A blind spot on the global mental health map: a scoping review of 25 years' development of mental health care for people with severe mental illnesses in central and eastern Europe

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Just over 25 years have passed since the major sociopolitical changes in central and eastern Europe; our aim was to map and analyse the development of mental health-care practice for people with severe mental illnesses in this region since then. A scoping review was complemented by an expert survey in 24 countries. Mental health-care practice in the region differs greatly across as well as within individual countries. National policies often exist but reforms remain mostly in the realm of aspiration. Services are predominantly based in psychiatric hospitals. Decision making on resource allocation is not transparent, and full economic evaluations of complex interventions and rigorous epidemiological studies are lacking. Stigma seems to be higher than in other European countries, but consideration of human rights and user involvement are increasing. The region has seen respectable development, which happened because of grassroots initiatives supported by international organisations, rather than by systematic implementation of government policies.

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Introduction

2016 marked a quarter of a century since the dissolution of the Soviet Union, which was the symbolic end of communist rule in central and eastern Europe (CEE). For this Review, CEE is defined as the 23 countries included in the UN Eastern European Group[1] plus Kosovo, which contain approximately 342 million people.[2] For most of the 20th century, mental health systems in CEE developed under the influence of communist and socialist ideologies.

This ideological influence differed across the region, however. Whereas the countries of the former Soviet Union were fully dominated by the Moscow school of psychiatry and had restricted contact with the international community, the countries of southeast and central Europe were more open to the outside world, and in some of them there were even examples of community-based care models (eg, in former Yugoslavia).[3,4] Despite their heterogeneity, CEE mental health systems shared many similar characteristics. People with severe mental illnesses were almost exclusively treated in large psychiatric hospitals;[4] mental health care systems were organised and funded centrally by the government; many branches of psychiatry-related social science, such as social psychiatry, psychiatric epidemiology, service research, and mental health economics, were largely underdeveloped;[4] decision making in general was the subject of ideological rather than scientific scrutiny; and neither staff, patients, and their families, nor citizens were regarded as stakeholders.[5] The profound socioeconomic transformations that occurred in 1989–91 theoretically enabled individual countries to start addressing gaps in mental health care without the previous ideological constraints.

Since then, numerous political initiatives have emerged with the aim to improve care for people with mental illnesses. These initiatives have been largely in line with the principles enshrined by the Universal Declaration of Human Rights[6] and Alma Ata Declaration,[7] and included the UN Principles for the Protection of Persons with Mental Illness[8] and later the Convention on the Rights of Persons with Disabilities,[9] as well as documents by the European Regional Office of WHO, such as the Mental Health Declaration and the Mental Health Action Plan for Europe.[10,11]

However, unfavourable news about mental health care in CEE has continued to emerge. Mental health care reforms, so often announced in the region, remain largely unimplemented.[4,12] The burden of mental and substance use disorders in CEE is one of the greatest in the world,[13] the prevalence of post-traumatic stress disorder and other mental health problems seems to be considerably elevated in countries that have seen recent conflict,[14] suicide rates are medium to high,[15] and alcohol consumption is excessive.[16] Despite some success in deinstitutionalisation and changes in legislation,[17] there is evidence of excessively long or unacceptably short stays in hospital[18] and otherwise inadequate services,[19] as well as reports of the abuse of psychiatry[20] and human rights violations in some countries.[19,21–23] The allocation of financial resources for mental health care is far below the average of the European Union (EU)[24] and the vast majority of resources are spent on outdated institutional systems.[25] The lack of non-biological or non-clinical research in general has been widespread, with CEE countries having the lowest publication rate per person in Europe in both public mental health research[26] and stigma-related research.[27] However, the evidence is fragmented, and no systematic mapping of development of mental health practices for people with severe mental illnesses has been conducted in the region as a whole.

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We aimed to summarise and analyse evidence about the past 25 years of development and the current state of mental health care practice in the countries of CEE. We intend to help fill an important blind spot on the global mental health map and shed light on future priorities for the region.

