Systematic Review

THE JOURNAL OF
MEDICINE ACCESS

Unmet healthcare needs in Southeastern Europe: a systematic review

The Journal of Medicine Access
2024, Volume 8: 1–10

DOI: 10.1177/27550834241255838
journals.sagepub.com/home/map
Sage

Ivan Maslyankov

Abstract

Objectives: This study sought to systematically review the existing literature on self-reported unmet healthcare needs in Southeastern Europe.

Methods: A systematic literature review of quantitative evidence in English and Bulgarian was performed in July 2023 using the following databases: Medline, Embase and EconLit. Publications were only included if they used self-reported unmet healthcare needs as an indicator of access to healthcare, concerned people living in Albania, Bosnia and Herzegovina, Bulgaria, Greece, Kosovo, Montenegro, Serbia, North Macedonia or Romania and if they were published after 2003. Quality assessment of the included publications was performed using the Appraisal tool for Cross-Sectional Studies (AXIS) tool.

Results: Twenty-three publications of varying quality were included in the review. Significantly more evidence was available for Greece, Bulgaria and Romania than for the rest of the region. Data collected through Pan-European surveys were commonly used, but almost half of the studies were only descriptive. Generally, the prevalence of unmet healthcare needs has decreased over the years. Unmet healthcare needs were higher among people of lower socioeconomic and educational status, ethnic minorities and migrants and high cost was consistently identified as the primary barrier to accessing healthcare.

Conclusion: Unmet healthcare needs are more prevalent among already disadvantaged societal groups. A trend of a declining prevalence of unmet needs has been observed, but it is more notable in the more socioeconomically developed countries. Improving financial protection should be a priority for the healthcare systems.

Plain Language Summary

Unmet healthcare needs in Southeastern Europe

A person is very good at identifying when their health needs are met. So, using self-reported unmet need is very useful when studying access to healthcare. This study looked at all of the existing literature on self-reported unmet healthcare needs of people living in Southeastern Europe – Albania, Bosnia and Herzegovina, Bulgaria, Greece, Kosovo, Montenegro, Serbia, North Macedonia and Romania. A study had to be in English or Bulgarian and containing numerical data in order to be included. Studies were picked from three academic databases (Medline, Embase and EconLit) in July 2023.

Not a lot of evidence on unmet healthcare needs in Southeastern Europe was available. Only 23 studies were included in the review, and among those, the quality was variable. A lot more evidence was present for Greece, Bulgaria and Romania than for the other countries. Most of the studies used data from Pan-European surveys, but more than half of them did not analyse them. A general trend that emerged was that unmet healthcare needs have decreased over the years. However, they were found to still be higher among people who are poorer or less educated, migrants or

School of Health and Related Research, University of Sheffield, Sheffield, UK.

Corresponding author:
Ivan Maslyankov, School of Health and Related Research, University of Sheffield, Sheffield, UK.
Email: casmaslyankov@gmail.com

from ethnic minorities. Also, people most often said that high costs are the biggest issue when accessing healthcare. This means that the healthcare systems in those countries should become more protective of these groups of society.

Keywords
Southeastern Europe, access to healthcare, unmet healthcare needs

Date received: 19 December 2023; accepted: 2 May 2024

Introduction

Achieving universal health coverage is a key objective of most healthcare systems in the world. Access to healthcare is a fundamental aspect of universal health coverage and is recognised at the highest level by the United Nations, World Health Organisation and European Union (EU).[1-3] Unfortunately, in virtually every country barriers to access remain. This warrants the study of those barriers in order to identify and be able to target those societal groups, which are unable to benefit from what is otherwise considered to be essential for welfare.

However, measuring (barriers to) access to healthcare is no easy task. One approach has been to use indicators of healthcare or service utilisation. These can be observable characteristics of the population, such as measures of ill-health or disease prevalence, or of the system, such as physician visit or vaccination rates. This approach provides a relatively narrow view as it does not take account of the appropriateness, acceptability, effectiveness and cost-effectiveness of care.[4] Others have also demonstrated that utilisation-based methods can find inequity where there is none.[5] An alternative approach is to study the level of alignment between supply and need. In the vast majority of cases, researchers do this by studying unmet healthcare needs. Here, again, different approaches exist. Proxies for how well needs are met, such as referral waiting times, can be used and are often very informative for specific policy questions. Another approach is to directly measure either 'clinical' or 'subjective' unmet healthcare needs. Clinical unmet need is assessed by an appropriate person (usually a clinician) and is based on guidelines/best practices so could be seen as objective, but it is specific to a narrow set of conditions and services.[6] Subjective unmet need is self-reported and concerns exist that such data could capture respondents' perceptions not based on actual need (either because the need would not be clinically validated, addressing the need would not be clinically recommended or there would be no capacity to benefit). Recall bias might also present as an issue, as well as the fact that such data only capture realised unmet need, thus excluding all cases when a person is not aware of their unmet needs. In addition, because of methodological differences data from surveys are difficult to compare, both between countries (even if collected within the same survey) and between surveys.[7,8] However, some notable advantages exist. Self-reported data do not rely on actual use of healthcare services (as is the case with utilisation-based access measures), they are easy to collect through surveys and it has been argued that individuals are best suited to judge their health status,[9] and hence the presence of unattended needs.[10] Therefore, the use of self-reported unmet healthcare need data has been extensive.

