GENERAL PRACTITIONERS' VIEWS TOWARDS DIAGNOSING AND TREATING DEPRESSION IN FIVE SOUTH-EASTERN EUROPEAN COUNTRIES.

Running Head: General practitioners' views towards depression

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ABSTRACT

Aim: To assess and compare general practitioners' views of diagnosing and treating depression in five South Eastern European countries.

Methods: A cross-sectional study was conducted in Albania, Bulgaria, Moldova, Romania and Serbia. The sample included 467 general practitioners who completed a hard-copy self-administered questionnaire, consisting of self-assessment questions related to diagnosing and treating depression.

Results: The most common barriers to managing depression in general practice reported by GPs were: patients' unwillingness to discuss depressive symptoms (92.3%); appointment time too short to take an adequate history (91.9%), barriers for prescribing appropriate treatment (90.6%); and patients' reluctance to be referred to a psychiatrist (89.1%). Most GPs (78.4%) agreed that recognizing depression was their responsibility, 71.7% were confident in diagnosing depression, but less than one third (29.6%) considered that they should treat it.

Conclusions: Improvements to the organisation of mental health care in all five countries should consider better training for GPs in depression diagnosis and treatment; the availability of mental health care specialists at primary care level, with ensured equal and easy access for all patients; and the removal of potential legal barriers for diagnosis and treatment of depression.

Words: 187

INTRODUCTION

Major depression is the second leading cause of the global 'burden of disease' (Global Burden of Disease Study 2013 Collaborators, 2015). The total number of people living with depression in the world is 322 million (WHO, 2017). Depression often leads to increased overall morbidity, absenteeism, disability, premature mortality and health care utilisation. Depression increases the risk of developing a number of chronic diseases and injuries, but also physical health disorders may increase the risk of depression (Prince et al., 2007; National Collaborating Centre for Mental Health, 2010). People with depression have double the chance of premature death and have a higher risk of all-cause mortality (Lepine & Briely, 2011). Up to 90% of people who died by suicide in high income countries had a mental health disorder, including depression (WHO, 2014). The death of every sixth person treated for depression was attributable to suicide (Wulsin, Vaillant, & Wells, 1999). The assumption is that among the untreated, this percentage is even higher (Hawton, Casanas, Commabela, Haw, & Saunders, 2013; Rihmer, 2007).

The importance of depression is also reflected in the price paid by the patient, the family and society. One-third of the total costs caused by mental disorders are related to depression, with indirect costs dominating (Sobocki, Jonsson, Angst, & Rehnberg, 2006; Karampampa, Borgstrom, & Jonsson, 2011).

A depressive episode may often remain unrecognised in primary healthcare, because of the variable presentation of the symptoms (Lisulov & Nedic, 2006). The earliest and best opportunities to identify depression are in the clinics of primary care providers. The US Preventive Services Task Force recommends screening for depression in the general adult

population, including pregnant and postpartum women (Siu & US Preventive Services Task Force, 2016).

The accuracy of non-psychiatric physicians in recognising depression may influence the outcome of the illness, as unrecognised patients are not offered treatment for depression (Cepoiu et al., 2007). According to Cepoiu et al. (2007), primary care physicians detect depression in less than half of their patients with the illness. Only a few of those receive appropriate treatment (Wang et al., 2005).

A meta-analysis, with more than 50,000 patients pooled across 41 studies, has shown that general practitioners (GPs) were able to identify about half of the people who had clinical depression and correctly reassured 80% of healthy people (Mitchell, Vaze, & Rao, 2009). Some of the possible barriers to depression care within primary health care are: 1) patient-related: difficulties in diagnosing depression, patient's resistance to discuss presence of depression symptoms, 2) general practitioner-related: lack of expertise, and competing demands and other responsibilities as a primary care provider, and 3) system-related: difficulties in accessing mental health systems, insurance coverage (Henke, Chou, Chanin, Zides, & Hudson Scholle, 2008, Schumann, Schneider, Kantert, Löwe and Linder, 2012).

In South Eastern Europe, mental health has been a low priority topic for policy-makers (Rechel, Schwalbe, & McKee, 2004). However, Lisulov and Nedic (2006), found by using screening tools PHQ-9 and MINI that every fourth patient in primary health care had a depressive disorder, but only 1.6% of patients screened during a week had depressive disorder diagnosed. They found

that 98.7% of the patients with a psychiatric diagnosis were treated with benzodiazepines (anxiolytics), of whom 64.5% were treated with benzodiazepines only, and that only every third of patient with diagnosed depression were treated with antidepressants (Lisulov & Nedic, 2006).

A position statement of the American College of Preventive Medicine (Nimalasuriya, Compton & Guillory, 2009) states that primary care providers should screen all adults for depression and that all primary care providers should have systems in place, either within the primary care setting itself or through collaborations with mental health professionals, to ensure the accurate diagnosis and treatment of this condition. The earliest and best opportunities to identify depression are in the clinics of primary care providers. However, Volpe et al. (2014) found that general practitioners seemed to have a less prominent gate-keeping role and hospital care was the first contact in 20% of the cases. The attitudes of clinicians are likely to be an important factor influencing the way that they assess and respond to patients' psychosocial problems, and their willingness to adopt new approaches to this part of their work (Haddad et al., 2012).