Methods

We considered the countries of CEE in terms of four subregions: the eastern European countries of the former Soviet Union (Belarus, Russia, Ukraine, Armenia, Azerbaijan, Georgia); the Baltic countries of the former Soviet Union (Latvia, Lithuania, Estonia); the central European countries of the former eastern bloc (Czech Republic, Hungary, Poland, Slovakia); and the southeast European countries (Albania, Bulgaria, Romania, Moldova, Bosnia and Herzegovina, Croatia, Kosovo, Macedonia, Montenegro, Serbia, Slovenia).

We were interested in assessing developments in mental health practice in the CEE region during the past 25 years. This overarching aim was split into more focused objectives addressing each of the topics of interest. In view of the broad scope of this inquiry, we followed published guidance on scoping reviews.[28–31] This involved use of a broad search strategy to identify relevant studies; selection of studies according to inclusion and exclusion criteria; charting the data; collating, summarising, and reporting the results; and placing particular emphasis on consultations with relevant experts. We supplemented the review with a comprehensive survey of a purposive sample of these experts. This survey was an essential part of the review and therefore this information was integrated in the data-charting stage. In line with the aims of the review, we present results by theme to show mental health care practices across the region.

The focus of this review was on the past 25 years of development and current practice of mental health care for people with severe mental illnesses. Severe mental illness was defined as an ICD-10 diagnosis of an affective disorder or non-affective functional psychotic disorder (F20–F22, F24, F25, F28–F31, F32.3, and F33.3). This definition accords with standard definitions of severe mental illnesses, although studies often apply additional criteria of illness duration and disability.[32] Severe mental illnesses were selected for feasibility reasons and because of their high socioeconomic burden.[33] Articles on child and adolescent psychiatry, geriatric psychiatry, learning disability psychiatry, and addiction psychiatry were excluded; articles on forensic psychiatry were also excluded unless they addressed human rights violations of people with severe mental illnesses. We operationalised mental health care practice as a system of mental health services that are provided by specifically educated professionals and influenced by policy, resources, and legislation.

Policy decisions can be informed by data about the epidemiology of severe mental illnesses, economic evaluations, and service user and family involvement, or they can be uninformed. Violations of the human rights of service users, when occurring within health and community services, suggest failures in mental health care practices. High levels of public stigma indicate societal unwillingness to accept people with severe mental illnesses as members of the community, which is likely to influence policy, funding, recovery, help-seeking behaviour, service quality, and quality of life for people with these disorders.

We therefore included articles that focused on: mental health services (inpatient, outpatient, primary care, community and residential services for people with severe mental illnesses); epidemiological studies of population mental health; policy and legislation; involvement of user and family members in service delivery and planning; resource availability and allocation, and economic evaluations of complex interventions; quality and duration of training for mental health specialists (including the availability of education for mental health care development, such as health-service research, psychiatric epidemiology, mental health economics); and studies on mental health-related stigma among the general population and current or future health-care professionals. In all cases, we were interested in assessing both the current state of affairs and changes that have occurred since 1989–91, up to August, 2016.

Our main interest was in primary studies, including all qualitative and quantitative designs. However, we also considered opinion papers, editorials, and reports, because we expected to find a shortage of evidence. We excluded conference abstracts, and case studies of individual patients, programmes, or facilities, because we assumed that we could not reasonably generalise their messages. Research that was clinically, biologically, aetiologically, or psychometrically oriented was also excluded. We included economic evaluations of complex interventions (rather than pharmacoeconomics only) and cost-of-illness studies since they are important for informing decisions on resource allocation, and therefore are relevant to rational planning of mental health services. Studies that were concerned with specific events, such as the war in former Yugoslavia or the earthquake in Armenia, were considered only if they contributed to the understanding of mental health practice development. Detailed inclusion and exclusion criteria are presented in the appendix (pp 3–5).

To triangulate the findings from the literature review, and to address the anticipated lack of literature,[26,27] the review was complemented by an expert survey. Expert reports were collected by country collaborators (OA, IB, AC-P, AD, NF, AG, HH, AH, FNI, SSI, MJ, VJ, SK, NM, BNS, OP, DS, BIV, EV) who approached up to five experts in their countries; for the Czech Republic and Slovakia this process was done by PW. We were unable to find collaborators in Estonia, Moldova, or Serbia.