Most of the research utilizing unmet healthcare needs has been conducted in high- or middle-income countries and has explored the relationships between unmet needs and health, socioeconomic and demographic characteristics. Broadly, there is consensus that worse self-perceived health, being female, an immigrant or unemployed, having a disability or chronic conditions, lower educational status and rural residence are factors, associated with higher unmet needs.[6,11-20] No two studies have used the exact same datasets or explanatory variables, which limits its comparability. Some cross-national studies have shown that with regard to system characteristics, unmet needs tend to be higher in countries with larger-income inequalities[18] and in countries where out-of-pocket (OOP) payments represent a higher proportion of total health expenditure.[21]

One region for which there is insufficient research is Southeastern Europe. By most definitions, the region fully encompasses Albania, Bosnia and Herzegovina, Bulgaria, Montenegro, Serbia and North Macedonia. For various reasons, Croatia, Greece, Kosovo, Romania, Slovenia and Turkey are only sometimes included. This study follows a geopolitical rather than a geographical definition, thus including Greece, Kosovo and Romania, but excluding Croatia, Slovenia and Turkey. All references to Kosovo in this text should be understood in compliance with UN Security Council Resolution 1244. Southeastern European countries have many important similarities as a result of their location and historical background. Most carry the legacy of the planned economy and substantial state involvement in the healthcare system, as well as significant differences in how users perceive the interaction with the healthcare system when compared to Western counterparts.[22-25] All countries have also seen periods of profound health reforms in the past few decades.[24,26-28] As a result, their healthcare systems are now much more market-oriented and health outcomes have significantly improved, but are yet to converge with Western European averages.[29-31] It has to be noted, however, that the countries

within Southeastern Europe also differ considerably, often in ways important to healthcare. As a basic example, in 2022 Albania's per capita gross domestic product (GDP) was €16,740, whereas Greece's was twice that, at €33,200 (values at purchasing power parity).

Aim and objective

This study aimed to investigate the performance of the health systems of Southeastern European countries in terms of access to healthcare by systematically reviewing the existing literature on self-reported unmet healthcare needs in the region.

Methods

Literature searches

A systematic review was conducted in order to identify and describe the existing literature on unmet healthcare needs in Southeastern Europe. Comprehensive literature searches were conducted in July 2023 in the following databases: (1) Medline, (2) Embase and (3) EconLit. No date, language or study design restrictions were applied during the searches. Details of the search strategy are presented in Supplementary Appendix 1. Briefly, relevant papers were identified by combining two topics with the 'AND' operator. The first topic was the region of interest, that is, Southeastern Europe, as previously defined. The second topic was the phenomenon of interest, that is, unmet healthcare needs. Various combinations of keywords, including synonyms and plural forms, were used. The search phrase did not include MeSH terms. Further searches were conducted by reviewing the results of the first five pages in the Google search engine when using the term 'unmet healthcare needs' and each country of interest. This strategy was replicated in Bulgarian with additional variations of the keywords. Finally, other eligible studies were identified from the references of relevant papers.

Inclusion and exclusion criteria

The inclusion criteria were a report or an original article of quantitative study design, which used self-reported unmet healthcare needs as an indicator of access to healthcare and reported on unmet needs in a country in Southeastern Europe. Articles pertaining to a specific disease (e.g. people with HIV/AIDS) or ethnic group (e.g. Roma people) were included. Studies were excluded if they were qualitative, letters, case series, reviews, commentaries or editorials, published before 2003 or in any language other than English or Bulgarian. Studies concerned with people living in Croatia, Slovenia or Turkey were also excluded, as well as studies that alluded to unmet healthcare needs where a treatment gap exist (i.e. where there is no capacity to benefit). Following the inclusion and exclusion criteria screening was performed in EPPI Reviewer 5 (EPPI Centre, University College London). The tool allowed for automatic deduplication. During an initial screening, all titles and abstracts were reviewed and each study's eligibility for subsequent full-text screening was determined. Only the studies deemed eligible after full-text screening were included in the review. The screening and inclusion/exclusion decision-making were not cross-checked.