There has been almost no research into mental health services in Eastern Europe (Gater et al., 2005). The aim of this study was to reveal some of the barriers in diagnosis and treatment of depression in primary care facilities, in five South Eastern European countries. Additionally, this study focused on perceptions by general practitioners of skills, attitudes and beliefs regarding depression and referral possibilities.

Diagnosis of depression is influenced by many factors. Three areas of potential barriers to the diagnosis and treatment of depression were considered: a) organisational factors of the health

care system; b) general practitioners' knowledge and attitudes towards depression; and c) GPs'

views of potential barriers in depression management in primary care related to patients'

attitudes.

MATERIALS AND METHODS

A cross-sectional survey was conducted within primary health care settings in five South Eastern

European countries: Albania, Bulgaria, Moldova, Romania and Serbia.

Settings

In Albania, the study took place in five towns: Tirana, Lezha, Korce, Lushnje and Sarande. In

Bulgaria participants were recruited in the capital city of Sofia. In Moldova, the study involved

four areas: Chisinau, Balti, Orhei and Cimislia. In Romania all participants were from Tirgu-

Mures county, and in Serbia, participants were recruited from the City of Novi Sad and Titel and

Beocin municipalities.

Health systems overview

Albania

The health system in Albania is mainly public. The state is the major provider of health services,

health promotion, prevention, diagnosis and treatment. The private sector covers most of the

pharmaceutical and dental services, as well as modern private hospitals and highly specialised

diagnostic centres, mostly in Tirana and one or two other major cities. The Ministry of Health

(MoH) is the leader in health policy development and planning, and in the implementation of

health strategies. Health insurance in Albania is a Bismarck-type health insurance scheme, which

covers primary health care services, hospital care and partial medication costs of a list of 405 approved and registered drugs. It also covers some specialised services in private hospitals. In 2009, there were 2,039 general practitioners (GPs), 1,587 specialised physicians and 12,746 nurses (Albanian Ministry of Health, personal communication, 2009). Recent emigration of physicians toward European Union countries is a concerning trend. In 2016, the network of mental health facilities was composed of three mental health hospitals, 34 outpatient facilities (two of them for children and adolescents), two psychiatric wards in general hospitals, five day treatment facilities (three of them for children and adolescents) and two community residential facilities. (Ministry of Health, personal communication)

Bulgaria

There are 12 mental health centres with 1032 beds on government/ municipal payment and 12 hospitals with 2225 beds. There were 517 psychiatrists in Bulgaria in 2017 (National Center of Public Health and Analyses, 2017). Mental health care is provided both in outpatient and inpatient settings. Ambulatory services are provided by general practitioners (GPs), by individual and group psychiatric practices and by psychiatrists' offices in diagnostic consulting centers and medical centers. Unfortunately, these facilities are unevenly distributed across the country and care concentrated predominantly in the three largest cities (Sofia, Plovdiv and Varna). Inpatient care is provided by specialized psychiatric hospitals and psychiatric wards in general hospitals, as well as by the mental health centers (former dispensaries for psychiatric diseases). Generally, mental health centers have more patients than specialized psychiatric hospitals—these facilities, mostly provide long-term care for persons with persistent problems. The shortest inpatient stays occur in multi-specialty hospitals (including university hospitals), who can provide more comprehensive and integrated treatment. Emergency psychiatric services are also provided by mental health centers; in addition, state psychiatric hospitals,

psychiatric wards at multi-specialty hospitals and emergency care centers can provide emergency care. Mental health centers provide outpatient and inpatient care, as well as preventative treatment and some social services. They offer programs for the identification of people with mental disorders and for early diagnosis, continuous treatment and mental health promotion. The centers include community care units which provide counselling, home care, psychosocial rehabilitation; inpatient care for active treatment of acutely ill mental patients is also offered.

Although the total number of physicians has remained the same, the number of physicians working in psychiatric institutions has fallen from 693 in 1990 to 517 in 2017 (National Centre of Public Health and Analyses). The number of psychiatrists per 100,000 population in Bulgaria in 2017 was around seven.

Republic of Moldova

As of the beginning of January 2012, a network of healthcare facilities providing Primary Health Care (PHC) consisted of five Territorial Medical Associations (TMAs) in the municipality of Chisinau, with 12 family medicine centres (FMCs) operating within. There were 37 FMCs and 60 autonomous Health Centres (HCs) in operation at the beginning of 2012. In order to ensure the autonomy of PHC facilities, a gradual HC legal delimitation was started, completed in 2014. PHC facilities provide PHC services to the patients enrolled with a PHC of their own choice, based upon a written application, irrespective of their insurance status (insured or uninsured). This includes care from other facilities in the case of medical and surgical emergencies, or in any other situation, as justified from a medical standpoint. There are 1,877 family medicine physicians working all over the country today, caring for about 1,896 people per physician on average. Outpatient psychiatric care services are provided at the level of: a) District by the psychiatrist from the specialised outpatient care division of district hospitals, consisting of a

psychiatric room for adults and psychiatric room for children; b) Municipality of Chisinau by the psychiatrists from the consultative department of the relevant district general hospital and the National Psycho-neurological Dispensary of the Clinical Psychiatric Hospital (CPH); and c) Municipality of Balti, by the psychiatrist from the specialised outpatient department of the Municipal general hospital; d) Psycho-neurological Dispensary within the PHCF CPH. The ambulatory care in Moldova consists of the consultative-methodological outpatient department of the CPH and the day care rehabilitation department within the Psychiatric Hospital in Balti. Part of the CPH is the outpatient department for the population of the municipality of Chisinau and the consultative department for the rest of the country dealing with outpatient therapy of psychiatric patients.