Experts were regarded as individuals involved in the organisation or provision of mental health care, or

affected by services, including members of local professional associations, members of local service user and family organisations, World Psychiatric Association representatives, and mental health-related WHO representatives. Country collaborators decided on the final list of experts on the basis of their understanding of the local situation. The expert survey attempted to maintain a balance between three factors: diversity of views, taking the opinions of key stakeholders into account, and feasibility of data collection. Reports were collected with a predeveloped Expert Report Form (appendix pp 6–7) and focused on the same topics as the literature review. Reports from experts have not been peer-reviewed and should be interpreted as qualitative data sources rather than established facts.

A data charting form was developed to classify the identified literature according to the above-mentioned topics, and by whether studies were published in an internationally recognised journal. Internationally recognised journals were operationalised as those that have received an ISI impact factor, although some of these journals are published in local languages, such as *Psychiatria Polska*. The following data were extracted into the form: full reference including abstract, thematic focus of the paper, and study location. Data extraction was conducted in the same way as reference screening—ie, data from studies by authors' names starting A–K were extracted by DK and TR, and from L–Z by PW and LK. The final chart (appendix pp 8–28) was then composed by PW. The same structure was used to chart data from the Expert Report Forms. The coding of expert reports was conducted independently by two researchers (DK, LK) who familiarised themselves with the reports, highlighted data relevant to each subtopic, and extracted information to create individual country summaries (appendix pp 29–64). When opinions differed among country experts, both perspectives were included in the respective country's profile.

We attempted to collect evidence for each country of the region and on each of the topics. Framework analysis[34] with Microsoft Excel (version 2013) was used to synthesise the results, including expert reports, to address each of the themes. For the literature, we used the saturation approach, starting with examining evidence that was published in internationally recognised journals. Saturation was reached when the following questions were answered for each country, with regard to both developments over the past 25 years and the current situation. Has the number of beds in psychiatric hospitals changed? Is the mental health care system still reliant on large psychiatric hospitals? Do plans for community care development exist, and to what extent have they been implemented? Do any examples of high-quality community services exist? Have there been changes in legislation about the rights and care of patients with severe mental illness? Do human rights violations still occur and what has been done to improve the situation? Have any studies of stigma been conducted and is stigma being reported as a considerable issue for mental health practice? Have any full economic evaluations of complex interventions been conducted? Have any population-based epidemiological studies been conducted?

Once each question had been answered for each country, abstracts for the remaining papers on this topic were checked for agreement with the answers generated so far. If the findings were consistent, the additional papers were not needed. Data from subtopic summaries based on expert reports were summarised within the overall description of the country, to create country profiles on the basis of both the literature and expert survey (appendix 29–64). For topics related to mental health resources, education of mental health professionals, human rights, and user involvement, country profiles relied on the expert reports as the primary data source because of a substantial literature gap on these topics (table). We then used narrative summary to provide an account of the evidence on development of mental health care practices in the region over the past 25 years.

At the last stage of the review, coauthors from each of the participating countries were asked to check the accuracy and currency of the information on their country, and assist with overall interpretation within the manuscript. Findings are reported in the context of the overarching aims of the study, including discussion of the implications for future research, practice, and policy. Because of the wide range of study designs included in the study, detailed quality assessment criteria could not be applied, which is standard in scoping reviews.[30]

Results and synthesis

Our search strategy resulted in a total of 24852 and 12785 references, before and after removing duplications, respectively. Inter-rater reliability was 97·4%, indicating a high level of agreement. We examined 464 full texts, and found eight articles that did not meet our inclusion criteria. We used 183 articles to compose country reports for each country in the region (figure, and appendix pp 29–64 for country reports).

The table gives a descriptive numerical summary of the studies from each country, showing the scope of the research found, for each topic. The equivalent table with full citations is presented in the appendix (pp 8–28). 458 articles met the inclusion criteria (table), most of which (236) fell into the category entitled "Services: structure, development and reforms". An additional 52 articles focused on policy or legislation, 24 on education or human resources, 21 on financial resources, 18 on human rights, and seven on user involvement. Our search strategy identified only 37 epidemiological articles reporting on the prevalence or incidence of severe mental illnesses in either the general or the treated population; 50 articles reporting levels of stigmatising attitudes and discrimination among the public and health-care

See Online for appendix

	Epidemiology	Services: structure, development, reforms	Services: economic evaluation	Financial resources	Policy and legislation	Human rights	User involvement	Education and human resources	Stigma	Total
Central and eastern Europe										
Czech Republic	0/4	4/10	1/0	3/1	0/3	3/2	0/0	2/0	2/2	15/22
Hungary	1/3	4/14	0/1	0/2	1/4	0/0	0/0	0/0	1/1	8/24
Poland	5/1	14/3	2/1	2/0	5/8	1/0	1/0	3/0	8/2	41/15
Slovakia	0/1	0/4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/5
Southeastern Europe										
Albania	1/0	1/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	2/2
Bosnia and Herzegovina	1/0	3/7	0/0	0/0	0/0	0/0	0/0	0/1	0/0	4/8
Bulgaria	0/0	3/3	0/0	0/2	2/0	0/0	0/0	0/0	0/0	5/5
Croatia	0/1	0/11	0/0	0/0	2/5	1/0	0/0	3/2	3/3	9/22
Kosovo	0/1	2/2	0/0	0/0	0/0	0/0	0/0	0/0	0/1	2/4
Macedonia	0/0	0/2	0/0	0/0	1/1	0/0	0/0	0/0	0/0	1/3
Moldova	0/1	0/5	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/6
Montenegro	0/ 0	0/1	0/0	0/0	0/1	0/0	0/0	0/0	0/0	0/2
Serbia	0/0	2/1	0/0	0/0	0/3	0/0	0/0	0/1	4/0	6/5
Slovenia	0/0	9/2	0/1	0/0	1/0	0/1	0/0	1/0	0/1	11/5
Romania	0/2	4/3	0/0	0/0	1/1	1/0	1/0	0/1	0/0	8/6
Baltic										
Estonia	0/0	4/4	0/1	0/0	0/0	0/0	0/0	0/0	0/0	4/5
Latvia	1/0	3/1	0/0	0/0	0/0	0/0	0/0	0/0	2/0	6/1
Lithuania	0/0	2/6	0/1	0/0	0/0	0/1	0/1	0/0	1/3	3/12
Eastern Europe, Russia, Caucasus										
Armenia	0/0	0/5	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/5
Azerbaijan	0/0	0/4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/4
Belarus	0/1	0/4	0/0	0/0	0/2	0/1	0/0	0/0	1/0	1/7
Georgia	1/1	1/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	4/1
Russia	2/7	12/41	1/3	1/6	4/2	1/3	0/2	1/1	4/6	26/70
Ukraine	1/0	3/5	0/0	0/0	0/3	0/0	0/0	0/1	0/0	4/9
International	1/0	15/10	1/0	3/1	2/0	0/3	0/2	5/2	4/1	31/19
Total	14/23	86/150	5/8	9/12	19/33	7/11	2/5	15/9	30/20	187/271

Data are shown as papers from journals with impact factor (IF)/no IF. See appendix (pp 8–28) for the equivalent table with full references. 488 papers were included in total.

***Table*: Number of papers found, stratified by topic and country of interest**

professionals, or self-stigma among patients or family members; and 13 economic evaluations. Only 187 out of the 458 articles were published in journals with an impact factor. The remaining articles were published in local journals, or were reports from organisations such as WHO.

Expert reports were collected for all countries except three (Estonia, Moldova, Serbia). Overall 62 expert reports were collected from 21 countries: Albania, Lithuania, Montenegro, Poland, Romania, and Slovakia (one report each); Latvia (two); Armenia, Azerbaijan, Belarus, Bulgaria, Czech Republic, and Hungary (three); Kosovo, Macedonia, Russia, Slovenia, and Ukraine (four); and Bosnia and Herzegovina, Croatia, and Georgia (five). The majority of experts were representatives of local professional associations and held leading positions in academia or service provision. There were also some reports from representatives of local service user and family organisations, although not for every country.

Individual country profiles, summarising results from the literature synthesis and expert survey, are presented in the appendix (pp 29–64). Hereinafter, the presentation of the results is limited to the synthesis of findings from across countries.

