mental health conditions, religious institutions, and local leaders, to discuss mental health and to create safe spaces for dialogue. It is crucial to also support research on mental health in Jordan to better understand the prevalence of mental health conditions and the impact of stigmatization. Effective reduction of stigmatization and discrimination will require collaboration of all of society.

ESTIMATED HEALTH IMPACT

ALL INTERVENTION PACKAGES	2023-2030	2023-2040
LIVES SAVED	361	2529
HEALTHY LIFE-YEARS GAINED	45 471	313 138

PRODUCTIVITY GAINS AND SOCIAL VALUE OF HEALTH

MENTAL HEALTH PACKAGE	Total cost OVER 2023-2030 (JOD)	Total cost OVER 2023-2040 (JOD)	ROI FOR EVERY JOD INVESTED OVER 2023-2030	ROI FOR EVERY JOD INVESTED OVER 2023-2040
ANXIETY DISORDER	44.3 million	124.3 million	0.4	2.6
DEPRESSION	64.9 million	176.5 million	1.1	3.6
PSYCHOSIS	88.9 million	216.8 million	-0.9	-0.8
BIPOLAR DISORDER	191.9 million	458.6 million	-1.0	-0.9
EPILEPSY	4.5 million	10.8 million	7.7	14.1
ALCOHOL USE DISORDER	3.7 million	10.8 million	2.2	4.3
UNIVERSAL SCHOOL-BASED SEL INTERVENTIONS	9.1 million	21.1 million	0.6	1.5

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