Romania

Each citizen with medical assurance can choose their GP. Each GP can enrol between 1000 to 3000 persons to their list. In Tirgu-Mures (500 000 habitants) there are 304 GPs. The patient has to receive a referral in order to see a specialist, in accordance with legislation. As GP services are overloaded (in some cases it can take a week to receive an appointment), frequently patients directly access both ambulatory and hospital settings. They have the right to go directly to both ambulatory and hospital settings only in an emergency situation, or with chronic disorders if they are already on the list of a specific specialist. Both GPs and specialists are paid by the National Medical Assurance Company according to the number of consultations, with the maximum of fourteen per day for psychiatrists. From the monies they receive from the national assurance company, GPs pay for their salary, nurses, facilities expenses and all other costs. The mental health system is serviced by acute psychiatric hospitals (less than 100 beds), chronic hospitals

(former large hospitals with more than 400 beds), ambulatory settings (outpatient clinics in the same building as the hospital, or nearby), private practice, related/not related to the national assurance company, day centres (only in Bucharest and maybe one or two other towns), and specialised addiction centres in each university city.

Republic of Serbia

Health care system in Serbia is composed of a network of healthcare facilities owned either by the state or privately. Health care is provided on three levels: primary, secondary and tertiary. Primary health care is provided within 158 state-owned primary healthcare centres which cover the territory of one or more municipalities or towns (Republic of Serbia, Ministry of Health, 2005 and 2006a). Primary health care is provided through a chosen doctor (medical doctor, specialist in general medicine or specialist in occupational medicine, pediatrician, gynecologist, dentist) (Republic of Serbia, Ministry of Health, 2005). Depending on the size of the population that covers, the primary health care centre may also contain different specialised services (Republic of Serbia, Ministry of Health, 2006a). Besides primary healthcare centers, primary health care is also providing through institutes intended for primary health care services of specific population groups or for specific area of health care, as well as through pharmacies. Health care on secondary level is provided through general and specialized hospitals, and health care on tertiary level is provided through clinics, institutes, clinical-hospital centres and clinical centres. (Republic of Serbia, Ministry of Health, 2005). The main source of health care financing is the National Health Insurance Fund. Mental health care is provided at all three levels of health care: in primary health care centres within specialised services, general hospitals, clinics, institute of mental health and four hospitals intended for long-term hospitalisation of psychiatric patients (Republic of Serbia, Ministry of

Health, 2006a). There were 476 psychiatrists (7 per 100,000) and 273 neuropsychiatrists (4 per 100, 000) in 2016 (Institute of Public Health of Serbia, 2017).

Sample

The study design assumed a sample of 500 GPs, 100 per country, 50 in rural and 50 in urban areas, where an 'urban area' was considered a town where mental health services (outpatient clinic, counselling service, etc.) were available.

Inclusion criteria for the study were: general practitioners, family doctors or specialists of general medicine, who are employed in primary care in the study sites. Exclusion criteria were: physicians with other specialisations, external consultants, volunteers and interns.

Purposive sampling was applied. With the exception of Moldova, the equal distribution of urban/rural GPs was not achieved. Due to the high refusal rate in Bulgaria, initial samples in Albania and Serbia were increased to 120, so the sample included 467 general practitioners, out of which 120 were from Albania, 31 from Bulgaria, 100 from Moldova, 96 from Romania and 120 from Serbia. The main reasons for refusal to participate were the absence of incentives and the fear of how the study results would be interpreted. For the refusal rates, see Table 1.

The most convenient way of GP enrolment was used for each country, depending on specificity of primary care (public/private, primary health centres/GP offices) and already established contacts/good collaboration. In Albania, GPs were selected related to the access they had to refer directly to specialist patients with depression (areas that have a psychiatrist or a mental health

community centre in their area of coverage). Sixty GPs were enrolled in Tirana, and 15 each in Lezha, Korçe, Lushnje and Sarande. In Bulgaria, GPs from Sofia were approached by mail and in person at several meetings arranged for the GPs, organised for other purposes. All registered GPs, and all GPs who attended the selected meetings were contacted/approached. In Moldova, GPs were approached in person by the researchers. In Chisinau and in Balti (two largest cities) there are four healthcare centres where GPs were approached. The Ministry of Health was asked to select two health centres from rural (northern and southern part) areas and in that way, health centres in Orhei and Cimişlia were selected and approached. In each health centre, the research team presented the study and invited the GPs to enrol. In Romania, GPs were selected randomly from the GP list of Tirgu Mures county, and were approached in person. In Serbia, three primary healthcare centres in South-Backa district (Novi Sad as large urban area with additional facilities in suburban areas and Titel and Beocin as non-urban areas) were selected based on the number of GPs available in each setting. The questionnaires were delivered to the management who were asked to invite each GP to enrol in the study until the required number of participants was reached.