Mental health care development

Between 1991 and 2016, the region witnessed substantial shifts in its approach to mental health services. The monopoly of the medical model of mental disorders weakened and attention to the social aspects of mental health care practice increased across the region. However, countries differ considerably in terms of how successful they have been in reforming their mental health care systems. Development in some regions has been

temporarily disrupted by catastrophes, such as the wars and civil unrest in former Yugoslavia, Albania, Armenia, Azerbaijan, Georgia, and Ukraine, as well as natural disasters such as the earthquake in Armenia. This disruption has often brought about specific catastrophe-related needs, such as high rates of post-traumatic stress disorder, and also severe damage to the hospital-based mental health care systems in the affected countries.

The number of psychiatric beds in the region has decreased substantially in all CEE countries over the past 25 years. However, this decrease has rarely been accompanied by adequate development of community services, and institutionalisation continues to occur. With only a few rare exceptions, mental health care across the region remains centralised and based around psychiatric hospitals. Psychiatric hospitals are often reported to be in an inadequate condition, and in practice they often substitute community and housing services. Systems of outpatient psychiatric care, which were already relatively well developed during the communist period, continue to function. However, this care is often limited to the prescription of medications and its integration and cooperation with other sectors of both mental and general health care is problematic.

In some countries, networks of community care are well developed and integrated into the mental health system. In Bosnia and Herzegovina and in Kosovo this change was a consequence of the destruction of inpatient care systems during the war, and the subsequent development of community mental health care in the aftermath, which was managed and partly financed by the UN. Examples of excellent community projects, facilities, and services exist all over the region, although countries differ in the proportion of their affected populations that have access to these services. Cases of highly developed community services are certainly not limited to the region's higher-income countries. However, these high-quality services have often been developed through the enthusiasm of individual people and organisations, and were strongly supported by international bodies (eg, the Swiss, Dutch, and Swedish funds, WHO, and the Open Society Fund) rather than through national governments. These projects often have problems with sustainability, scaling up, and integration into mainstream mental health care systems, especially in terms of statutory funding.

The developments described in mental health care practice over the past 25 years do not seem to have been uniformly favourable across all countries. Experts from Bulgaria, for instance, reported that the system has deteriorated. Therapeutic farms—a form of agriculturally oriented occupational therapy attached to psychiatric hospitals that existed before 1990—were abolished completely, and the system as a whole has been affected by frequent and chaotic changes in policies and financing, which are characterised by a general lack of interest in mental health care and underfunding.

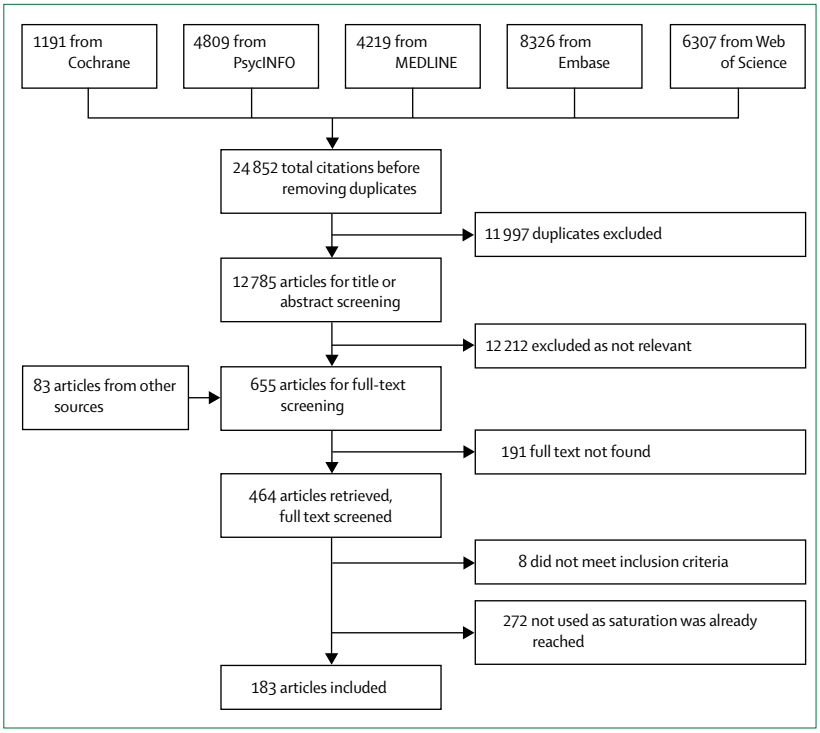

***Figure*: Screening and selection of articles**
Data are number of articles.

Policies and legislation

The vast majority of countries in the region have developed and approved a specific mental health policy. Integral to these newly developed policies are the intentions to develop community mental health care, to decrease stigmatisation, and to improve conditions in inpatient facilities. However, these policies remain largely unimplemented, and changes have been more cosmetic than structural. Similarly, legislation has been improved across the region but is reportedly rarely enforced in practice.

Resources and informed decision making

All countries in the region have unjustifiably under-financed mental health systems. Although exact numbers are unavailable, and community services are considered to be social services and are therefore often financed from other sources, the proportion of health-care budgets allocated to mental health is estimated to be around 3% (equivalent to US$18·7 per person) in most CEE countries.[24] This amount is far below the average in EU countries that were not part of the former eastern bloc, where the respective proportion is 7% (equivalent to US$293·7 per person).[24]

We also found very little information about economic evaluations and only one full economic evaluation that compared the costs and outcomes of two complex interventions. This evaluation built upon WHO-CHOICE methodology[35] and estimated the costs and outcomes of a

hypothetical situation in Estonia—ie, it did not evaluate any intervention that took place in practice. Epidemiological studies on the prevalence of severe mental illnesses are also rare, and those that exist are often insufficiently rigorous to be published in internationally recognised journals. Therefore, the basis for decision making to allocate resources is not clear, and there is a high risk that the already limited mental health budgets of countries are being spent ineffectively.

The lack of information also applies to human resources, which should be allocated according to the best available evidence to make the most effective use of available specialists. Nowadays, a considerable proportion of mental health professionals are working in hospital settings. Although education for psychiatrists and other mental health professionals has improved considerably, interest among medical students is low, and those who obtain high-quality education often migrate to countries with higher incomes and a longer history of democratic rule.

User involvement, human rights, and stigma

Self-help groups and service user organisations for people with severe mental illnesses exist almost in all countries of CEE. However, involvement of service users in mental health care development continues to be rare across the region. The voices of service users and their families, despite being increasingly raised, at present seem not to have gained sufficient strength to overcome the structural discrimination and huge disparities between mental and general health care. People with severe mental illnesses are also reported to face poverty and economic exclusion. Examples of human rights violations have been reported across the region, although the level, character, and frequency of violations differ between countries. This situation is changing for the better. Ombudsman institutions (public defenders of rights) have been introduced in many countries, legislation has been amended for the benefit of patients, and service user associations have become more active. There seem to be many anti-stigma activities mentioned across the region, but they rarely include thorough evaluation and therefore are not reported to the scientific community. Activities that are part of larger international projects (eg, the World Psychiatric Association Open the Doors Program) are exceptions. There are indications that levels of stigma among both the public and health-care professionals are alarmingly high, but empirical evidence is limited to very few studies. The same observation seems to apply to stigma among family members, even though families bear a substantial part of the disease burden and provide care to a large proportion of people with severe mental illnesses; however, the evidence is almost exclusively anecdotal.

Discussion

Over the past 25 years, CEE countries have experienced sociopolitical and economic transformation. Mental health care has evolved in the context of important societal changes, including centralised economies being displaced by market-oriented economies, and health insurance replacing state-funded health care.

In some countries, the International Classification of Diseases was newly introduced. The ideological shift in understanding mental health and health care has also been profound.[36] During Soviet times, psychiatry was strongly biologically oriented and mental health problems were considered to have a purely biological basis.[37,38,9] On the other hand, social problems, including those related to severe mental illnesses, were regarded as the leftovers of capitalism. Most of the social science disciplines were considered to be bourgeois quasi-sciences, and were de facto prohibited.[38] The absence of social science in psychiatry has not yet been overcome, which is apparent when considering the lack of research on these topics identified by the current review. This lack of evidence might be a major factor behind the non-transparent decision making so often reported in the region, because in the absence of evidence discussions are driven exclusively by the opinions and interests of stakeholders.

In terms of mental health services, the 25 year period after 1989–91 has seen some positive developments in community and social psychiatry, in which recovery is promoted and enhanced via the establishment of community service networks that are well integrated into the mental health care system. This route has been difficult, however, and countries have had to deal with many adverse events that occurred after the collapse of communism. These included, for instance, unemployment and increased homelessness, but also anomia—a state in which old societal values are no longer valid and new ones have yet to be established.[39] Additionally, there were social crises and human and natural catastrophes, which all affected population health as well as health-care systems. Unfortunately, people with severe mental illnesses often bore the consequences of these crises most severely: they were among the first to lose their jobs in the economic transition, and the most affected by national budget cuts.[40] Presently, good quality community services are available to only a fraction of people who need them in the region. The infrastructure that exists, besides psychiatric hospitals and outpatient care which are largely limited to providing shelter and medications, can be largely attributed to the enormous efforts of enthusiastic individuals and organisations, rather than to strategic development and political dedication on the part of governments.

At the same time, support from the international community has been tremendous during this period. The Open Society Foundation, Geneva Initiative, the Netherlands, Switzerland, Sweden, and WHO have helped to establish some high-quality community services for people with severe mental illnesses. However, the sustainability of projects supported via external sources cannot be taken for granted. For instance,

financial support has shrunk for many countries as their economies have grown and as they have joined the EU. The EU provides new opportunities and resources, financially as well as in terms of expertise, though these are often not used and are not available to countries outside the Union. "The problem is, however, that in absence of a political will to invest in the infrastructure of mental health promotion and a new type of community based services, the same priorities as in Soviet times will continue to be funded: psychiatric hospitals, long term care institutions for mentally ill and mentally retarded persons, and biomedical therapies."[41] This statement, written by the Lithuanian psychiatrist Dainius Puras, could be the conclusion of the current review if it were not written almost 20 years ago.

Strengths and limitations

A broad literature search strategy and extensive expert survey were used to obtain information on the development of mental health care practice in the region during the past 25 years. Findings from the literature were systematically collected and triangulated with information from local experts, thereby increasing this review's reliability.

However, this study has several limitations. First, the operationalisation of mental health care practice used could be considered overly narrow (ie, focused only on people with severe mental illnesses and excluding child and adolescent, old age, and substance-related disorders). Neither the domains of prevention and promotion, nor forensic psychiatry, were included. Furthermore, it was not possible to review studies related to medicine in general, some of which could convey information relevant to psychiatry, such as general health policy or medical corruption.

Another limitation relates to the search strategy, which was not specifically tailored to capture each of the subtopics of interest in depth, such as stigma and human rights violations. Some articles on these topics were likely to have been excluded, presumably those published in journals of lower quality and those that were not clearly indexed within the scientific databases. This review, therefore, should not be considered to be a comprehensive review of all mental health-related stigma and human rights reports in the CEE region, but rather an attempt to gain insight into the level of research conducted on stigma in the region.

A further limitation is that we were not able to provide exact quantitative data on features such as numbers of psychiatric beds closed, percentage of health budgets dedicated to mental health, numbers of psychiatric nurses employed, and levels of public stigma. Although such information is ostensibly available in international databases, it is highly unreliable,[24] and additional rigorous studies are needed to obtain high-quality data.

We are also aware of the limitation of defining internationally recognised journals as those with an impact factor. However, we opted for this metric for the sake of transparency in the presentation and interpretation of results. Although the review of papers published in journals with an impact factor can be considered exhaustive, the list of papers published in journals with no impact factor should be regarded with caution, since many local journals are not listed in scientific databases or even available online. We cannot rule out the possibility that some potentially relevant papers might have been missed from these sources. Additionally, we were not able to obtain full texts of 191 articles that might have potentially conveyed useful information. That some important information was contained in the articles we were not able to retrieve is also possible.

Finally, there is the potential for bias related to data collection. Some experts were more diligent than others in conducting grey literature searches in their own languages, and we have not incorporated their grey literature search into the results of our systematic search. Some expert reports may therefore be more objective than others. The same applies to assessing the scope of local literature that might have been missed by our systematic search strategy. Information obtained from experts could be further biased by various factors, such as experts themselves being providers of specific services or fear of criticism where this could impact on their career prospects.

Despite these limitations, we believe that overall the combination of methods used provided some safeguards against unreliable information, allowing us to obtain a reasonably balanced view of mental health care practices in CEE. We also hope that this review will serve as a stimulus for other experts to provide further evidence that will enhance our understanding of this important topic.

Conclusions

To our knowledge, this is the largest review on mental health systems in the former eastern bloc ever conducted. It largely confirms the findings of previous reviews and reports, such as that published by Samele and colleagues.[42] However, the added value of our review is that it considers the region as a whole, rather than selected countries only, and it reflects on changes over 25 years of development. The greatest challenges seem to be insufficient resource allocation and non-transparent decision making.

In our opinion, recent successes in bringing mental health onto the global development agenda provide an exceptional opportunity to advance mental health systems in CEE. The explicit incorporation of mental health into the UN Sustainable Development Goals (targets 3.4 and 3.5),[43] as well as the World Bank–WHO meetings in April, 2016,[44] and other initiatives, have brought mental disorders from the periphery to the centre of global attention. WHO's mh-GAP programme[45] and comprehensive Mental Health Action Plan 2013–2020[46,47] provide high-quality frameworks for reforms, to which CEE countries are committed. The global mental health

Search strategy and selection criteria

MEDLINE, PsycINFO, Embase, Web of Science, and the Cochrane Library were searched with combinations of terms referring to the appropriate region and mental health topics (full strategy in the appendix p 1–2). Results were retrieved on Aug 8, 2016. There were no restrictions on language, but the search was limited to documents published from 1989. Much attention was also dedicated to local scientific journals and grey literature searches because research from central and eastern Europe is known to be under-represented in international peer-reviewed journals. Coauthors were instructed to use the advanced search feature in Google Scholar and to provide useful references that were not identified through our search strategy. Reports, chapters, books, theses, letters, and media reports were all eligible for inclusion in our final analysis. A total of 80 additional papers were found in this manner. After removal of duplicates, the title and abstracts of all references retrieved were screened by the review team. We piloted the inclusion and exclusion criteria individually (PW, DK, TR, LK) and then discussed discrepancies as a team to ensure a high level of agreement. Subsequently, DK and TR screened studies by authors with names beginning A–K, while PW and LK screened studies by authors with names starting L–Z. Inter-rater reliability was calculated as percentage of agreement (ie, number of studies that both authors agreed on divided by total number of studies). Disagreements were in the first instance resolved through discussion between the two researchers screening the same articles, and in the second instance through discussion among all four researchers. The review was initially conducted in English (PW, DK, TR, LK) and later enhanced by grey literature searches in other regional languages (conducted by the regional collaborators in Russian, Ukrainian, Latvian, Lithuanian, Belarusian, Czech, Polish, Serbian, Georgian, Armenian, Croatian, Albanian, Macedonian, Slovenian, and Bulgarian). We supplemented the search strategy with hand searching to ensure that all relevant research and reports were included.

movement can be used as a vehicle for continual implementation of the necessary improvements in mental health care. Capacity building to promote excellence in research should be strengthened to accelerate the production of high-quality evidence, and user and family organisations should be supported to participate in policy making and service planning, and to promote recovery-oriented development in mental health care practice across the region.

Contributors

PW and DK initiated, planned, and designed the study, identified country collaborators, coordinated the study, conducted the literature review, and prepared the first draft of the paper. TR participated in designing the study, worked on the literature review, screened the literature and extracted data, and contributed to writing and proof-reading the draft. LK worked on the literature review, screened literature, and extracted data; participated in summarising expert reports; worked on country profiles; and commented on the final draft. VM worked on extracting the literature and getting access to full texts; and worked on summarising data into country profiles. CH helped to identify collaborating experts and contributed to the final version of the manuscript. NS contributed to the design of the study, helped to identify experts and collaborators across the region, and contributed to the final draft of the paper. RVV helped to put the study into historical and local context, and contributed to the final draft of the manuscript. Country collaborators (OA, IB, AC-P, AD, NF, AG, HH, AH, FNI, SSI, MJ, VJ, SK, NM, BNŠ, OP, DS, BIV, EV) collected expert reports in their countries, conducted grey literature search in local sources, commented on and validated country profiles, and contributed to the final draft of the manuscript. GT supervised the whole project from the beginning and helped to make many strategic decisions.

Declaration of interests

We declare no competing interests.

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