Quality assessment and data extraction

The Appraisal tool for Cross-Sectional Studies (AXIS) was used for quality assessment of the included studies. A numeric (aggregate) score was not assigned to each study and those of particularly bad quality were not excluded. The decisions about quality were based on a holistic overview of the performance of each study. The trends in study quality were narratively synthesised and the quality assessment results were used to aid the interpretation of other results in the review. A data extraction form was used to collect the following: first author's last name and publication year, study country, study population, data source, survey period/year, sampling strategy, sample size, unadjusted prevalence of unmet healthcare needs, any adjustment methods (and if yes, explanatory variables and significant predictors of unmet healthcare needs), links to important events and any other relevant findings. The measure of the unadjusted prevalence was the proportion of people presenting unmet needs; significant predictors were those which statistically significantly increased the probability or the odds of experiencing unmet need. A blank data extraction form is presented in Supplementary Appendix 2. Selected study characteristics were tabulated. Key themes and outcomes across each country were identified and summarised. Quantitative synthesis methods were not used. The updated Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for reporting were followed (Supplementary Appendix 5).

Results

The database searches identified 346 records, reduced to 313 following deduplication. After screening on title and abstract, 39 records were eligible for the full-text screening phase, following which 23 were retained and included in the systematic review. The study selection process is presented graphically in Figure 1. The included publications reported on unmet healthcare needs as early as 2004 and up to 2023.

By far the most evidence on unmet healthcare needs in Southeastern Europe came from Greece, which was included in 10 studies,[20,21,32-39] followed by Bulgaria with

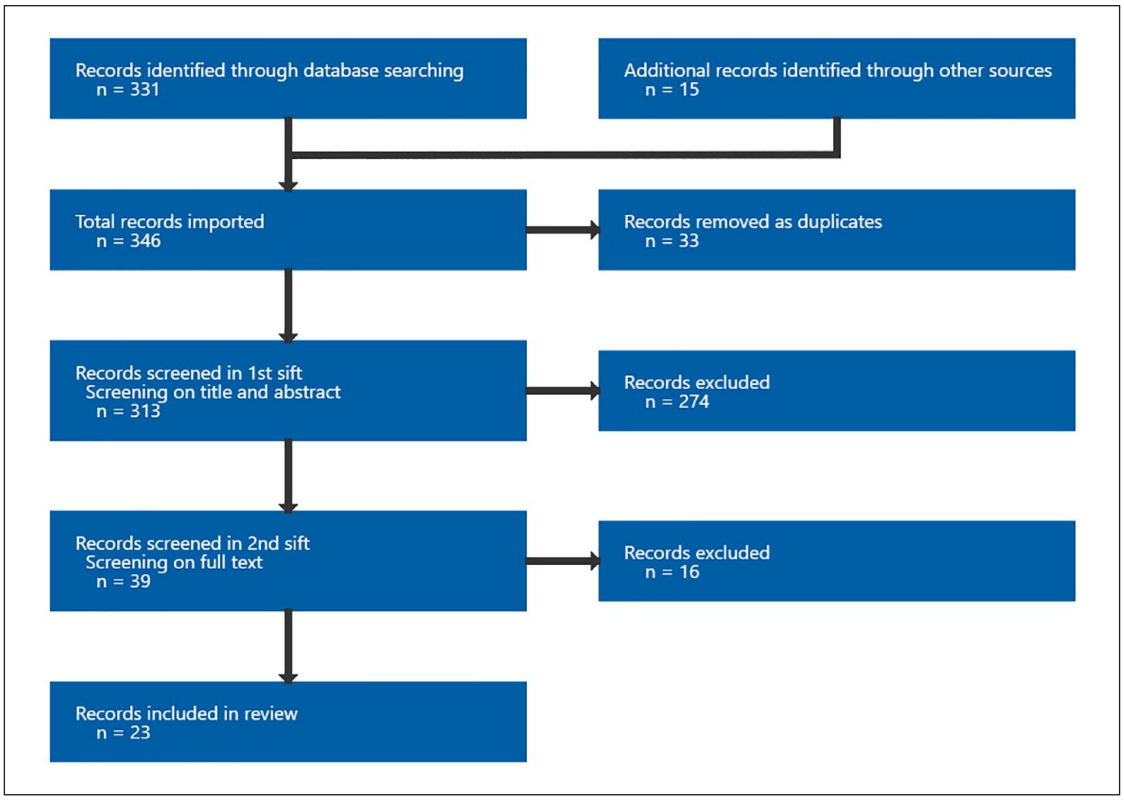

Figure 1. Flow chart detailing study selection.

7.[21,40-45] Romania was included in six publications,[21,35,44-47] whereas Serbia and Albania in three each;[45,48-51] North Macedonia in two[45,52] and finally, Bosnia and Herzegovina and Montenegro in one study only.[45] No studies concerning Kosovo were identified. The study characteristics are presented in Supplementary Appendix 3. In summary, 19 of the records were original research articles, whereas the rest were reports by the WHO Regional Office for Europe, published as part of the series 'Can people afford to pay for healthcare?'. The majority of the studies (65%) were concerned with the country's population as a whole, but a few investigated unmet needs in specific subpopulations, for example, migrants (Table 1).