Data collection

The data were collected using a self-administered adapted version of a questionnaire used in previous studies (Williams et al., 1999; Ahmad, 2013). The original questionnaire (Williams et al., 1999) consisted of 33 questions, divided into six sets of questions. The first set consists of five questions that describe a depressed patient, the second set contains five questions that describe diagnostic thinking when the patient was evaluated, and the third set has two questions about the initial treatment choices for the patient and one question about limitations for

recognising and providing optimal treatment for depression. In the fourth set, there are two questions about participants' general approach to depression and in the fifth set of questions, there are seven questions ask about participants' skills and attitudes regarding depression. The last set of questions consists of ten questions that describe participants and their practice setting. The modified questionnaire contains 12 questions (see Appendix). First and second sets of questions from the original questionnaire were not used, and only the last question from the third set of questions was used in the modified questionnaire. All the questions from the fourth and fifth set were used (though one question has been modified) and four questions from the last set were used. Some questions specific to the study countries were added to the adapted questionnaire (legal terms for prescribing antidepressants, availability of assessment tools for depression), as well as questions about motivation, level of discomfort in diagnosing and treating depression. There were also several questions that aimed to evaluate knowledge about depression aetiology, diagnostics and treatment.

The adapted questionnaire consisted of several parts: a) the GPs' demographics and professional attributes; b) self-reported factors that limited the ability to recognise and provide optimal treatment for depression; c) self-perceptions of skills and attitudes regarding depression; d) satisfaction with possibilities of referrals; and e) likelihood to change the way of recognising and treating depression during the next six months. The questionnaire was translated into four languages (Albanian, Bulgarian, Romanian and Serbian). The validation of the questionnaire was done in Albania and Moldova on the sample of 20 GPs.

The survey was conducted over a two-week period. GPs were approached either by mail or in person. For the former, questionnaires were returned by mail and for the latter, they were collected by members of the research team.

Each participant was informed about the purpose of the study, data protection and confidentiality and given the opportunity to decline from responding to questions. They signed a consent form.

Data analysis

The questionnaires were numerically coded and all data were entered into a Microsoft Excel worksheet for tabulation.

Descriptive statistics were computed to summarise demographic and practice attributes of general practitioners.

The non-parametric chi-square was used to assess the significance (at the 0.05 level) of the difference between the study countries in:

a) self-reported factors that limit the ability to recognise and provide optimal treatment for depression during a patient appointment;

b) self-perceptions of skills and attitudes regarding depression;

c) GP beliefs related to depression;

d) GP satisfaction with possibilities of referrals to psychiatrists, psychologist and social workers, compared to other medical specialists; and

e) GPs likelihood of improving their knowledge and changing the way of managing depression.

The respondents' answers "somewhat limited" and "limited a great deal" were considered as limitations to diagnose and treat depression. Attitudes towards depression were analysed using the five degree Likert scale. As a positive or negative attitude, answers "strongly agree/disagree" or "agree/disagree" were considered for each particular statement. GPs' confidence in managing depression was interpreted as a percentage of those who answered "very confident" or "mostly confident".

To explore the effect of barriers on physician skills and attitudes regarding depression, we used bivariate generalized least squares regression specifying clustered data (by country) and random effects. First, we created indices reflecting barriers, skills and attitudes. For barriers, a summative score was created – if a physician reporting a barrier limiting the diagnosis/treatment of depression either somewhat/a great deal, the barrier was counted as one; the index represents the sum of all barriers on a scale of 0-20. The skill index was created similarly following reverse coding of items 2a-2d (i.e. attaching higher possible scores to positive responses or confidence in a skill); the resulting index ranges 0-16. The attitude index is based on items 2e-2n: neutral responses were dropped and positive/negative responses assigned a yes/no code and then summed; the resulting index ranges from 0-9. For items 2e-2n we also explored the impact of barriers on each item via logistic regression.

Ethical approval

The study was approved by the Committee for Protection of Human Subjects, University of California at Berkeley (protocol number 2013-07-5480) and by the boards of ethics in participating institutions.

RESULTS

GPs' demographics and professional attributes

Of the 467 general practitioners who participated in this research, 25.7% were from Albania,

6.6% from Bulgaria, 21.4% from Moldova, 20.6% from Romania and 25.7% were from Serbia.

Most were female (78.8%), and the age range was between 25 and 74 years, with a mean age of

47.3 years. Two out of three participants (67.2%) worked in an urban primary health care setting,

with 19.2 mean years of practice as a general practitioner (Table 1). The average weekly number

of patients seen by a single GP ranged from 80.1 in Albania to 185.8 in Serbia. The average

weekly number of patients with depression (diagnosed either at consultation or previously

diagnosed) ranged from 2.8 in Albania to 12.6 in Serbia. Characteristics of the practice in each

country are presented in Table 2.

Insert Table 1 about here

Insert Table 2 about here

Self-reported factors that limit the ability to recognise and provide optimal treatment for
depression

Overall, the most common barriers to managing depression in general practice reported by the

GPs were those related to patients and organisational factors, such as patient unwillingness to

discuss depressive symptoms (92.3%), lack of time for taking an adequate patient history

(91.9%), insufficient time for counselling (90.6%), and the patients' reluctance to be referred to a

psychiatrist (90.4%). The least common barriers were those related to physicians (lack of

motivation for treating depression, 54.0%, and feeling uncomfortable to discuss psychological issues with patients, 57.4%). However, statistical significance was observed for only two patient barriers: 'patient reluctant to begin antidepressant medication' and 'symptoms can be explained by other medical illness'). Lack of statistical significance was observed for only one physician barrier (incomplete knowledge and skills of treatment for depression) and one organisational barrier (patient's insurance coverage limited treatment options). Barriers that limited GPs' ability to recognise and treat depression are summarised in Table 3.

