




Mental Health and Prevention of Substance Use Programs in Iran: Component of the National Action Plan for Prevention and Control of Non-communicable Diseases

Ahmad Hajebi¹, Ali Asadi², Seyyed Ebrahim Ghoddousi², Tahereh Ziadlou², Maryam Mehrabi², Zahra Vaezi², Amirali Hajebi³, Maryam Abbasinejad^{2*} 

Received: 22 Sep 2021

Published: 24 Dec 2022

Abstract

Background: Mental disorders have a high prevalence and significant burden among all health conditions across the world and in Iran. Therefore, some targets in the field of mental health and substance and alcohol use prevention have been included in the National Action Plan for Prevention and Control of Non-communicable Diseases and Related Risk Factors.

Methods: Keeping in mind the key priorities, important strategies have been considered for attaining the main targets in this field. These strategies fall under four categories of governance, prevention and reduction of risk factors, health care, and surveillance, and monitoring and evaluation strategies.

Conclusion: The success of mental health and substance and alcohol use prevention programs in Iran can be partly related to the evidence-based approach adopted and also to the commitment of high-rank officials of the Ministry of Health and Medical Education to the principal strategy of increasing access to the general population to basic mental health services, among all other non-communicable diseases.

Keywords: Mental Health Services, Non-Communicable Disease, Risk Factors, Iran

Conflicts of Interest: None declared

Funding: None

***This work has been published under CC BY-NC-SA 1.0 license.**

Copyright© Iran University of Medical Sciences

Cite this article as: Hajebi A, Asadi A, Ghoddousi SE, Ziadlou T, Mehrabi M, Vaezi Z, Hajebi A, Abbasinejad M. Mental Health and Prevention of Substance Use Programs in Iran: Component of the National Action Plan for Prevention and Control of Non-communicable Diseases. *Med J Islam Repub Iran.* 2022 (24 Dec);36:171. <https://doi.org/10.47176/mjiri.36.171>

Introduction

Mental disorders have a high prevalence and significant burden among all health conditions. There is an estimated total of 792 million individuals (10.7%) suffering from mental disorders in the world (1). Mental and substance-related disorders contribute to 7% of disability-adjusted life years (DALY) and 19% of years lost with disability (YLD)

(2).

The results of the Iranian national burden of disease study published in 2014 by Forouzanfar et al. show that major depressive disorder accounts for 6.3% of DALY and ranks fourth after ischemic heart diseases (9.1%), low back pain (9%) and road accidents (7.3%) (3).

Corresponding author: Dr Maryam Abbasinejad, m-abbasinejad@health.gov.ir

¹ Research Center for Addiction and Risky Behaviors, Psychiatric Department, Iran University of Medical Sciences, Tehran, Iran

² Department for Mental Health and Substance Abuse, Ministry of Health and Medical Education, Tehran, Iran

³ Non-Communicable Diseases Research Center, Endocrinology and Metabolism Research Institute, Tehran University of Medical Sciences, Tehran, Iran

↑What is “already known” in this topic:

Mental disorders have a significant burden and also a bidirectional relationship with NCDs. The mental health program in Iran has been running as a component of the NCD program. Its prominent goal is to promote access to basic mental health services through the coverage of the PHC network.

→What this article adds:

Primary mental health services should be active and comprehensive to promote case-finding at the PHC level. Sufficient empowerment of service providers will lead to high-quality service delivery. Clear definition of referral pathways and feedback loops from the GPs to the specialized care level is considered a gap needed to be approached in the future.

The results of a review study on 174 mental health surveys of 63 countries show a significant prevalence of mental disorders. This study shows that an average of 17.6% of the adult population has experienced at least one episode of mental disorder in the past 12 months (4).

The Iranian mental health survey of 2011 on 7886 individuals ranging from 15 to 64 years old revealed that 23.6% of these individuals have suffered from at least one mental disorder in the past 12 months (5, 6).

According to the results of the 2011 Iranian mental health survey, the prevalence of substance-related disorders was 2.44% according to DSM-5 criteria (7). Results of a study showed that 5.7% of the Iranian population reported having used alcoholic beverages at least once in their lifetime (8). The Iranian Drug Control Headquarters of the Islamic Republic of Iran reported 2 million and 808 thousand substance users in the population of Iran in 2017 (9).

Studies have emphasized the bidirectional relationship between non-communicable and mental disorders (10, 11). Mental disorders increase the risk of communicable and non-communicable diseases and lead to more accidental or intentional trauma (12-18). In addition, other diseases may lead to mental disorders and this comorbidity can lead to a poor prognosis (19-22). Mental disorders such as major depressive disorder may be significantly disabling and patients might not receive sufficient health care. Studies show that approximately 60% of those diagnosed with a mental disorder have not received any health care from a general practitioner or a mental health specialist (23, 24).

The 2019 national health survey of the United States showed that among 51.5 million individuals diagnosed with a mental disorder, 23 million (44.8%) had received mental health services in the past year (25).

One study performed among 2316 patients attending 86 general practitioners in Belgium showed that a mental disorder was only diagnosed for 5.4% of them initially, but further assessment showed that 42.5% of these individuals had a mental health problem at the time of the study (26).

In Iran, 65.3% of individuals diagnosed with a mental disorder in the past 12 months had not received any treatment. Only 34.7% of individuals with mental disorders had used mental health services in the past 12 months, and 54.7% of them (those who received services) had received minimally adequate treatment (5).

Regarding the considerable prevalence and burden of mental and substance use disorders across the world and Iran and their strong relationship with non-communicable disorders, there have been major global and national political responses taken to approach this issue. One of the most important national responses in this field is the inclusion of mental health and substance use prevention targets in the National Action Plan for Prevention and Control of Non-communicable Diseases and Related Risk Factors.

Political Response

Global commitment

The declaration of Alma-Ata in 1978 is considered a milestone in the field of public health. In this declaration, establishing a public healthcare system for providing healthcare has been introduced as the key to reach "health

for all," and the urgency for all governments to take action for the promotion of health across the community is underscored (27).

Regarding the increasing rate of prevalence and burden of mental disorders, the World Health Organization (WHO) chose the theme of World Health Day 2001 related to the prevention of discrimination against people with mental disorders and published that year's annual report with the slogan of "Mental Health, New Understanding, New Hope" (28).

In 2008, the global strategy for the prevention and control of non-communicable disease (NCD) was approved by the world health general assembly. This program focused on cardiovascular disease, diabetes mellitus, respiratory disease and cancer and mental disorders were not included in its scope (29).

In 2013, the WHO decided to respond actively to the increasing challenges of countries towards providing for the needs of people with mental disorders and developed and published the "Mental Health Action Plan" (2013-2020) (30). The four main objectives of this plan are enhancing the role of governments in moving forward the mental health targets, providing comprehensive and integrated mental health services for all, improving primary prevention programs in the field of mental health, and strengthening information systems and research in the field of mental health (31).

In 2016, the Special Session of the United Nations General Assembly (UNGASS) was held to consider the global response to the world drug problem. In this meeting, all international organizations were invited to contribute to this issue. The cooperation of the WHO with the International Narcotics Control Board (INCB) was sought to ensure access to narcotic drugs for medical conditions while preventing illicit use and enhancing promotive programs to reduce the demand for substances. WHO published an action plan in response to the need for technical support from countries on this issue (32, 33).

The global response to the alcohol problem dates back forty years ago. In 1979, WHO developed a program to respond to the world alcohol problem and established a routine database system in 1997. WHO published its first report on the world alcohol problem in 1999, and in the year 2000, it insisted that alcohol is one of the five risk factors for disease in the world. The world health general assembly published an action plan on the alcohol problem in 2005 and a health program was released in this regard in 2010 (34, 35).

National commitment

Parallel with the global general health policies, the Islamic Republic of Iran has put many steps forward to develop and expand public health care services for increasing access and coverage for the general population, maintaining and promoting mental health, service provision for mental disorders, and management of substance use disorders. The first step in this regard was the integration of mental health into primary health care in the second half of the 1980s, which has been shown to have many health benefits especially in rural areas (36, 37).

The Fifth Economic, Social, and Cultural Development Plan of the Islamic Republic of Iran was published in 2011. In this plan, special attention was given to health approaches and the promotion of mental health indicators and the battle against substance use (38).

The National Comprehensive Mental Health plan was developed and signed by the minister of health and medical education in 2012 and was approved in the secretariat of the High Council of Health and Food Security in 2018 (39, 40).

The importance of the promotion of mental health has also been mentioned in the general health policies signed by the supreme leader of the Islamic Republic of Iran in 2014 (41).

The Health Transformation Plan was signed by the president in 2014, and mental health and substance use prevention was included among its targets (42).

In 2015, the National Committee for Prevention and Control of Non-communicable disease developed the National Action Plan for Prevention and Control of Non-communicable Disease in the Islamic Republic of Iran. An innovative aspect of this action plan was the inclusion of mental health and substance use prevention targets among all other targets (43).

In the past decade, there have been many governmental policies considering the issue of substance use, and many activities are performed in this field. The Iran Drug Control Headquarters is the main coordinator of substance use prevention programs. This headquarters signed the "Comprehensive plan for primary prevention in substance use" in 2010 to enhance multi-sectoral approaches and interventions for the prevention of substance use. In 2013, the "Comprehensive Plan for Treatment and Social Supports in substance use" was also drafted and developed (44).

In 2011, the national action plan for prevention, treatment, harm reduction, and rehabilitation for alcohol consumption was signed based on the Iranian Islamic model. This document was also approved by the national committee for fighting against alcoholic beverages in the Ministry of Interior (45).

National Targets and Key Priorities

The main targets in the field of mental health and prevention of substance and alcohol use included in the National Action Plan for Prevention and Control of Non-communicable Disease in the Islamic Republic of Iran are to relatively increase the access to mental health services by 20%, and to reduce the mortality due to substance use and alcohol consumption by 10% (43).

One of the key priorities set in the pathway to reaching the main targets in the field of mental health and prevention of substance and alcohol use is the development and expansion of mental health services with a focus on primary prevention and promotion programs. Capacity building among health staff in the primary healthcare system to timely detect problems and treat disorders and effectively refer cases to specialized services is of utmost importance. In addition, increasing the access and coverage of mental health and prevention of substance and alcohol use services in the suburban marginal zones and providing services for the groups with social risk factors and other vulnerable groups are the

main priorities. Increasing the mental health literacy of the general population is also considered a key priority (42).

Multi-sectoral approach and structure

High-level policy documents obligate multisectoral collaborations so much so that the different governmental sectors have to move forward according to their contents and perform their share of activities in the field of health. The significance of the Comprehensive Mental Health Action Plan in 2012 by the minister of health was an important step in enhancing multisectoral collaboration in mental health. This program was established in the medical universities in 2013 and was performed with the help of other governmental sectors at the national level. In 2018, this program was approved in the main commission of the secretariat of the Higher Council of Health and Food Security (46).

To reach the main targets of the health system in the field of substance use prevention and treatment, multiple governmental sectors need to collaborate and the main coordinator in this field is the Drug Control Headquarters of the Islamic Republic of Iran. The Ministry of Health is a member of the secretariat of this headquarters and follows its programs in the sub-committees of reducing demand, developing community involvement, fighting against supply, research and education, provincial committees and the parliament committee.

Move to Action Responsibilities

Assessments done after the integration of mental health services into the primary healthcare system showed that this program was successful in rural areas but had problems such as poor access to services in urban areas, and this was indeed a great challenge (47).

There have been many rationales to explain the lack of success of the mental health integration program in urban areas. One of these rationales is the changing pattern of population. Official data from the national population and housing census show that the urban population has risen from 33% in 1960 to above 74% in 2016. This has led to the movement of the rural population to urban areas, the development of small cities and the formation of marginal urban areas without proper health and treatment infrastructure (48, 49). The other rationale is the changing pattern of diseases in the world and Iran. Throughout the past three decades, there has been a general shift from infectious diseases to chronic non-communicable diseases such as cardiovascular disease, hypertension, diabetes, cancer, psychiatric and substance use disorders and road accidents (50).

In response to these changes, the Ministry of Health and Medical Education started to enhance physical infrastructures for providing mental health and substance prevention services in urban and suburban areas. Another important step in this regard was the hiring and placing of mental health workers in the primary healthcare system for providing mental health services alongside general practitioners and community health workers. Empowering human resources, revision of educational modules, and development of service packages took place. After these infrastructures

were established, the service processes were also revised and screening for mental health problems became systematized. Another novel approach adopted was the integration of screening for substance use into primary healthcare services. Brief intervention and cognitive behavioral interventions for substance and alcohol use disorders and referral to specialized services are all a component of the primary healthcare system now (51).

Main Strategies and activities

Keeping in mind the key priorities, some important strategies are considered for reaching the main targets in the field of mental health and substance use. These strategies fall under four categories of governance, prevention and reduction of risk factors, health care, and surveillance, monitoring, and evaluation strategies (40).

Governance: Capacity building at the national level based on governmental health policies has always been one of the main strategies in the path towards reaching our targets. Advocacy at the level of the “High Council for Health and Food Security” and strengthening the provincial and district authorities of this council are also among the strategies in this regard. Parallel to advocacy at higher levels, enhancing the official structure of the Department for Mental Health and Substance Use in the Ministry of Health at national and provincial levels has also been followed. One of the health system’s main problems is access to full insurance coverage for mental health and substance use treatment services. Therefore efforts to promote insurance coverage of these services are one of the main strategies to overcome this obstacle. Involvement of the private sector and non-governmental organizations in the field of mental health, social health and substance use prevention and treatment along with enhancing multi-sectoral collaborations, is also an important strategy.

Prevention and reduction of risk factors: Increasing the knowledge, changing the attitudes and empowerment of the general population in the field of mental health and substance use prevention for enhancing the detection and management of risk factors for mental disorders in vulnerable groups are the main strategies in the field of prevention and reduction of risk factors of mental and substance use disorders. The development of alternative activities for substance use in high-risk groups, enhancing social support services for vulnerable groups, and the expansion of community-based services in neighborhoods, schools, universities and workplaces are also among strategies for the prevention of substance use disorders.

Health care: Expansion of physical infrastructures of the health system, focusing on urban and suburban marginal areas for increasing access and coverage of services, and enhancing the human resources for providing mental health and substance use prevention services along with promoting specialized services in the field of mental health and substance use are main strategies in the field of health care. Attention is also given to the organization and empowerment of health volunteers in this field. Advocacy for increasing the share of mental health and substance use in the national budgets is also an important strategy from years ago until now.

Surveillance, monitoring, and evaluation: Designing and planning for national surveys to monitor trends of mental disorders and national research to determine service utilization are always on top of our needs in the field of monitoring and evaluation. Enhancing the routine information system for common mental disorders and the self-harm and suicide registry system are two main strategies in this regard. Enhancing continuous monitoring systems for the integrated programs, periodic evaluation of the mental health and substance use programs, and perhaps the establishment of a surveillance system for substance use (focusing on new psychoactive substances) are also important.

Implemented programs

Primary Prevention programs for mental health and substance use prevention: In these programs, the main strategy is strengthening protective factors and reducing risk factors for mental disorders and substance use. Life skills training for adults and children and parenting skills training for parents performed by mental health workers in the format of group sessions in public health centers is one of these programs. Study results show that increasing the perceived risk of substance use and focusing on its adverse effects is one of the main approaches in substance use preventive interventions. Self-care programs are also provided by health volunteers to increase the mental health literacy of the general population and change their attitudes toward mental health (52).

Diagnosis and treatment of common mental disorders: In this program, individuals who attend health houses in rural areas and health posts in urban areas are screened for mental health problems and suicidal ideas by the community health care workers and if needed, are referred to the trained general practitioners in rural and urban health centers. In this program, there is a bidirectional interaction between the general practitioner and the mental health workers and patients are referred from the general practitioner to the mental health worker for non-pharmaceutical and psychological interventions. The general practitioner can also refer the patients, based on the type of disorder and severity and response to treatment to the psychiatrist or the hospital if needed (52).

Suicide Prevention Program: This program is based on the strategies of enhancing the validity of data, increasing knowledge among the general population and policy-makers and enhancing multi-sectoral collaboration, providing appropriate service and care for those at risk, maintaining the continuity of care, reducing access to lethal means of suicide and the management of suicide reporting in the media. This program has four main components of reporting and registering suicide data, detection, and management of those at risk, active follow-up of suicide attempters and postvention for the survivors of people who have died from suicide (52).

Psychosocial Support in Disasters and Emergencies: Psychosocial support in disasters program are activities done before, in the midst of and after disasters to reduce the psychosocial consequences afterward and to empower the affected individuals through primary prevention, early detection and management by mental health professionals.

Mental health assessment in the time of the disaster, increasing awareness on mental health issues among the population affected, screening and detecting mental health problems, detecting individuals at risk for mental disorders, and performing psychological intervention sessions for those with acute stress symptoms are the main components of this program (52).

Harm Reduction in substance use: The Ministry of Health and Medical Education has established drop-in centers for harm reduction with the collaboration of the Iranian drug control headquarters aiming to reduce the health, social, and economic consequences of substance use. The activities performed during the harm reduction program include interventions for reducing harm in intravenous substance users and are not necessarily accompanied by substance abstinence. One of the most common and serious complications of intravenous drug use is the transmission of HIV and viral hepatitis. The performance of this program has led to a significant reduction in virus transmission. To increase the comprehensiveness of harm reduction services, low-threshold methadone treatment is also added to the service in these centers (52).

Discussion

Opportunities and challenges

One of the most valuable opportunities in the field of implementation of mental health programs in Iran was the establishment of the Higher Council of Health and Food Security and the specialized working groups under its supervision which started at the time of the implementation of the Fourth National Development Plan in 2006. In this council, there are representatives of all governmental sectors that are somehow related to the issues of health (40). Other than that, the health policies signed by the Supreme Leader of the Islamic Republic of Iran in 2014 (41) and the health-related items in the fifth and sixth national development plans (38) are among the main opportunities in the field of implementation of mental health programs in Iran. Other opportunities include the health-exclusive media, non-governmental organizations, and active scientific associations in the field of mental health. Many international declarations in the field of mental health and the Mental Health Action Plan (2013-2020) (30) published by the WHO have also been valuable opportunities in this regard.

It is worth mentioning that although improvement has been seen due to the consideration of mental health by governmental officials, mental health is still not considered a major priority among officials outside the ministry of health. The perceived social stigma around mental disorders in the general population and among some officials, lack of mental health literacy and existence of superstitious beliefs are also among the main obstacles to the expansion of mental health programs. Although the private sector is increasingly getting involved in the field of mental health, there is still not enough dedication among them to investing in this field. The private insurance companies still do not cover a huge part of the expenses related to inpatient and outpatient mental health services, and this is an important problem in this field.

Plan

Moving towards needs-led services is indeed one of the main targets in the expansion and development of mental health services in the future. Expansion of service centers and increase in the number of service providers for each catchment area, improving access of the general population, especially regarding the primary prevention programs, and also increasing the variety and quality of services alongside the usage of new training methods for capacity building are also among the most important future targets in this field. A 50% relative increase in the access of the general population to mental health and substance use prevention services is listed among the main targets of the National Action Plan for Prevention and Control of Non-communicable Disease and Related Risk Factors.

Lessons learned

Throughout the implementation of the mental health programs and the expansion of services, we have actually been learning a lot. We have learned that our services should be active rather than passive and comprehensive in nature, and periodic local announcements should be given to the general population to enhance case-finding in the screening process. Gradually, we have come to this solution that it is more cost-effective if the majority of services be provided at the primary level of care and consequently, service providers at this level should be trained and retrained and empowered enough to provide high-quality care. These services ought to be of above-standard quality. One example of the need for standard qualification of services is the success of the national vaccination program of the primary healthcare system, which has proven to maintain its quality and therefore, the majority of people prefer to use primary care for their children vaccination than to go receive services in the private sector. One other very critical issue that we have learned a lot from was the fact that referral pathways should be clearly defined and feedback should be given from the specialized services to the primary care level to ensure the quality of care and decrease the cases missed to follow-up. At the primary care level, the family physicians should be empowered so that the health and medical services and status of the majority of people residing in each catchment area be under their supervision. This adds up to the quality of care and can ensure a working feedback loop.

Conclusion

The mental health programs of the primary healthcare system have been going on as a major national governmentally-led act and as a component of the National Action Plan for Prevention and Control of Non-communicable Diseases and Related Risk Factors. Its prominent goal was increasing and promoting access to basic mental health services parallel to other fields of health through the coverage of the public healthcare network in urban and especially marginal suburban areas. The success of these programs can be partly related to the evidence-based approach adopted, focusing on the increasing burden of mental illness and substance use in Iran, and also to the true commitment of high-rank MOH officials

to the principal strategy of increasing access to the general population to basic health and mental health services. In the future, we must move towards needs-led services and further qualitative and quantitative development of them.

Acknowledgments

The authors of this manuscript would like to acknowledge the contributions of the Deputy for Health of the MOH and the staff members of this deputy office who have played an important role in the progress of these programs and also the directors of the offices of mental health, social health and substance use prevention and also the focal points of the mental health programs of the universities for their contribution to these programs.

Author Contribution Details

AH was the director of the study, developed the main theoretical framework of the research, and co-wrote the manuscript. MA wrote the manuscript and acted as the corresponding author. SEG and AA were in charge of planning and supervising the work. TZ and MM provided the initial structuring of the information gathered. ZV and AAH finalized the results according to the study framework. All authors discussed the results and commented on the manuscript. AAH wrote the final manuscript after input from all authors.

Conflict of Interests

The authors declare that they have no competing interests.

References

1. Hannah Ritchie and Max Roser (2018) - "Mental Health". Published online at OurWorldInData.org. Available from: <https://ourworldindata.org/mental-health>. [accessed 01 March 2021].
2. Rehm J, Shield KD. Global Burden of Disease and the Impact of Mental and Addictive Disorders. *Curr Psychiatry Rep* 21, 10 (2019). Available from: <https://doi.org/10.1007/s11920-019-0997-0>. [accessed 01 March 2021]
3. Forouzanfar MH, Sepanlou SG, Shahrzaz S, Dicker D, Naghavi P, Pourmalek F, et al. Evaluating causes of death and morbidity in Iran, global burden of diseases, injuries, and risk factors study 2010. *Arch Iran Med*. 2014 May;17(5):304-20.
4. Steel Z, Marnane C, Iranpour C, Chey T, Jackson JW, Patel V, et al. The global prevalence of common mental disorders: a systematic review and meta-analysis 1980-2013. *Int J Epidemiol*. 2014;43(2):476-493.
5. Iranian Mental Health Survey, 2011, Ministry of Health and Medical Education, Islamic Republic of Iran.
6. Sharifi V, Amin-Esmaeili M, Hajebi A, Motevalian A, Radgoodarzi R, Hefazi M, et al. Twelve-month prevalence and correlates of psychiatric disorders in Iran: the Iranian Mental Health Survey, 2011. *Arch Iran Med*. 2015 Feb;18(2):76-84.
7. Amin-Esmaeili M, Rahimi-Movaghar A, Sharifi V, Hajebi A, Radgoodarzi R, Mojtabei R, et al. Epidemiology of illicit drug use disorders in Iran: prevalence, correlates, comorbidity and service utilization results from the Iranian Mental Health Survey. *Addiction*. 2016 Oct;111(10):1836-47.
8. Amin-Esmaeili M, Rahimi-Movaghar A, Sharifi V, Hajebi A, Mojtabei R, Radgoodarzi R, et al. Alcohol use disorders in Iran: Prevalence, symptoms, correlates, and comorbidity. *Drug Alcohol Depend*. 2017 Jul 1; 176:48-54.
9. Iran Drug Control Headquarters, Islamic Republic of Iran, 2017.
10. Prince M, Patel V, Saxena S, Maj M, Maselko J, Phillips MR, et al. No health without mental health. *Lancet*. 2007 Sep 8;370(9590):859-77.
11. Cole MG, Dendukuri N. Risk factors for depression among elderly community subjects: a systematic review and meta-analysis. *Am J Psychiatry*. 2003;160:1147-56.

12. Lawrence DM, Holman CD, Jablensky AV, Hobbs MS. Death rate from ischaemic heart disease in Western Australian psychiatric patients 1980-1998. *Br J Psychiatry*. 2003;182:31-36.
13. Larson SL, Owens PL, Ford DE, Eaton W. Depressive disorder, dysthymia, and risk of stroke: thirteen-year follow-up from the Baltimore epidemiologic catchment area study. *Stroke*. 2001;32:1979-83.
14. Jonas BS, Franks P, Ingram DD. Are symptoms of anxiety and depression risk factors for hypertension? Longitudinal evidence from the National Health and Nutrition Examination Survey I Epidemiologic Follow-up Study. *Arch Fam Med*. 1997;6:43-49.
15. Golden SH, Williams JE, Ford DE, Yeh HC, Paton Sanford C, Nieto FJ, et al. Depressive symptoms and the risk of type 2 diabetes: the Atherosclerosis Risk in Communities study. *Diabetes Care*. 2004;27:429-35.
16. Saz P, Dewey ME. Depression, depressive symptoms and mortality in persons aged 65 and over living in the community: a systematic review of the literature. *Int J Geriatr Psychiatry*. 2001;16:622-30.
17. Blazer DG, Hybels CF, Pieper CF. The association of depression and mortality in elderly persons: a case for multiple, independent pathways. *J Gerontol A Biol Sci Med Sci*. 2001;56:505-09.
18. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Med*. 2006;3:e442.
19. Strik JJ, Lousberg R, Cheriex EC, Honig A. One year cumulative incidence of depression following myocardial infarction and impact on cardiac outcome. *J Psychosom Res*. 2004;56:59-66.
20. Lin EH, Katon W, Von KM, Rutter C, Simon GE, Oliver M, et al. Relationship of depression and diabetes self-care, medication adherence, and preventive care. *Diabetes Care*. 2004;27:2154-60.
21. Lustman PJ, Anderson RJ, Freedland KE, de Groot M, Carney RM, Clouse RE. Depression and poor glycemic control: a meta-analytic review of the literature. *Diabetes Care*. 2000;23:934-42.
22. Cournos F, McKinnon K, Sullivan G. Schizophrenia and comorbid human immunodeficiency virus or hepatitis C virus. *J Clin Psychiatry*. 2005;66 (suppl 6):27-33.
23. Wang PS, Lane M, Olfson M, Pincus HA, Wells KB, Kessler RC. Twelve-month use of mental health services in the United States: results from the National Comorbidity Survey Replication. *Arch Gen Psychiatry*. 2005 Jun;62(6):629-40.
24. McAlpine DD, Mechanic D. Utilization of specialty mental health care among persons with severe mental illness: the roles of demographics, need, insurance, and risk. *Health Serv Res*. 2000;35(1 Pt 2):277-292.
25. Substance Abuse and Mental Health Services Administration. (2020). Key substance use and mental health indicators in the United States: Results from the 2019 National Survey on Drug Use and Health (HHS Publication No. PEP20-07-01-001). Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Available from <https://www.samhsa.gov/data/sites/default/files/reports/rpt29393/2019NSDUHFRRPDFWHTML/2019NSDUHFRR1PDFW090120.pdf>. [accessed 01 March 2021]
26. Anseau M, Dierick M, Buntinx F, Cnockaert P, De Smedt J, Van Den Haute M, et al. High prevalence of mental disorders in primary care. *J Affect Disord*. 2004 Jan;78(1):49-55.
27. Declaration of Alma-Ata; International Conference on Primary Health Care, Alma-Ata, USSR, 6-12, September 1978 Available from: https://www.who.int/publications/almaata_declaration_en.pdf. [accessed 01 March 2021].
28. The World health report: 2001: Mental health: new understanding, new hope. https://www.who.int/whr/2001/en/whr01_en.pdf. [accessed 01 March 2021].
29. 2008-2013 action plan for the global strategy for the prevention and control of noncommunicable diseases. Geneva: World Health Organization; 2009. Available from: <http://www.who.int/nmh/publications/9789241597418/en/>. [accessed 01 March 2021].
30. Saxena S, Funk MK, Chisholm D. Comprehensive mental health action plan 2013-2020. *East Mediterr Health J*. 2015 Sep 28;21(7):461-3.
31. Saxena S, Funk M, Chisholm D. World Health Assembly adopts Comprehensive Mental Health Action Plan 2013-2020. *Lancet*. 2013 Jun 8; 381(9882):1970-1.
32. WHO's role, mandate and activities to counter the world drug problem: A public health perspective. Available from: https://www.who.int/substance_abuse/publications/drug_role_mandate

- .pdf. [accessed 01 March 2021].
33. Expanding Public Health Approaches to the World Drug Problem. Geneva. World Health Organization 2016, Available at <https://www.who.int/life-course/news/events/ungass-2016/en/>. [accessed 01 March 2021].
 34. Monteiro MG. The road to a world health organization global strategy for reducing the harmful use of alcohol. *Alcohol Res Health*. 2011;34(2):257-260.
 35. Global strategy to reduce the harmful use of alcohol. Geneva. World Health Organization 2010, Available at https://www.who.int/substance_abuse/msbalcstrategy.pdf. [accessed 01 March 2021].
 36. Shahmohammadi D. Comprehensive Report on Mental Health Integration into PHC in Rural Areas of Shahrekord. Tehran: Center for Disease Control & Prevention of the Ministry of Health & Medical Education of the Islamic Republic of Iran, 1992. (Persian)
 37. Shahmohammadi D, Bagheri Yazdi SA, Palahang H. Nationwide Integration of Mental Health into Primary Health Care in Iran: Case Summary for WHO. Tehran: Majd Publications; 1994. (Persian)
 38. The Fifth Economic, Social, and Cultural Development Plan of the Islamic Republic of Iran (2011). Available at: <https://rc.majlis.ir/fa/law/show/790196>. [accessed 01 March 2021].
 39. Islamic Republic of Iran. The Transitional Roadmap for the Health System of the Islamic Republic of Iran, Tehran: Ministry of Health & Medical Education; 2012. (Persian)
 40. Islamic Republic of Iran. Department for Mental Health and Substance Abuse. The Comprehensive Mental Health Plan, Tehran: Ministry of Health & Medical Education; 2012. (Persian)
 41. Islamic Republic of Iran. The General Health Policies signed by the Supreme Leader of the Islamic Republic of Iran, Available at <https://www.leader.ir/fa/content/11651/www.leader.ir> [accessed 01 March 2021].
 42. Islamic Republic of Iran. The Health Transformation Plan of the Islamic Republic of Iran, Tehran: Ministry of Health & Medical Education; 2014. (Persian)
 43. Islamic Republic of Iran. Deputy for Health. The National Plan for Prevention and Control of Non-communicable disease in the Islamic Republic of Iran, Tehran: Ministry of Health & Medical Education; 2015.
 44. Available at http://news.dchq.ir/3/?page_id=65100. [accessed 01 March 2021].
 45. Islamic Republic of Iran. Deputy for Health. The National Action plan for prevention, treatment, harm reduction and rehabilitation for alcohol consumption, Tehran: Ministry of Health & Medical Education 2011. (Persian)
 46. Islamic Republic of Iran. Higher Council for Health and Food Security, Available at <https://rc.majlis.ir/fa/law/show/126527>. [accessed 01 March 2021].
 47. Islamic Republic of Iran. Department for Mental Health and Substance Abuse. Situational Analysis of Mental Health Services in Iran. Tehran: Ministry of Health & Medical Education; 2014. (Persian)
 48. Planning and Budget Organization. Analysis of Population and Housing Census Results. Deputy of Economic Affairs and Coordination, Tehran; 2017.(Persian)
 49. Mirabadi M, Besharatifar S, Karimi A. An Analysis on the spatial pattern, dimensions and related factors to urbanism growth of contemporary in Iran (Emphasizing on development and livelihood indexes). *Geogr Urban Plan Res*. 2018;6(3):605-27.
 50. Danaei G, Farzadfar F, Kelishadi R, Rashidian A, Rouhani OM, Ahmadnia S, et al. Iran in transition. *Lancet*. 2019 May 11;393(10184):1984-2005.
 51. Hajebi A, Sharifi V, Abbasinejad M, Asadi A, Jafari N, Ziadlou T, et al. Integrating Mental Health Services into the Primary Health care System: The Need for Reform in Iran. *Iran J Psychiatry*. 2021;16(3):320-328.
 52. Islamic Republic of Iran. Department for Mental Health and Substance Abuse. Annual Operational Plan. Ministry of Health and Medical Education. Tehran. 2021.