Data collected routinely as part of Pan-European surveys were commonly used, especially data from the European Statistics on Income and Living Conditions survey (44% of all studies) (Table 1). Where reported, the sample sizes ranged from 79 to 16,000. Slightly more studies included statistical analyses (56%), whereas the rest (44%) were descriptive only. Among the studies that used statistical methods, most used regression analysis to adjust the prevalence of unmet needs based on explanatory variables. However, there was little overlap among the variables used. The only consistent adjustment was for gender and age, although different age categories were used. Income, self-reported health and presence of chronic conditions were included more often than not. A few studies adjusted for marital status, employment

Table 1. Characteristics of the studies included in the systematic literature review.

	N	%
Population		
Nation as a whole	15	65
Migrants	2	9
People from a single county	1	4
People with a disability	1	4
People with HIV/AIDS	1	4
People with a spinal cord injury	1	4
Older people (>50 years of age)	1	4
People from an ethnic minority	1	4
Data source		
European survey	15	65
EU-SILC	10	44
EHIS	4	17
SHARE	1	4
Other source	12	52
Statistical analysis		
No (descriptive results only)	10	44
Yes	13	56
Logit/probit model	11	48
Other	2	8

EHIS: European Health Interview Survey; EU-SILC: European Statistics on Income and Living Conditions; SHARE: Survey of Health, Ageing and Retirement in Europe.
Note: Data sources add up to more than the total because some studies used multiple sources.

status and education. Various other variables were used in separate cases.

The sample of studies was heterogeneous in terms of quality. Very few studies were of good overall quality; for most, there were significant concerns, usually in multiple domains. Specifically, no study was sufficiently explicit regarding the survey non-responders and related biases. With very few exceptions, the studies were lacking detail about the samples used, including justifications for the sample size and information on the suitability of the sample frame. Last but not least, a significant proportion of the studies did not discuss potential limitations. On the contrary, most studies were explicit in their aims and used appropriate study designs and data collection methods. There were generally no concerns over conflicts of interest and most studies reported appropriate ethics approval or participant consent. The reader is referred to Supplementary Appendix 4 for a visual presentation of the quality assessment results.

Albania

Recent European Union Statistics on Income and Living Conditions (EU-SILC) data have shown a very high prevalence of unmet needs for healthcare and dental care in Albania. Unmet need for healthcare has grown from 19% in 2017 to 21.5% in 2018; for dental care – from 20.5% to 23.6% in the same period.[51] Two studies have looked at unmet needs in specific subpopulation. Morrison et al.[50] found that HIV/AIDS-positive patients in Albania's single clinic offering antiretroviral therapy were more likely to have depression and anxiety if they had experienced unmet healthcare needs. The results were statistically significant, but the sample was very small. Arora et al.[45] reported that close to 60% of Roma people in Albania stated having unmet healthcare needs. The adjusted odds of experiencing unmet healthcare needs were 111% higher for Roma people compared with non-Roma people. The results were statistically significant and the sample of non-Roma people was not representative of the general population, so the results were thought to be an underestimation.

Bosnia and Herzegovina

No studies reported on the general population's unmet healthcare needs in Bosnia and Herzegovina. About 45% of Roma people reported unmet needs.[45] The adjusted odds of experiencing unmet healthcare needs were significantly higher for Roma people compared with the odds of non-Roma people.[45] The sample of non-Roma people was not representative of the general population, so the results were judged to be an underestimation.

Bulgaria

Several studies reported on the unadjusted prevalence of unmet healthcare needs in Bulgaria. Using data from the EU-SILC for different, but largely overlapping time periods, they indicated that unmet needs for medical and dental care have continuously decreased – from 15% in 2008 to just above 2% in 2020 and from 17% in 2008 to 3% in 2020, respectively.[21,40,43] The sharpest decline was observed in the period 2007–2009. The same trend was also described using the European Health Interview Survey (EHIS) data, where a reduction from 10.3% in 2010 to 2.1% in 2017 was noted.[42] Using data from national surveys, Atanasova et al.[41] observed that the proportion of people who forwent outpatient services decreased from 32.0% in 2010 to 26.1% in 2011, while that for inpatient services fell from 6.1% to 4.1% in the same period. The same team found that being younger, female, less healthy and chronically ill, with less income or with no social health insurance made one more likely to report foregoing outpatient services; however, only income and self-assessed health status were significant predictors of reporting forgone inpatient services. In contrast with those findings, Tambor reported that the proportions of foregone primary care and hospital services in 2010 were 40.4% and 29.1%, respectively.[44] It is unclear what values were used for their calculations, specifically what the denominator contained.

More recent figures showed that unmet healthcare needs in Bulgaria have fallen below the EU average of 3%.[40] However, the evidence strongly suggests that inequity with regard to experiencing unmet needs remains substantial.[40-43] The studies agreed that inequalities are significant between socioeconomic and age groups, as well as between rural and urban dwellers. Arora et al.[45] further showed that the adjusted odds of experiencing unmet needs were 44% higher in the Roma people, providing evidence for inequity among ethnic minorities. The studies were consistent that high cost, particularly for medicines, is the most important access barrier.[40,42]

Greece

In contrast with other countries, the evidence on unmet healthcare needs in Greece was substantial. The unadjusted prevalence of unmet needs for the general population was reported in three studies. According to Chaupain-Guillot and Guillot, it was 7.5% for both medical and dental care in 2009.[21] According to Pappa et al.,[20] it was 9.9% for primary care in 2010. In stark contrast, another study found a prevalence of unmet healthcare needs of 47.7%, but it has to be noted that the authors used a convenience sample and the study was of low quality.[36]

Pappa et al.[20] found that at the country level younger age, parenthood, lower number of physician consultations attended, poor mental health and less education were significant predictors of unmet healthcare needs. Likewise, Zavras et al.[33] also found education to be a significant determinant, in addition to income, unemployment and insurance status, but none of the other predictors identified

by Pappa et al.[20] Zavras et al.[33] used data from 2006 and 2011 comparatively. They found that the year of participation (later vs earlier) was significantly associated with unmet healthcare needs due to financial reasons. These findings were confirmed in another study which compared data from 2007 and 2011.[37]

Two studies specifically looked at the unmet needs of migrants and provided evidence that they face worse healthcare and more barriers to access than non-migrants.[34,39] Fares et al.[34] found that (at mean income) the conditional predicted probability of unmet need for medical or dental care among migrants was 39.33%, which was much higher than the probability in three other countries accepting large numbers of immigrants (Germany, France and Italy). Rotarou and Sakellariou provided evidence that people with a disability had more unmet healthcare needs and that for them significant barriers arose from high costs, distance and transportation and long waiting lists.[32] Adjusting for explanatory variables (including disability status), the authors also found unemployment, low educational level and low-income positively associated with unmet needs. As part of the International Spinal Cord Injury Survey, Bychkovska et al.[35] found that in the period 2017–2019, 11% of people with a spinal cord injury in Greece reported unmet healthcare needs.

The studies agreed that the most common reason for experiencing unmet healthcare needs was cost,[20,32,37,39] except for one, which reported low self-esteem to be the leading cause.[36] Almost all of the studies analysed unmet needs in light of the austerity programmes implemented after the 2008 economic crisis and the particular socioeconomic hardship experienced by the Greek people. Only one analysis predated those events. This study found that in 2004, 9.85% of people over 50 forewent care and that the probability of forgoing care was higher among those in the lower-income groups and those with worse self-assessed health.[38]

Montenegro

No studies reporting on the general population's unmet healthcare needs in Montenegro were identified. The adjusted odds of experiencing unmet healthcare needs were 43% higher for Roma people compared with non-Roma people, but the results were not statistically significant.[45] The sample of non-Roma people was not representative of the general population, so the results were thought to be an underestimation.

North Macedonia

One study looked at the general population's unmet healthcare needs in North Macedonia. Dimkovski and Mosca outlined a positive trend of consistently decreasing unmet healthcare needs, from around 11% in 2010, down to the EU average of 3% in 2019. In 2019, unmet dental care needs were lower than the EU average at around 2%.[52] The authors also noted that unmet needs have fallen for all income categories. High cost was stated as the main reason for unmet needs. In line with other countries, the odds of experiencing unmet healthcare needs were significantly higher for Roma people (adjusted odds ratio of 1.48).[45]

Romania

Three publications were concerned with unmet healthcare needs at the national level in Romania. Unmet medical and dental needs were reported to be 11% and 15%, respectively in 2009.[21] In 2010, the proportion of people reporting forgone primary care services was 42% and forgone inpatient services was 39.5%.[44] The validity of the results in this study is particularly low. Scintee et al.[47] reported that unmet needs for medical care fell from 12% in 2011 to just above 4% in 2017, after which they remained stable. In the same period, unmet dental needs fell from 13% to 4.5%. Neculau et al.[46] reported that in Brasov County, unmet needs for a family doctor due to accessibility problems were 11.4% in 2018. Also, the adjusted odds of experiencing unmet needs were more than 100% higher for Roma people in 2011, potentially even higher due to the nature of the study sample.[45] Finally, the prevalence of unmet healthcare needs was reported to be as high as 12.5% in people with a spinal cord injury.[35] Unmet needs in Romania were predominantly attributed to high costs, especially for medicines.[21,47]

Serbia

Two studies investigated unmet needs of the general population in Serbia. One study noted a very high prevalence in 2013 (26.2%).[48] The authors found older age, being a woman, lower levels of education, lower financial and employment status and rural residence to be significant predictors of unmet need. Popovic et al.[49] investigated unmet healthcare needs only a year later, but report a much lower unadjusted prevalence (14.9%). In agreement with the previous study, they established lower educational levels, rural residency and lesser income to be predictors of higher unmet need. In contrast, they found gender and unemployment to be predictors of lower need. Both studies agreed on the most common reason for unmet needs being a lack of financial resources. Arora et al.[45] reported an odds ratio of 1.72 indicating higher odds of experiencing unmet healthcare needs for Roma people compared with non-Roma people after controlling for a range of covariates. The results were statistically significant. The sample of non-Roma people was not representative of the general population, so the results were thought to be an underestimation.

Discussion

Main findings

This first systematic review of the literature on self-reported unmet healthcare needs in Southeastern Europe identified few high-quality, analytical studies and a relatively large number of descriptive studies. Even though use of data collected through Pan-European surveys was common, quantitative comparisons were unattainable. Nonetheless, some key themes were observed.

More evidence was available, the more developed the county was. Therefore, the evidence gap was particularly big for Western Balkan countries, whereas more research was available for Bulgaria, Romania and most notably, Greece. The latter three are the only EU members in Southeastern Europe. Another emergent trend was that many countries have witnessed an overall decline in the prevalence of unmet healthcare needs in the past 15 years. This was particularly evident in Bulgaria, Romania, North Macedonia and Serbia. Bulgaria and Romania have been members of the EU since 2007, and at the time of writing, North Macedonia is the furthest along the EU candidacy procedure. The rates of reporting unmet needs have managed to gradually converge with the EU averages in those countries. Serbia has too seen a decline, but the rates are yet to reach the EU averages. Interestingly, neither of the countries experienced a rise in prevalence as an aftermath of the economic crisis of 2008, which happened in many EU countries, including Greece.[53] In fact, almost all of the studies that concerned with Greece explicitly linked outcomes to the health(care) effects of the economic crisis and the subsequent austerity measures. The literature on the effects of the economic crisis on the health of the Greek people is extensive.[54-57]

Another consistent trend was the higher prevalence of unmet needs among disadvantaged groups of society. Therefore, evidence from Southeastern Europe confirms previous findings that lower socioeconomic and educational status are determinants of unmet healthcare needs,[10,11,21] as is being a migrant[58] or from an ethnic minority.[59] Roma people are a significant minority in the region, whose worse access to healthcare may be mediated through the effects of income, education, stigma, discrimination or residence. Migrants in the region tend to be refugees and forced migrants, who suffer from many of the same barriers, with the addition of stress. Female gender was also often observed to be a determinant of unmet needs, in line with evidence from other regions.[10,12,17]

Finally, the review consistently identified high costs as the main barrier to access in the region. Indeed, this is understandable given the lesser public spending on healthcare and relatedly, the big reliance on OOP payments, both formal and informal. Long wait times, which are a long-standing challenge in many Western European countries,[60] did not emerge as a significant barrier to access across Southeastern Europe.

The findings of the study should aid policymakers in both identifying past good practices and setting future priorities. With regard to the former, the policies that have contributed to the reductions of unmet healthcare needs could be identified and reprioritised. However, of note, those could well be beyond healthcare policy, given that health is also affected by lifestyle choices, environmental conditions and social determinants. Prospectively, policymakers should prioritise addressing the higher unmet healthcare needs among disadvantaged groups in order to reduce the existing health inequities. In addition, mitigating the financial barriers to healthcare access can improve overall population health outcomes and promote social justice, aligning with broader public health goals.

Strengths and limitations

This review benefits from several strengths. The comprehensive search techniques and validated systematic review methods following a thorough guideline strengthen the conclusions. However, some limitations need to be noted. Related to the search strategy, a significant limitation is the exclusion of literature in languages other than English or Bulgarian. Since all of the countries included in the review have different official languages, many relevant studies may have been missed; this represents an opportunity for further investigations. Also, the searches were restricted to the country names, whereas relevant studies may exist for specific regions or cities. Unfortunately, the inclusion of additional languages or more comprehensive searches would not have been feasible within the timeframe of the project. Although the searches resulted in a reasonable pool of studies, the prevailingly low quality is seen as a major limitation that hinders the validity and reliability of the results. What is more, the studies were not evenly distributed between countries, leaving significant knowledge gaps for parts of the region. Finally, the inability to make cross-country comparisons and the unavailability of data lending themselves to pooling have to be noted. Data from different surveys for the same country or from similar surveys for different countries are very difficult to compare,[8] so research which by design encompasses multiple countries is needed.

Conclusion

This study was the first systematic assessment of the prevalence and determinants of self-reported unmet healthcare needs in Southeastern Europe. A heterogeneous study sample was skewed towards studies about Greece, Romania and Bulgaria. The findings suggest that unmet healthcare needs are more prevalent among already disadvantaged societal groups, such as those of lower socioeconomic and educational status, ethnic minorities and migrants. A positive trend of declining prevalence of

unmet needs was observed in most countries in the region, but it seemed to be related to the level of socioeconomic development. Studies consistently identified high cost as the primary barrier to accessing healthcare. The quality of the studies was predominantly low, so the findings need to be observed with caution. There remains a need for high-quality cross-country research, especially for countries of the Western Balkans. Furthermore, significant benefits could emerge from standardisation of the questions used in surveys, cross-country research and international collaboration. International organisations and countries themselves could take on a leadership role alike.

Declarations

Ethical approval

None required. No involvement of human participants or human data.

Consent for publication

Not applicable.

Author contributions

Ivan Maslyankov: Conceptualisation; Data curation; Investigation; Methodology; Software; Writing – draft; Writing – review.

Acknowledgements

Not applicable.

Funding

The author received no financial support for the research, authorship and/or publication of this article.

Competing interests

The author declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Availability of data and materials

No new data were created or analysed in this study. Data sharing is not applicable to this article.

ORCID iD

Ivan Maslyankov https://orcid.org/0009-0004-3303-4845

Supplemental material

Supplemental material for this article is available online.

References

1. United Nations. *2030 UN Sustainable Development Goal 3 – Ensure healthy lives and promote well-being for all at all ages*. New York: United Nations, 2015, https://sdgs.un.org/goals/goal3 (accessed 11 July 2023).
2. World Health Organization. *WHO global impact framework*. Geneva: World Health Organisation, 2019, https://www.who.int/about/what-we-do/thirteenth-general-programme-of-work-2019—2023 (accessed 11 July 2023).
3. European Commission. *European pillar of social rights – building a fairer and more inclusive European Union*. Brussels: European Commission, 2021, https://ec.europa.eu/social/main.jsp?catId=1226&langId=en (accessed 11 July 2023).
4. Gulliford M, Figueroa-Munoz J, Morgan M, et al. What does 'access to health care' mean? *J Health Serv Res Policy* 2002; 7: 186–188.
5. Gibson G, Grignon M, Hurley J, et al. Here comes the SUN: self-assessed unmet need, worsening health outcomes, and health care inequity. *Health Econ* 2019; 28(6): 727–735.
6. Allin S, Grignon M and Le Grand J. Subjective unmet need and utilization of health care services in Canada: what are the equity implications. *Soc Sci Med* 2010; 70(3): 465–472.
7. Smith S and Connolly S. Re-thinking unmet need for health care: introducing a dynamic perspective. *Health Econ Policy Law* 2020; 15(4): 440–457.
8. Organisation for Economic Cooperation Development. Unmet needs for healthcare: Comparing approaches and results from international surveys. Paris: OECD Publishing, 2020, https://www.oecd.org/health/health-systems/Unmet-Needs-for-Health-Care-Brief-2020.pdf (accessed 21 July 2023).
9. Idler EL and Benyamini Y. Self-rated health and mortality: a review of twenty-seven community studies. *J Health Soc Behav* 1997; 38(1): 21–37.
10. Cavalieri M. Geographical variation of unmet medical needs in Italy: a multivariate logistic regression analysis. *Int J Health Geogr* 2013; 12: 27.
11. Shi L and Stevens GD. Vulnerability and unmet health care needs. *J Gen Intern Med* 2005; 20(2): 148–154.
12. Sibley LM and Glazier RH. Reasons for self-reported unmet healthcare needs in Canada: a population-based provincial comparison. *Healthc Policy* 2009; 5(1): 87–101.
13. Pagán JA and Pauly MV. Community-level uninsurance and the unmet medical needs of insured and uninsured adults. *Health Serv Res* 2006; 41(3 Pt. 1): 788–803.
14. Wiltshire JC, Person SD, Kiefe CI, et al. Disentangling the influence of socioeconomic status on differences between African American and white women in unmet medical needs. *Am J Public Health* 2009; 99(9): 1659–1665.
15. Marshall EG. Do young adults have unmet healthcare needs? *J Adolesc Health* 2011; 49: 490–497.
16. Fiorillo D. Reasons for unmet needs for health care: the role of social capital and social support in some western EU countries. *Int J Health Econ Manag* 2020; 20(1): 79–98.
17. Fjær EL, Stornes P, Borisova LV, et al. Subjective perceptions of unmet need for health care in Europe among social groups: findings from the European social survey (2014) special module on the social determinants of health. *Eur J Public Health* 2017; 27: 82–89.
18. Israel S. How social policies can improve financial accessibility of healthcare: a multi-level analysis of unmet medical need in European countries. *Int J Equity Health* 2016; 15: 41.
19. Moran V, Suhrcke M, Ruiz-Castell M, et al. Investigating unmet need for healthcare using the European Health Interview Survey: a cross-sectional survey study of Luxembourg. *BMJ Open* 2021; 11: e048860.
20. Pappa E, Kontodimopoulos N, Papadopoulos A, et al. Investigating unmet health needs in primary health

care services in a representative sample of the Greek population. *Int J Environ Res Public Health* 2013; 10: 2017–2027.
21. Chaupain-Guillot S and Guillot O. Health system characteristics and unmet care needs in Europe: an analysis based on EU-SILC data. *Eur J Health Econ* 2015; 16(7): 781–796.
22. Atanasova E, Pavlova M, Moutafova E, et al. Informal payments for health services: the experience of Bulgaria after 10 years of formal co-payments. *Eur J Public Health* 2014; 24(5): 733–739.
23. Liaropoulos L, Siskou O, Kaitelidou D, et al. Informal payments in public hospitals in Greece. *Health Policy* 2008; 87: 72–81.
24. Rechel B and McKee M. Health reform in central and eastern Europe and the former Soviet Union. *Lancet* 2009; 374: 1186–1195.
25. Schneider SM and Popic T. Cognitive determinants of healthcare evaluations – a comparison of Eastern and Western European countries. *Health Policy* 2018; 122(3): 269–278.
26. Atanasova E, Pavlova M, Velickovski R, et al. What have 10 years of health insurance reforms brought about in Bulgaria? Re-appraising the Health Insurance Act of 1998. *Health Policy* 2011; 102(2-3): 263–269.
27. Mihailovic N, Kocic S and Jakovljevic M. Review of diagnosis-related group-based financing of hospital care. *Health Serv Res Manag Epidemiol* 2016; 3: 2333392816647892.
28. Tresa E, Czabanowska K, Clemens T, et al. Europeanization of health policy in post-communist European societies: comparison of six Western Balkan countries. *Health Policy* 2022; 126(8): 816–823.
29. Dimova A, Rohova M, Koeva S, et al. Bulgaria: health system review. *Health Syst Transit* 2018; 20: 1–230.
30. 2015 SDG Collaborators. Measuring the health-related sustainable development goals in 188 countries: a baseline analysis from the global burden of disease study 2015. *Lancet* 2016; 388: 1813–1850.
31. Organisation for Economic Cooperation Development. *Government at a glance: Western Balkans*. Paris: OECD Publishing, 2020.
32. Rotarou ES and Sakellariou D. Access to health care in an age of austerity: disabled people's unmet needs in Greece. *Crit Public Health* 2019; 29: 48–60.
33. Zavras D, Zavras AI, Kyriopoulos II, et al. Economic crisis, austerity and unmet healthcare needs: the case of Greece. *BMC Health Serv Res* 2016; 16: 309.
34. Fares H, Domínguez JP and Puig-Junoy J. Differential probability in unmet healthcare needs among migrants in four European countries. *Int Migration Integration* 2023; 24: 1523–1546.
35. Bychkovska O, Strøm V, Tederko P, et al. Health system's role in facilitating health service access among persons with spinal cord injury across 22 countries. *Int J Environ Res Public Health* 2023; 20: 6056.
36. Tsirona C, Siskou O, Galanis P, et al. Investigating the impact of the economic crisis on access to health services in Greece. *Int J Caring Sci* 2022; 15: 727–738.
37. Kentikelenis A, Karanikolos M, Reeves A, et al. Greece's health crisis: from austerity to denialism. *Lancet* 2014; 383: 748–753.
38. Mielck A, Kiess R, von dem Knesebeck O, et al. Association between forgone care and household income among the elderly in five Western European countries – analyses based on survey data from the SHARE-study. *BMC Health Serv Res* 2009; 9: 52.
39. Kaitelidou D, Galanis P, Economou C, et al. Inequalities between migrants and non-migrants in accessing and using health services in Greece during an era of economic hardship. *Int J Health Serv* 2020; 50(4): 444–457.
40. Dimova A and García-Ramírez JA. *Can people afford to pay for health care? New evidence on financial protection in Bulgaria*. Copenhagen: WHO Regional Office for Europe, 2022.
41. Atanasova E, Pavlova M, Moutafova E, et al. Out-of-pocket payments for health care services in Bulgaria: financial burden and barrier to access. *Eur J Public Health* 2013; 23(6): 916–922.
42. Rohova M, Dimova A and Atanasova E. Access to health services of people in the Northeastern region of Bulgaria. Collection of abstracts and reports from the First National Conference 'Public Health – Global Priority in Science and Practice', Varna, 2017. https://journals.mu-varna.bg/index.php/conf/article/view/4225.
43. Atanasova E, Rohova M and Dimova A. UNMET needs for health care services in Bulgaria. *J IMAB* 2016; 22: 1324–1327.
44. Tambor M, Pavlova M, Rechel B, et al. The inability to pay for health services in Central and Eastern Europe: evidence from six countries. *Eur J Public Health* 2014; 24(3): 378–385.
45. Arora VS, Kühlbrandt C and McKee M. An examination of unmet health needs as perceived by Roma in Central and Eastern Europe. *Eur J Public Health* 2016; 26(5): 737–742.
46. Neculau A, Rogozea L, Popa D, et al. Patient's perceptions regarding the availability of primary care services in Romania – a pilot survey among users of primary care services in Brasov county. *Bull Transilv Univ Brasov* 2020; 13: 73–84.
47. Scintee SG, