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FACTORS INFLUENCING THE INCREASE IN INCIDENCE OF SUICIDE AND SUBSTANCE ABUSE IN CENTRAL EASTERN EUROPE

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Abstract
What caused the incidence of suicide and substance abuse to increase in Central and Eastern Europe after the Velvet Revolution? This paper examines the history, public health status, and mental health status of the Czech Republic, Slovak Republic, and Hungary in efforts to identify key factors in the surge of suicide rates and substance abuse since the Velvet Revolution. Critical success factors and best practices are discussed in hopes of combating the mental health crisis facing the world. Solutions are presented as recommendations to improve the health status of Central and Eastern Europe.

Key words: *mental health; health reform; suicide; substance abuse; Central and Eastern Europe*

REVIEW

INTRODUCTION

The fall of Communism in post-war Czechoslovakia was intended to be a monumental triumph for Democracy, inciting a more sophisticated lifestyle for Central Europeans. However, since the late 1980s, the incidence of crime, suicide, and substance abuse in the Czech Republic, Slovak Republic, and Hungary increased dramatically. In fact, Hungary is the second leading nation in suicide incidence in the European Union, second only to Lithuania (OECD 2010i). This increase in suicide rates and substance abuse could prove detrimental to the economic stability of the Central and Eastern Europe (CEE) countries.

Suicide is evidence not only of a breakdown in an individual's psyche, but also of a deterioration of the social context in which an individual lives. Because of this, suicide is often used as a proxy indicator of the mental health status of a population. Suicide is often the end-point for a number of different factors, including depression, substance or alcohol abuse, or other chronic mental illnesses. Mental illness has been noted as a significant percentage of a nation's gross domestic product (GDP), as health expenditures for mental health problems continues to exacerbate.

Although statistics pertaining to suicide rates and incidence of crime and substance abuse are plentiful, little research is available to address the question of why these social factors have increased after the Velvet Revolution. One possible explanation is the perceived life satisfaction of CEE residents. Other studies suggest that persistent poverty or other socioeconomic factors could prove an alarming link to the increase in adverse psychosocial behavior. Still other research argues rapid socioeconomic transition, increasing psychological and social insecurity, or the absence of a national suicide prevention strategy could be associating factors to the trend.

This paper seeks to examine historical trends in political regimes in Central Eastern Europe, discuss the current health status of these countries, including public health expenditures, identify key influencing factors in the increase of suicide rate and substance abuse, discuss the current mental health status of Central Eastern Europe, and suggest recommendations for improvement of health outcomes while addressing best practices.

History

Interwar Czechoslovakia: The First Republic

In 1918, Slovakia and the regions of Bohemia, Moravia, Silesia, and Carpathian Ruthenia formed a common state, renamed Czechoslovakia, which emerged following the First World War as a sovereign European state (Czech History 2012a). During the Interwar period, which is now labeled the First Republic, Czechoslovakia enjoyed a period of relative prosperity. Not only was there progress in the development of the country's economy and political system, but in culture and in educational opportunities as well. Yet the Great Depression caused a sharp economic downturn, followed by political disruption and insecurity in Europe. Thereafter, Czechoslovakia came under continuous pressure from the revisionist governments of Germany and Hungary. Eventually this led to the Munich Agreement of September 1938, which allowed Nazi Germany to partially dismember the country.

Communist regime

Soon after WWII, the power in the country went largely to the hands of the Communist Party, and the first wave of nationwide nationalization of the industry and other areas of the economy took place (Czech History 2012b). In 1948, second wave of nationalization took place in which privately owned companies became the property of the state. The 1960s were a time of greater political and cultural freedom, as changes were made in the Communist Party itself. During the spring of 1968, the Communist Party attempted to create a more humane version of socialism, "socialism with a human face", that would guarantee people's basic rights and reduce the amount of political persecution in the country (Czech History 2012b). This was later known as Prague Spring. The period from 1968 to the mid-1980s was the period of "normalization"; the purpose of which was to reinstate the original socialist practices, which existed before the Prague Spring reform. This period of normalization led to protests and underground radical groups.

Velvet revolution

The protests from students and other radical groups culminated in what is now known as the Velvet Revolution, a non-violent revolution in Czechoslovakia that took place from November 17 to December 29, 1989 (Radio Prague 1997b). Dominated by student and other popular demonstrations against the Communist Party of Czechoslovakia, it saw to the collapse of the party's control of the country and the subsequent conversion from Czech socialism to a parliamentary republic. The environment after the fall of Communism led to an almost immediate about-face in international relations for Czechoslovakia. The Slovak Republic and the Czech Republic went their separate ways after January 1993, in an event sometimes called the "Velvet Divorce" (Radio Prague 1997a). The countries now belong to the North Atlantic Treaty Organization (NATO), the European Union (EU), and the Organization for Economic Cooperation and Development (OECD) and have adopted the Euro as their official currency.

Health status of CEE countries

Life expectancy

Life expectancy continues to rise in the majority of EU countries (OECD 2010g), which reflects reductions in mortality rates in any age cohort. The increase in life expectancy can be attributed to a number of factors, including higher living standards, improved lifestyle, and better education, as well as improved access to quality healthcare services. Average life expectancy at birth for the years 2005–07 across the EU reached 74.3 years for men and 80.8 years for women (OECD 2010a). Hungary, the Czech Republic, and the Slovak Republic trail far below this average for both men and women. Hungary has the lowest life expectancy at 69.1 years for men and 77.6 years for women. The Slovak Republic is just ahead of Hungary in terms of life expectancy with an average of 70.4 years for men and 78.3 years for women. The Czech

Republic has the highest life expectancy of the three countries, and is the closest to the EU average, at 73.4 years for men and 79.8 years for women (OECD 2010a).

Higher national income, as measured by GDP per capita, is generally associated with higher life expectancy at birth (OECD 2010b). Both Hungary and the Slovak Republic find themselves under the normal curve for average life expectancy as associated with national income, while the Czech Republic is slightly higher than the normal curve. Similarly, higher health spending per capita is generally associated with longer life expectancy (OECD 2010c). The Slovak Republic and Hungary again tend to be on the lower end of the spectrum; because both countries have a lower-than-average life expectancy, the health expenditure per capita is lower. The Czech Republic is slightly higher than average for this association.

Suicide rate

Suicide is a significant cause of death in many EU countries, as there are approximately 123,000 deaths by suicide each year (WHO 2012a). Suicide rates were highest in Baltic and CEE countries, with Lithuania and Hungary leading the pack with approximately 30.7 and 21.5 suicides per 100,000 population, respectively (OECD 2010d, WHO 2012a). Men are nearly five times more likely to commit suicide than women, in all countries of the EU, but the gender gap is narrower for attempted suicides, reflecting the fact that women tend to use less fatal methods than men. The highest suicide rates are for the age cohorts 65+ (21.9 per 100,000 population) and 45–59 (21.5 per 100,000 population) (WHO 2012a). Though suicide rates for the elderly population have declined in recent years, there has been little progress observed for the younger generation.

Since the fall of Communist governments, many countries in Central and Eastern Europe have experienced major social, political, and economic upheaval. In Hungary since 1990, there have been significant increases in unemployment, poverty, alcohol misuse, and divorce (Almasi et al. 2009). High suicide rates may be attributed to these factors, as suicide is often linked to depression caused by adverse life events or alcohol abuse. Many countries are promoting mental health and developing national strategies for prevention, focusing on at-risk groups (Hawton and van Heeringen 2009).

Healthcare resources and services

Access to high-quality services depends on the size, skill mix, geographic distribution, and productivity of the health workforce. Physicians, in particular, are the cornerstones of health systems. Since 2000, the number of physicians per capita has increased in all European countries, except the Slovak Republic, which boasts only 300 physicians for every 100,000 residents (OECD 2010h, WHO 2012d). The Czech Republic and Hungary do not look any better, with the number of physicians per 100,000 population at 358 and 287 respectively. The slow or negative growth in the number of general practice physicians per capita raises concerns about access to primary care for certain population groups.

The number of available hospital beds provides an indication of the resources available for delivering services to inpatients in hospitals. Over the past fifteen years, the number of hospital beds per population has decreased in all European countries (OECD 2010f). Indeed, the number of hospital beds in Hungary decreased from approximately 850 per 100,000 population in 1995 to approximately 700 per 100,000 population in 2011 (WHO 2012c). The Czech and Slovak Republics had similar declines in the number of hospital beds over the last fifteen years. This deficit in crucial healthcare resources fosters trepidation about the future healthcare status of these CEE countries, as well as continued concern for their residents.

Health expenditures and financing

Globally, health expenditures continue to be a disquieting outgrowth of federal monies, as rising healthcare costs skyrocket past the GDP. Over the past ten years, per capita health spending is estimated to have increased by 4.6% annually on average across the EU countries (OECD 2010e). Health expenditure per capita for the Czech and Slovak Republics appears to have peaked around 2008 and plateaued thereafter (World Bank 2011a). In Hungary, although there was a similar peak in health expenditure per capita in 2008, it has been rapidly declining over the past four years.

In countries with low government spending on health, private out-of-pocket spending tends to dominate. While levels of government health spending per capita are closely associated with a country's level of income (WHO 2012b), government spending on health as a percentage of its GDP depends on two factors. The first is the ability of a government to mobilize public revenues. The second factor is the priority that government gives to the health sector through its resource allocation decisions, measured as the percentage of total government spending devoted to healthcare. According to estimates from the World Bank, Hungary's health expenditure as expressed in a percentage of the GDP is 7.3%, while the Czech and Slovak Republic have health expenditures of 7.9% and 8.8% of the GDP respectively (World Bank 2011b). These estimates are nearly half of the estimated health expenditure of the United States, at approximately 17.9% of the GDP.

Mental health status of CEE countries

Incidence/prevalence of substance abuse

In Slovakia, general population surveys have reported a continuous increase in lifetime prevalence of drug use among the general population in the period from 1994–2006 (EMCDDA 2012c). This was followed by stabilization and even a slight decrease in the most recent studies. Hungary and the Czech Republic showed similar results and identified cannabis and ecstasy as the most prevalent of the illicit drugs (EMCDDA 2012a, b). Surveys and clinical data concluded that the use of illegal drugs is spreading in the CEE. The social composition of drug users has changed, and new forms of drugs and uses have appeared, such as the use of heroin and methamphetamine.

Each of the three countries boasts a different attitude when it comes to regulation of illicit substances. For example, the Czech Republic decriminalized drug use, and residents of the Czech Republic face nothing worse than a fine if caught with an amount the law considers intended for personal use (The Economist 2010). In contrast, the Slovak Republic has a more skeptical approach when it comes to relaxing drug laws. Indeed, residents found in possession of even small amounts of marijuana can be sentenced to three years imprisonment. The legal regulation of access to drugs in Hungary changed in 1993: stricter sentences can be imposed on drug traffickers, while the possibility has been created for drug users to undertake therapy in place of punishment (Gerewich and Bácskai 1995).

Alarmingly, the Czech Republic has become the chief producer of methamphetamine in Europe. Of the 483 methamphetamine labs discovered in Europe in 2008, all but 26 of them were found in the Czech Republic, a country of 10.3 million people (Konviser and Bruce 2010). The second-place country, Germany, hosted eleven labs, while the Slovak Republic was third on the list with just four methamphetamine labs found in 2008.

Mental health treatment facilities

In CEE countries, mental health reform has embraced deinstitutionalization and a greater role for community mental health services (Hyun et al. 2008). Many countries are reducing the numbers of beds and are moving towards closing mental hospitals to replace such institutional forms of care with community-based mental health services. These community-based psychiatric inpatient units as well as psychiatric beds in district general hospitals are available in the Czech Republic, Slovak Republic, and Hungary. The Czech Republic hosts approximately 110 psychiatric beds per 100,000 population, while the Slovak Republic and Hungary have approximately 95 beds per 100,000 population.

In many EU countries, outpatient clinics are offered in a department of a mental hospital or district general hospital or sometimes in community settings (WHO 2008a). Depending on the stage of development of the mental health workforce, nurses, psychologists, social workers and occupational therapists support psychiatrists. Visits to these outpatient programs varied between the three CEE countries. Slovakia topped the list with nearly 30,000 visits per 100,000 population and Hungary boasted approximately 20,000 visits per 100,000 population, but the Czech Republic had less than 5,000 visits per 100,000 population. This may be due to their increased number of inpatient psychiatric beds or because Czech citizens are not seeking the mental health services they need.

Mental health legislation

Mental health policy and legislation are the foundation on which to develop action and services. Policies are necessary to define the values, direction, responsibilities, structure, functioning, and outcomes of services. According to WHO guidelines, mental health policies in CEE countries must address the organization of services, such as developing community-based services or implementing mental health services in primary care, mental health advocacy, equity of access to mental health services, funding, and quality assurance (WHO 2008b).

The health care system in Slovakia is based on universal coverage, compulsory health insurance, a basic benefit package, and a competitive insurance model with selective contracting and flexible pricing. Health care is provided to insured individuals for free. Health policy results from the interplay between the Ministry of Health, the health insurance companies, and the Hospital Consultants & Specialists Association (Szalay et al. 2011).

Public health programming

The Mental Health Declaration for Europe and Mental Health Action Plan for Europe identify promoting mental health, reducing stigma, discrimination and social exclusion, and preventing mental health problems as priorities for the next decade (WHO 2008c). A lack of knowledge about mental disorders, their symptoms, and responsiveness to treatment often lead to prejudices towards people with mental illness and subsequently to stigmatization, social exclusion, and discrimination. Promoting mental health, reducing stigmatization and preventing mental disorders have been shown to be effective in reducing the burden of mental disorders. The Mental Health Declaration for Europe and Mental Health Action Plan for Europe identify several public health initiatives for Central European countries to reduce the burden of mental health disorders.

One way of reducing the mental health burden is to raise public awareness. Programs and activities range widely, including participation in large networks such as the European Alliance against Depression, national programs, local television and radio broadcasts, and awareness-raising events. A second way to reduce the mental health burden is by tackling the stigma and discrimination of the mental health population. Similar to raising public awareness of mental illness, there is a wide range of anti-stigma activities. Campaigns are carried out by organizations such as Zero Stigma, as well as partnerships within “Open the Doors”, the global anti-stigma program of the World Psychiatric Association in Slovakia. There are also local initiatives such as anti-stigma seminars for health professionals about the human rights situation in mental health services and the needs of the mental health population. A final area identified in the Mental Health Action Plan for Europe is mental health promotion. Programs to promote the mental health of children and adolescents are available in more than half the schools in more than 40% of EU countries (WHO 2008c). These activities range from workshops on conflict resolution and social and emotional learning to more general programs that address a variety of topics specific to the target audience.

In all three areas, raising public awareness, tackling stigma and discrimination, and mental health promotion, the majority of EU countries indicated that conducting public campaigns, working with the mass media, holding high-level expert meetings, and involving governments were the best ways to combat mental health disparities. These public health programs have increased and improved since 2005 and continue to gain support from all stakeholders.

Possible causes of adverse behaviors

Alcohol abuse

The use and abuse of alcohol is a major determinant of health in Central Eastern European countries. For example, excessive drinking in adolescence has both immediate and long-term health consequences. With the initial use of alcohol at a young age, adolescents are more likely to experiment with other drugs. Further, alcohol abuse itself is associated with a range of social, physical, and mental health problems, including depression, anxiety disorders, obesity, and accidental injury. Drunkenness at least twice in their lifetime is reported by more than 40% of 15-year-olds in the Czech Republic, Slovakia, and Hungary (OECD 2012b). Rates of drunkenness are also seen in the 13-year

old group, with one in ten children reporting drunkenness at least twice in their lifetime in both the Czech Republic and Slovakia.

Alcohol abuse is also a major problem for the adult population of Slovakia, Hungary, and the Czech Republic. High alcohol intake is associated with increased risk of stroke, heart and vascular diseases, as well as liver cirrhosis and certain cancers. Alcohol also contributes to death and disability through accidents and injuries, assault, violence, homicide, and suicide. Therefore, it is a major area of concern for the mental health population of CEE. However, alcohol use is one risk factor that is largely avoidable and preventable.

The EU region has the highest alcohol consumption in the world, which is measured by calculating annual sales totals. However, this does not take into account the large underground market for illegally produced alcohol in Hungary, Slovakia, and the Czech Republic. According to Radio Prague, alcohol is Slovakia's number one drug problem (Groch 2007). Not only is alcohol connected to a large number of serious crimes like murders and rapes, but it is also the trigger for the disintegration of many families in CEE countries. The increase in alcohol abuse in CEE countries is a major factor in the increase in substance abuse and suicide over the last few decades.

Mental illnesses and alcoholism feed each other and create a vicious cycle. People who suffer from mental illnesses turn to alcohol to escape the realities of everyday life, and alcoholism increases levels of anxiety and depression – two common mental illnesses that in turn lead to alcoholism. Alcoholism and other psychiatric disorders often occur at the same time. However, they are distinct disorders that must be treated as such in order to get positive outcomes for the patient. Persons with a mental disorder may also be less inhibited and more likely to show risk-taking behavior, such as buying and using illegal drugs or drinking to excess, that could quickly lead to alcohol or substance abuse.

Socioeconomic inequality

Socioeconomic inequality may also play a large role in the increases in rates of suicide and substance abuse in CEE countries. One measure of this inequality is in perceived life satisfaction. Slovakia's perceived life satisfaction score is 5.9, which is lower than the average score of 6.9 for all countries worldwide (OECD 2012a). The Czech Republic score is slightly higher than Slovakia at 6.3, while the score for Hungary is much lower, at 4.9, with 10 being the highest score possible.

Studies show higher rates of health and social problems, such as violence, substance abuse, and suicide, and lower rates of social goods, including life expectancy and education level, in countries and states with higher socioeconomic inequality, such as Czech Republic, Slovakia, and Hungary. The effect of socioeconomic inequality on health is profound. Poverty, which is a result of socioeconomic inequality in a society, is detrimental to the health of the population. The outcome indicators of health, such as mortality, morbidity and life expectancy, are all directly influenced by the standards of living of a given population. This is no less true in CEE countries, which have a long history of poverty during and following World War II and the Velvet Revolution. Poverty is a multidimensional phenomenon, encompassing the inability to satisfy basic needs, a lack of control over resources, lack of education, and poor health. Poverty can be intrinsically alienating and distressing, and of particular concern are the effects of poverty on the development and maintenance of emotional, behavioral and psychiatric problems.

Mental illnesses tend to occur at high rates in areas of low income or poverty. Further, poverty is considered both a determinant and a consequence of poor mental health. Here, access to mental health services is also an issue. In poorer areas, patients are less likely to have transportation to mental health services, or these services are unavailable. There is a strong association between suicide and attempted suicide, with socioeconomic deprivation accounting for much of this relationship (Murali and Oyebode 2004). Moreover, alcohol and substance abuse fit in with the general pattern, with high rates found among those in lower social classes. Among men and women, alcohol and substance abuse are both much higher among the unemployed group. Social class is a risk factor for alcohol-related mortality, which is also linked to social factors such as poverty, disadvantage, and social class.

Few national policies on prevention

According to the WHO Country Assessment for Slovakia, there are no overall national policies for preventing violence and injuries (WHO 2010). Both alcohol and socioeconomic inequalities have been identified as risk factors in national policies, however nothing is being done on a national level to prevent these risk factors. Two national policies that have promise for combating mental illness in Slovakia are the National Program for Protection of the Elderly and the National Program for Improvement of the Living Conditions for Disabled People in All Living Areas. However, each of these programs focuses on health promotion in only the elderly population of Slovakia. The main aim of these documents is to apply the UN principles for the elderly within the state policy at all levels and sectors. A second aim is to develop social policy in a wider context including social welfare and employment policy, healthcare, housing, and education. Health promotion activities that focus on the elderly are covered mainly by the following objectives: healthy lifestyle, healthcare, nutrition, and reduction of damage due to alcohol, drugs, and tobacco.

In the Czech Republic, the National Health Restoration and Promotion Program was adopted 1991. On the basis of this document, a national health program was adopted outlining the long-term strategic goals reflecting the objectives of the WHO (2000) adopted by EU member countries. Four main strategies for action were chosen to ensure that scientific, economic, social, and political sustainability drive the implementation of this national policy in EU countries. These strategies include:

- multi-sectoral strategies to tackle the determinants of health, taking into account physical, economic, social, cultural and gender perspectives, and ensuring the use of health impact assessment;
- health-outcome-driven programs and investments for health development and clinical care;
- integrated family- and community-oriented primary healthcare, supported by a flexible and responsive hospital system;
- a participatory health development process that involves relevant partners for health at home, school and work and at local community and country levels, and that promotes joint decision-making, implementation and accountability (WHO 2000).

Hungary also participates in the WHO Health for All program, and a national program called Towards a Healthier Nation was recently introduced. The main aims of this program are to decrease the incidence of avoidable death in particular disease areas, to establish screening programs for major diseases, to increase the capacity for epidemiology of non-communicable diseases, educational programs for health promotion, campaigns against tobacco smoking, and campaigns against venereal and other communicable diseases, especially AIDS. According to the UN Country Profile on Hungary, recent changes in the political and social structure of Hungarian society have not been favorable to improved healthcare. Regarding the capacities for implementation of the Towards a Healthier Nation program, the main problems encountered are related to the insufficient level of resources, such as a lack of experts, financial resources, and infrastructure.

Few psychiatric facilities and providers

As discussed earlier, there is a limited number of psychiatric facilities and mental health providers, which has a causal relationship to the increasing incidence in suicide rates and rates of substance abuse. Many CEE countries are reducing the numbers of beds and are moving towards closing mental hospitals to replace such institutional forms of care with community-based mental health services. These community-based psychiatric inpatient units as well as psychiatric beds in district general hospitals are available in the Czech Republic, Slovak Republic, and Hungary. The Czech Republic hosts approximately 110 psychiatric beds per 100,000 population, while the Slovak Republic and Hungary have approximately 95 beds per 100,000 population.

Since 2000, the number of physicians per capita has increased in all European countries, except the Slovak Republic, which boasts only 300 physicians for every 100,000 residents. The Czech Republic and Hungary do not look any better, with the number of physicians per 100,000 population at 358 and 287 respectively. The slow or negative growth

in the number of general practice physicians per capita raises concerns about access to primary care for certain population groups.

Stigma related to mental health disorders

Stigma is a complex construct with four social-cognitive processes (i.e., cues, stereotypes, prejudice, and discrimination) that may be directed by others toward those with mental illness, or may occur within an individual with mental illness (Cummings et al. 2013). Cues such as psychiatric symptoms, deficits in social skills, physical appearance, and labels, such as a diagnosis, may suggest a person has a mental illness. Such cues may trigger cognitive associations with negative stereotypes related to mental illness. Commonly held stereotypes against those with mental illness include incompetence and a perception that these individuals are more likely to engage in violence and other criminal behavior. Discrimination is the behavioral manifestation of prejudice that occurs when those with mental illness are treated differently or excluded.

There are a number of ways stigma manifests in the increase in incidence of rates of suicide and substance abuse, as well as in overall access to healthcare services. For example, stigma can lead to issues in the workforce, such as discrimination in the hiring process, which can translate into socioeconomic inequality for persons with mental illness. Stigma and discrimination and their influence on access to care may vary based on experience of mental illness or other socioeconomic factors. For example, psychotic disorders are highly stigmatizing, and people with psychosis are more likely to be perceived as violent and unpredictable relative to people with other mental health problems. This can lead to high levels of discrimination in healthcare settings. Moreover, substance abuse is consistently associated with high rates of public stigma and institutional discrimination that may discourage individuals with substance abuse problems from seeking healthcare (Henderson et al. 2013).

Stigma associated with mental disorders can also influence career choices, resulting in fewer people choosing to work in the mental health field, further compounding the issue of lack of psychiatric providers in CEE countries. Additional factors include poor professional education about depression; limited training in interpersonal skills; failure to consider psychotherapeutic approaches; and prescription of inadequate doses of antidepressant medication for inadequate durations. In another instance, people who have symptoms of mental illness are also members of the general population and share the same pool of information about psychiatric disorders, including negative stereotypes and beliefs. Common beliefs, such as the fact that psychiatric treatments are ineffective, others would react with avoidance, or that a person should solve their own problems are likely to reduce patients' likelihood of seeking help.

Solutions and recommendations

Much can be done to improve the mental health status of Hungary, Slovakia, and the Czech Republic. Solutions focusing on improving access to mental health services, mental health legislation reforms, and reducing stigma and discrimination of mental health patients can have a significant impact on health outcomes, reduce the number of suicides in CEE countries, and reduce the rates of substance abuse. Below, several alternative solutions are discussed:

Improved access to mental health care

The first recommended solution is to improve access to mental health services. As highlighted above, access to mental health services is compounded by a lack of treatment facilities available, as well as the stigma placed on the mental health population. Improving access to mental health services will improve health outcomes, reduce the number of patients in inpatient mental health facilities, and improve socioeconomic well-being throughout CEE countries. Currently, a trend developed in which mental health services are now being provided in community-based settings, rather than inpatient psychiatric hospitals. This is a crucial step in improving access to mental health services, as community-based care allows patients to connect with others with the same illness in the form of therapy groups, support groups, and group activity sessions. Further, many community-based initiatives involve a care manager, who follows up with patients' treatment and medication adherence.

In CEE countries, mental health reform has embraced deinstitutionalization and a greater role for community mental health services as part of the WHO Mental Health Action Plan for Europe. An increasing number of countries have closed many of their asylums and are now implementing effective community-based services. Special consideration should be given to the emotional, economic, and educational needs of families and friends, who are often responsible for intensive support and care and often require support themselves. Community-based initiatives offer a patient- and family-centric approach to treating mental illness. The Mental Health Action Plan for Europe defined several objectives in implementing community-based mental health initiatives (WHO 2005):

- Plan and implement specialty community-based services, accessible 24 hours a day, seven days a week, with multidisciplinary staff, to care for people with severe mental health problems.
- Provide crisis care, offering services where people live and work, preventing deterioration or hospital admission whenever possible, and only admitting people with very severe needs or those who are a risk to themselves or others.
- Guarantee access to necessary medicines for people with mental health problems at a cost that the health care system and the individual can afford, in order to achieve appropriate prescription and use of these medicines.
- Offer caregivers and families assessment of their emotional and economic needs, and involvement in care programs.
- Develop rehabilitation services that aim to optimize people's inclusion in society, while being sensitive to the impact of disabilities related to mental health problem.

Community-based initiatives have the potential to reduce the rates of suicide, as providers are more aware of signs and symptoms of suicidology, interventions and risk assessments are in place, and crisis intervention services are available 24 hours a day, seven days a week. Further, these community-based initiatives can reduce the rates of substance abuse in CEE countries by providing rehabilitation and treatment for illicit drug use, alcohol detoxification, and increased education and self-management strategies.

Destigmatization of mental illness

Destigmatization of mental illness is a second solution to the adverse behaviors experienced in CEE Countries. Three tenets of reducing stigma include increased awareness of mental illness, education of the public, and advocacy and support efforts.

The first tenet, increasing awareness of mental illness, is crucial to reducing stigma of mental illness worldwide. There are several approaches to increasing awareness of mental illness. One approach is to partner with hospitals throughout Hungary, Slovakia, and the Czech Republic in order to provide awareness events highlighting various mental illness topics and issues. One example of an awareness event is a Depression Awareness Fair. In this event, physicians and mental health experts from across CEE can present on mental health topics, hold open forum discussions, and speak directly with patients and their families. Further, the event can be a forum for depression risk assessments so people who feel they have symptoms of a mental illness may take the risk assessment and speak with a psychiatrist or other therapist. Risk assessments may be the first step in determining if a patient meets the criteria for treatment. The paradox is that many people who seek therapy or other mental health treatment do not really need it, while people who actually suffer from a mental illness do not seek treatment. The risk assessment will identify those who require further treatment and those who do not. Finally, the Depression Awareness Fair is a great way to get families involved with mental health treatment and education. Oftentimes, the family unit is the major support system for persons with depression and other mental illnesses. By providing awareness of mental illness, family members will feel more comfortable in providing support to their loved ones.

The second tenet is providing education to the public. One form of education could be during an awareness event, while another could be in better education for healthcare professionals. Many primary care physicians are not adept at identifying signs of mental illness and may overlook a patient's cry for

help or suicide attempt because they are not sure how to treat that. Education and teaching on mental health disorders, suicide, and substance abuse issues should be prevalent, not only in the medical school curriculum, but also available to nurses, teachers, members of the clergy, and other providers. This is essential, as signs of suicidology and substance abuse are easy to recognize once a person knows what to look for.

The final tenet is advocacy and support of mental illness. According to the WHO, "advocacy is an important means of raising awareness of mental health issues and ensuring that mental health is on the national agenda of governments" (WHO 2003). Advocacy can lead to improvements in policy, legislation, and service development. Moreover, mental health advocacy was developed to protect the human rights of individuals with mental illness and to reduce stigma and discrimination against this population. The emergence of mental health advocacy in countries throughout the world helps to change society's perceptions of mental illness. Patients are also more likely to seek treatment for their disorder. Ministries of Health in Slovakia, Czech Republic, and Hungary can each play a crucial role in the advocacy system. The ministries can develop various initiatives in respect of different target populations, and they can promote the education and teaching of mental health topics. The ministries can also support the advocacy initiatives and activities of policy-makers. The principal objective in relation to policy-makers is to ensure that mental health is given due attention on national policy agendas. This helps to enhance the development and implementation of mental health policy, legislation, and services in CEE countries. Ministers of finance are typically involved in decisions on the amount of funding to be invested in mental health. This group is crucial for policy implementation (WHO 2003).

Control price and availability of alcohol

A third recommended solution is to better control the price and availability of alcohol in CEE countries. Alcohol-related harm, including accidents and work-related injuries, represents an increasing CEE health problem. There is substantial evidence that significant health and economic benefits may be achieved by taking specific actions on alcohol. Legislation offers an area for improvement in this matter. For example, a new amendment to the law on protection from alcoholism is crucial so that CEE countries can better protect their youth from the effects of alcohol. As mentioned previously, there is a large population of youth, ages 13–15 who report drunkenness on more than one occasion. Amending the current legislature and adding a national policy on alcohol use targeted at youth is one step to controlling the availability of alcohol. Since alcohol is often linked to increases in substance abuse, and because substance abuse is also a growing problem for CEE countries, improving legislature can significantly combat these issues.

Another major improvement can be achieved by raising taxes on alcoholic beverages that would decrease the availability of alcohol for young people in CEE countries. To reduce the rate of underage drinking, which largely determines whether a person will continue this habit in adulthood, there are several actions that can be taken by governments in CEE countries. First, governments may differentiate prices on alcoholic and non-alcoholic beverages by instilling a tax on alcohol products based on alcoholic volume and percentage (i.e. higher prices for beverages with higher alcohol contents) and by reducing the prices of non-alcoholic beverages. Further, CEE governments may use tax revenues from alcoholic products to fund alcohol control activities, including health education, research into alcohol policy, and support to health services at both local and national levels. Finally, governments can control the availability of alcohol by restricting the number of stores where alcohol is sold under licensing laws, limiting the number of licenses, and restricting the hours of alcohol sale.

Finally, CEE countries must develop protections against those who illegally produce and distribute alcohol. The illegal production of alcohol and other illicit substances continues to become an issue for CEE countries. In fact, as mentioned previously, the majority of illegal methamphetamine labs are located in the Czech Republic. Moreover, there is a growing threat of "killer" alcohol (Boyd 2012) that has recently claimed the lives of many

Czech residents. The Czech government set up a temporary crisis management group over the rising number of fatalities caused by methanol poisoning from illegally produced alcohol. Not only is alcohol a gateway drug that could lead to further substance abuse, but this "killer" alcohol is a major health concern for residents of the Czech Republic and Slovakia. Governments should propose legislature to reduce the amount of alcohol being illegally produced. Further action could be to monitor the levels of methanol in alcoholic beverages prior to sale. These methods could greatly reduce the risk of illness and death from "killer" alcohol and other illegally produced substances.

Mental health legislation reforms

Mental health legislation has several opportunities for growth and reform, especially in respect to guidelines for reducing rates of suicide and substance abuse in CEE countries. As mentioned previously, access to care, alcohol taxation and sales, and education of health professionals are three areas that would greatly benefit from improvements in the legislature. However, improving mental health outcomes must be addressed from multiple angles and from multiple stakeholders. Two additional legislation reforms regarding mental health should look into mid-level physician extenders to provide necessary mental health treatments and the development of public health programs and campaigns.

Currently, physicians in CEE countries have the sole responsibility for writing prescriptions for pharmaceuticals. Due to the lack of qualified psychiatrists in these countries, this creates a devastating toll on the mental health population. Reforming mental health legislation to allow physician assistants (PAs) or certified registered nurse practitioners (CRNPs) to write and distribute prescriptions for pharmaceuticals will not only increase the number of mental health patients receiving pharmaceutical treatment, but it will also improve access to mental health services, as there will be a larger number of providers available to prescribe necessary medications. The use of CRNPs in mental health settings is widely accepted in the United States and other developed countries worldwide. CRNPs are also a more cost-effective solution to the major problem of the lack of mental health providers in CEE countries. Their salaries are lower than psychiatrists', and they typically have fewer years of formal education. Allowing CRNPs or PAs to write prescriptions could be a major improvement in the access to mental health services, the availability of mental health providers, and the availability of necessary pharmaceutical treatment of mental illness.

The second area of mental health reform lies in public health programming and campaigns throughout CEE countries. One such public health program should focus on prevention and treatment of substance abuse. As substance abuse is one of the largest problems facing the mental health community, programs should be set in place for the treatment of addictions. Treatments could include detoxification programs, group or individual therapy, family education, and prevention strategies. This program should also focus on marketing and advertising materials to discourage youth and other at-risk groups from engaging in the use of illicit substances. It is important to not only focus on preventing further substance abuse, but also to treat current substance abusers in a holistic environment. Many users of illicit substances have an underlying mental illness that has not been treated. Identifying the reasons why patients use these substances and identifying any symptoms of mental illness are two crucial steps in combating the increase in incidence of substance abuse in CEE countries.

A second public health program should involve education on suicide. There are many ways to identify suicidal individuals by their symptoms and behaviors. It is true that many people with suicidal ideation do not really wish to die, but are simply reaching out for help for an underlying mental health issue, similar to those who suffer from substance abuse. The public should be made aware that any discussion or attempt of suicide must be taken seriously. The individual at stake desperately needs treatment of a mental illness in order to prevent the suicidal act. The public health program here should involve a telephone hotline that individuals can call if they feel suicidal and are in need of treatment. Persons receiving these phone calls should direct the individual to a mental health facility or provider, or in extreme cases, can send a

mobile crisis unit to the individuals home. The mobile crisis team is another crucial aspect of a successful public health program. These crisis units are specifically trained to speak with individuals who threaten suicide and to prevent the act in the first place. The crisis team will then refer the individual for a psychiatric evaluation and treatment. Support groups for suicide survivors should also be put in place to reflect a community of caring. Members of these support groups often include family members or friends of individuals who have completed a suicide or persons who attempted suicide in the past. These groups can also utilize therapists or other mental health providers for group therapy sessions.

Public health programs such as the programs listed above have the distinct potential to reduce the incidence of both substance abuse and suicide rates in CEE countries, as well as to promote healthy lifestyles and prevent further adverse behaviors.

CONCLUSIONS

Improving mental health and reducing suicide and substance abuse rates require attention to the promotion and protection of mental health throughout life, particularly in socioeconomically disadvantaged groups. Well-designed health programs for living and working environments can help people gain a sense of coherence, build and maintain mutually supportive social relations, and cope with stressful situations and events. Suicide rates can be sharply reduced if health care providers are trained for the early detection of depression and other mental illness, if crisis teams and hotlines are available, and if appropriate treatment is provided. Substance abuse can be greatly reduced by continued improvements to legislature on alcohol taxation and sale, public health programs, and improved education to providers and the general public. In all, there mental health community can be greatly improved by improvements in legislation and access to services.

Managers of mental health facilities, mental health service providers, and government officials have much to learn in order to prevent further devastation from mental illness and to promote healthy lifestyles. This paper discussed several areas and aspects of public health that have influence on detrimental adverse behaviors. Identifying these behaviors early on is a crucial first step in the treatment of mental health. Further steps include education, advocacy, support, legislation reforms, and improved access to treatment. All stakeholders should be aware of the signs and symptoms of mental illness, and steps should be taken to reduce stigma and discrimination of this population. Herein lies the solution to the mental health crisis facing the global community today.

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