Insert Table 3 about here

Self-perceptions of skills and attitudes regarding depression

Table 4 comprises GPs' perceptions of their skills and attitudes in diagnosing and treating depression. Most respondents (78.4%) agreed that recognising depression was their responsibility, but less than one third (29.6%) considered that they should treat depression. There were highly significant differences in attitudes between the countries in every listed item, except 'I can diagnose depression' and 'I can personally treat depression with counselling'. Table 5 shows significant differences across countries for all listed items in GP beliefs relating to depression (except for the item 'becoming depressed is a natural part of being old'). A very high percentage of respondents felt that dealing with depressed patients was difficult, and over half thought that becoming depressed was the way that people with poor coping mechanisms dealt with difficulties.

Insert Table 4 about here

Insert Table 5 about here

Satisfaction with access to specialists

A significant proportion of GPs (85.3%) was satisfied with access to psychiatrists (compared to other subspecialty). The level of satisfaction was much lower in Serbia, where a significant proportion of GPs (35.9%) were dissatisfied with access to psychiatrists (0% in Albania, 3.7% in Bulgaria, 8.6% in Romania, 15% in Moldova). The level of satisfaction was much lower for access to psychologists or social workers – the proportion of GPs who were dissatisfied ranged from 21% in Albania to 37.5% in Serbia (Table 6).

Insert Table 6 about here

Insert Table 7 about here

Likelihood to change the way of recognising and treating depression during the next six months

Significant differences were found between the countries. Only 20% of GPs from Bulgaria stated that it was very likely or almost certain they would attend training on depression, compared with 90% of GPs from Romania (Table 7). Almost 80% of GPs in Romania said that they would ask patients about depression more often than they were doing before (40% in Serbia). Only 16% of GPs in Bulgaria indicated they would use a depression screening instrument and prescribe antidepressants more often (68% in Moldova for both statements).

In all countries, more than two thirds of GPs suggested that they would consult mental health professionals more often to change the way they recognised or managed depression in the next six months, except Serbia, where only one third of GPs suggested that they would do so (Table 7).

Regression analysis

Country clustered regression models suggest that encountering increased barriers in clinical practice significantly reduce physicians' reported skills and confidence in diagnosing and treating depression (β=-0.243, p<0.001, CI (-0.309, -0.176)). However, such effects are not significant for attitudes (β=0.021, p=0.424, CI (-0.030, 0.071)). Similarly, individual item logistic regressions generally did not suggest that reported barriers influenced attitude related responses (data not shown). Two notable exceptions relate to physicians' attitudes on depression being a natural part of 'old age' (item 2l, OR=1.085, p=0.008, CI (1.021,1.151)) and relating to the admission that work with depressive patients is difficult or heavy going (item 2m, OR=1.206, p=0.047, CI (1.002, 1.451)).

DISCUSSION

In all five South Eastern European countries enrolled in the study, the reasons for depression under-diagnosis from the GPs' perspective are numerous, and they can be related to patient, general practitioner, and organisational issues. The most common patient-related reasons included patients' unwillingness to talk about symptoms of depression, or to be referred to a mental health specialist. These findings indirectly reflected the fear of the stigma of mental disorders. The next most common patient-related reason was GPs' insufficient knowledge and skills for diagnosing and treating depression. At the same time, a lack of motivation to deal with depression was the least reported reason among GPs.

The most common organisational barriers included insufficient time to dedicate to each patient, including those with symptoms of depression, and practice workloads. According to the WHO,

the density of physicians per 1,000 population in the study countries was (in the last year of available data): 1.1 in Albania, 3.9 in Bulgaria, 3.0 in Moldova, 2.4 in Romania and 2.1 in Serbia. These figures compare, for example, with 3.9 in Sweden, 3.9 in Germany, 3.2 in France, and 2.8 in the UK (WHO, 2016). Despite the lowest density rate occurring in Albania, which was almost four times lower than in Bulgaria, according to our study, GPs in Albania have the lowest number of patients. The number of patients in Albania was three times lower than in Serbia, but there were similar complaints about inadequate time dedicated for each patient.

The pathways to care studies revealed that in Eastern European countries, new patients frequently made a direct approach to psychiatric services and GPs had a limited role as "gatekeepers" (Gater et al., 2005). The delay between the first consultation with a GP and contact with psychiatrists is small, less than one month in Eastern European countries, but this shows the low rate of involvement of GPs in treatment (Volpe, Mihai, Jordanova, & Sartorious, 2015). GPs provide no treatment for new patients, or only sedatives and hypnotics, with antidepressants being rarely prescribed (Gater et al., 2005).

Despite the density of psychiatrists per 10,000 population being highest in Serbia and lowest in Albania (Albania 0.1, Bulgaria 0.8, Moldova and Romania 0.6, Serbia 0.7) (World Health Organisation, 2015), according to the study findings, the access to a mental health specialist is most difficult in Serbia and easiest in Albania. These findings, taking into account different health systems in the study countries and potential selection bias, could also lead to the conclusion that the problem of adequate health care was not related to human resources exclusively, but that existing human resources have not been used in the most efficient way. For

example, psychiatrists in Serbia are predominantly available in secondary and tertiary health centres and psychiatric institutions (according to legislation, primary care centres, the predominant mode of primary health care in Serbia, can have one psychiatrist only if the population served by the centre (municipality) has more than 40,000 inhabitants. However, the majority of municipalities in Serbia have less than 40,000 inhabitants.

Nearly 80% of GPs in the five study countries (ranging from 66% in Albania to 85% in Moldova and Serbia) think diagnosing depression is their responsibility and approximately 70% believe they can do that (from 66% in Moldova to 75% in Albania). However, only 30% of GPs thought they were responsible for treating depression (from 13% in Romania to 44% in Serbia) and approximately 40% considered that they were capable of doing so, with medications (from 24% in Moldova to 63% in Serbia), and 44% with counselling (from 33% in Romania to 50% in Bulgaria).

A range of factors (patient, doctor, practice) contribute to the under-recognition and less than optimal management of depression in general practice (Richards, Ryan, McCabe, Groom, & Hickie, 2004). Patient factors include comorbidity and embarrassment; doctor factors include inadequate knowledge and skills; practice factors include inadequate consultation time and insufficient access to specialised mental health resources (Williams et al., 1999).

Knowledge among GPs of mental disorders may vary from country to country and depends on the amount and quality of training received both at under- and postgraduate levels (James, Jenkins, Lawani, & Omoaregba, 2010). Developing a focused medical educational program that

motivates GPs to play a role in depression **c**are is necessary to enhance recognition and treatment of depression, as suggested, for example, by studies in Japan (Ohtsuki et al. 2012), France (Mercier et al. 2010), and Australia (Richards et al. 2004). However, participation in mental health training by GPs appears to be related to their attitudes toward depressed patients and to their confidence and abilities to diagnose and manage common mental disorders effectively (Williams et al., 1999). On the other hand, the majority (54%) of GPs in this study thought depression was a result of recent personal misfortunes, and a way that people with poor coping strategies dealt with difficulties. Three quarters of GPs thought working with depressed patients was difficult.

Serbia clearly showed a different situation with respect to other countries. According to the regulations regarding human resources in health care institutions in Serbia, primary health care centres can have one psychiatrist or neuropsychiatrist per 40, 000 inhabitants (Republic of Serbia, Ministry of Health, 2006b). The result is that a great number of primary health care centres do not have a psychiatrist, and patients with mental health disorders are referred to higher levels of health care. It should also be noted that there are no institutions specifically intended for mental health at the primary care level.

The study has several limitations. Purposive sampling might not have allowed the generalisability of the findings to apply to all GPs in the five study countries. Moreover, in all the study countries except Albania and Moldova, the study was undertaken in one region only, not allowing consideration for differences within the countries. Despite the advantages of the quantitative approach used in the study, some potentially valuable experiences and opinions of the GPs remained unexplored, as they could be assessed by a qualitative study only. We only ran bivariate regression models to explore the impact of barriers on skills/attitudes, however, by

clustering by country, we are confident that we have captured most substantive levels of variability within our data. The lack of significant results regarding attitudes is possibly due to the way in which the summative attitude scoring/recoding of items was undertaken.

CONCLUSION

These findings suggest that the barriers to diagnosing and treating depression reported by GPs are numerous. Improvement of the organisation of mental health care in all five countries should be prioritised. It should include better training for GPs in depression diagnosis and treatment, availability of mental health care specialists at the primary care level, with ensured equal and easy access for all patients, and the removal of potential legal barriers which prevent GPs from offering diagnosis, and treatment, of depression at the primary care level.

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Table 1 Demographic attributes of general practitioners (GPs)

		Albania (n=120) n (%)	Bulgaria (n=31) n (%)	Moldova (n=100) n (%)	Romania (n=96) n (%)	Serbia (n=120) n (%)	Total (n=467) n (%)
Gender (%)	Male	36 (30.0)	12 (38.7)	12 (12.0)	12 (12.5)	27 (22.5)	99 (21.2)
	Female	84 (70.0)	19 (61.3)	88 (88.0)	84 (87.5)	93 (77.5)	368 (78.8)
Mean age, years (SD)		44.2 (11.2)	48.6 (5.1)	47.6 (9.5)	49.5 (9.7)	48.0 (8.4)	47.3 (9.7)
Type of setting (%)	Urban	108 (90.0)	24 (77.4)	50 (50.0)	60 (62.5)	72 (60.0)	314 (67.2)
	Rural	12 (10.0)	7 (22.6)	50 (50.0)	36 (37.5)	48 (40.0)	153 (32.8)
Average years of practice as GP (SD)		18.0 (12.0)	14.4 (3.4)	20.2 (8.9)	22.1 (11.2)	18.4 (8.7)	19.2 (10.1)
Refusal rate (%)		4	80	23	12	*	-

*As the GPs were approached by the management of their institutions, the response rate was not recorded.

Table 2 Practice attributes of general practitioners (GPs)

	Albania (n=120)	Bulgaria (n=31)	Moldova (n=100)	Romania (n=96)	Serbia (n=120)	Total (n=467)
Average number of patients during a week per GP (SD; range)	80.1 (39.9; 42-200)	82.9 (44.1; 1-160)	138.5 (35.2; 20-200)	127.6 (49.2; 50-480)	185.8 (52.8; 32-350)	130.2 (61.3; 2-480)
Average number of patients with previously diagnosed depression during a week per GP (SD; range)	2.8 (3.8; 0-30)	10.6 (9.2; 1-30)	7.2 (7.0; 0-52)	10.9 (12.5; 1-90)	12.6 (9.9; 1-75)	8.5 (9.5; 0-90)
Number of GPs with no patients with depression	16	0	1	0	0	17
Patients with depression in total number of patients (%)	5.1	12.8	5.2	9.2	6.6	6.8
Mental health specialist available at practice site (% yes)	29.4	12.9	0.0	50.0	60.0	34.1

Table 3 Self-reported factors that limit the ability to recognize and provide optimal treatment for depression during a patient appointment (number and % of responses 'limited somewhat' and 'limited a great deal')

	Albania (n=120)	Bulgaria (n=31)	Moldova (n=100)	Romania (n=96)	Serbia (n=120)	Total (n=467)*	Significance
Patient barriers							
Patient or family reluctance to accept diagnosis of depression (%)	108 (90.0)	25 (80.6)	94 (94.0)	82 (85.4)	105 (87.5)	414 (88.7)	χ^2=6.192; df=4; p=0.1853
Patient inability/unwillingness to discuss depressive symptoms (%)	113 (94.2)	26 (83.9)	96 (96.0)	86 (89.6)	109 (90.8)	430 (92.3)	χ^2=7.545; df=4; p=0.1097
Patient reluctant to begin antidepressant medication (%)	100 (90.8)	28 (83.9)	97 (97.0)	90 (79.2)	113 (90.0)	428 (89.1)	χ^2=14.212; df=4; p=0.0066
Patient concern about medication side effects (%)	99 (82.5)	29 (93.5)	74 (74.0)	83 (86.5)	105 (87.5)	390 (83.5)	χ^2=10.992; df=4; p=0.267
Patient reluctant to be referred to a mental health professional (%)	109 (83.3)	26 (90.3)	91 (91.0)	76 (93.8)	108 (94.2)	410 (90.4)	χ^2=6.880; df=4; p=0.1424
Medical problems were more pressing (%)	93 (70.8)	24 (77.4)	84 (84.0)	78 (81.3)	109 (90.8)	388 (81.4)	χ^2=7.103; df=4; p=0.1306
Symptoms can be explained by other medical illness (%)	95 (79.2)	23 (74.2)	93 (93.0)	68 (71.9)	97 (80.8)	376 (80.7)	χ^2=11.811; df=4; p=0.0188
Physician barriers							
Incomplete knowledge of diagnostic criteria (%)	88 (73.3)	18 (58.1)	86 (86.0)	62 (64.6)	89 (74.2)	343 (73.4)	χ^2=14.176; df=4; p=0.0068

Incomplete knowledge and skills of treatment for depression (%)	100 (83.3)	20 (64.5)	76 (76.0)	76 (79.2)	94 (78.3)	366 (78.4)	χ^2=8.119; df=4; p=0.0873
Lack of effective treatments (%)	89 (74.2)	20 (64.5)	82 (82.0)	64 (66.7)	64 (53.3)	319 (68.3)	χ^2=23.291; df=4; p=0.0001
Lack of motivation for treating depression (%)	47 (39.2)	23 (74.2)	68 (68.0)	53 (55.2)	61 (50.8)	252 (54.0)	χ^2=24.723; df=4; p=0.0001
Feeling uncomfortable discussing psychological issues with patients (%)	62 (47.5)	16 (51.6)	77 (77.0)	43 (44.8)	75 (62.5)	273 (57.4)	χ^2=24.945; df=4; p=0.0001
Organizational barriers							
Appointment time too short for an adequate history (%)	100 (83.3)	28 (90.3)	98 (98.0)	89 (92.7)	114 (95.0)	429 (91.9)	χ^2=16.918; df=4; p=0.002
Inadequate time for me to provide appropriate treatment (counselling/information), (%)	104 (86.7)	28 (90.3)	95 (95.0)	81 (84.4)	115 (95.8)	423 (90.6)	χ^2=10.110; df=4; p=0.0386
Practice workload prevents adequate attention to depression (%)	100 (83.3)	28 (90.3)	97 (97.0)	75 (78.1)	108 (90.0)	408 (87.6)	χ^2=17.484; df=4; p=0.0016
Poor reimbursement for treatment (%)	68 (55.8)	25 (80.6)	82 (82.0)	50 (52.1)	88 (73.3)	313 (66.8)	χ^2=27.225; df=4; p<0.0001
Patient's insurance coverage limited treatment options (%)	93 (77.5)	21 (67.7)	73 (73.0)	69 (71.9)	95 (80.0)	351 (75.4)	χ^2=4.321; df=4; p=0.3643
Lack of access to mental health specialists (%)	56 (46.7)	21 (67.7)	64 (64.0)	52 (54.2)	87 (72.5)	280 (60.0)	χ^2=19.496; df=4; p=0.0006
Legal terms for prescribing antidepressants (%)	74 (61.7)	17 (54.8)	60 (60.0)	86 (89.6)	85 (70.0)	322 (68.7)	χ^2=30.531; df=4; p<0.0001
Lack of accessible screening tools for depression (%)	101 (84.2)	18 (58.1)	87 (87.0)	79 (82.3)	97 (80.8)	382 (81.8)	χ^2=12.539; df=4; p=0.0138

*some participants did not answer some questions.

Table 4 Self-perceptions of skills and attitudes regarding depression (number and % of those who answered 'very confident' and 'mostly confident')

	Albania (n=120)	Bulgaria (n=31)	Moldova (n=100)	Romania (n=96)	Serbia (n=120)	Total (n=467)*	Significance
Recognizing depression is my responsibility	79 (65.8)	24 (77.4)	85 (85.0)	76 (79.2)	102 (85.0)	366 (78.4)	χ^2=19.324; df=4; p=0.0007
Treating depression is my responsibility	21 (17.5)	13 (41.9)	39 (39.0)	12 (12.5)	53 (44.2)	138 (29.6)	χ^2=40.916; df=4; p<0.0001
I can diagnose depression	90 (75.0)	20 (71.4)	66 (66.0)	68 (72.6)	85 (72.5)	329 (71.7)	χ^2=2.232; df=4; p=0.6931
I can treat depression with medications	49 (40.8)	10 (35.7)	24 (24.0)	31 (33.0)	75 (62.5)	189 (40.9)	χ^2=39.148; df=4; p<0.0001
I can personally treat depression with counselling	55 (45.8)	14 (50.0)	44 (44.0)	31 (32.6)	59 (49.2)	203 (43.8)	χ^2=6.486; df=4; p=0.1657
Overall, I can personally manage depression	60 (50.0)	11 (39.3)	32 (32.0)	38 (39.6)	56 (46.7)	197 (42.5)	χ^2=8.581; df=4; p=0.0725

*some participants did not answer some questions.

Table 5 GPs' beliefs related to depression (number and % of those who believe or strongly believe)

	Albania (n=120)	Bulgaria (n=31)	Moldova (n=100)	Romania (n=96)	Serbia (n=120)	Total (n=467)*	Significance
Depression originates from recent misfortunes	68 (56.7)	13 (41.9)	77 (77.0)	24 (25.0)	59 (57.5)	241 (53.7)	χ^2=54.490; df=4; p=<.0001
Most depressive disorders improve without medication	35 (29.2)	3 (9.7)	47 (47.0)	10 (10.4)	26 (21.7)	121 (25.9)	χ^2=39.523; df=4; p<0.0001
It is difficult to differentiate unhappiness and depression	42 (34.5)	11 (35.5)	52 (52.0)	43 (44.8)	23 (19.2)	171 (36.4)	χ^2=29.665; df=4; p<0.0001
Becoming depressed is way people with poor coping mechanisms deal with difficulties	66 (55.0)	8 (25.8)	76 (76.0)	16 (16.7)	83 (69.2)	249 (53.3)	χ^2=90.667; df=4; p<0.0001
Becoming depressed is a natural part of being old	28 (23.3)	6 (19.4)	22 (22.0)	13 (13.5)	33 (27.5)	102 (21.8)	χ^2=6.408; df=4; p=0.1707
Working with depressed patients is difficult	97 (80.8)	23 (74.2)	82 (82.0)	70 (72.9)	75 (62.5)	347 (74.3)	χ^2=16.199; df=4; p=0.0028
If patients need antidepressants, better prescribed by a psychiatrist than a GP	84 (70.0)	23 (74.2)	77 (77.0)	82 (85.4)	105 (87.5)	371 (79.4)	χ^2=13.951; df=4; p=0.0075

*some participants did not answer some questions.

Table 6 GP Satisfaction with access to psychiatrists, psychologist and social workers, compared to other medical specialists (number and % of less and much less satisfied)

	Albania (n=120)	Bulgaria (n=31)	Moldova (n=100)	Romania (n=96)	Serbia (n=120)	Total (n=467)*	Significance
Access to psychiatrists	0 (0)	1 (3.7)	15 (15.0)	26 (7.4)	43 (35.8)	85 (14.7)	$\chi2=41.166$; df =4; p<0.0001
Access to psychologists or social workers	24 (21.0)	6 (22.2)	28 (28.0)	40 (35.1)	45 (37.5)	143 (29.9)	$\chi2=11.116$; df =4; p=0.0253

*some participants did not answer some questions.

Table 7 GP likelihood of changing ways of recognizing and treating depression (number and % of those who responded 'very likely' and 'almost certain')

	Albania (n=120)	Bulgaria (n=31)	Moldova (n=100)	Romania (n=96)	Serbia (N=120)	Total (n=467)*	Significance
Attend training on depression (%)	89 (74.8)	6 (20.0)	59 (59.0)	84 (90.3)	56 (47.1)	294 (63.8)	$\chi 2$=70.699; df =4; p<0.0001
Ask patients about depression more often (%)	80 (67.2)	13 (43.3)	54 (54.0)	73 (80.2)	48 (40.3)	268 (58.4)	$\chi 2$=37.960; df =4; p<0.0001
Use a depression screening tool (%)	45 (37.5)	5 (16.7)	68 (68.0)	50 (55.2)	37 (32.2)	205 (45.0)	$\chi 2$=42.146; df =4; p<0.0001
Prescribe antidepressants more often (%)	39 (35.1)	6 (20.0)	68 (68.0)	35 (38.5)	20 (16.8)	168 (36.7)	$\chi 2$=68.010; df =4; p<0.0001

Consult mental health provider more often (%)	82 (68.9)	24 (80.0)	81 (81.0)	76 (83.5)	38 (31.6)	301 (65.6)	χ2=80.260; df =4; p<0.0001

*some participants did not answer some questions.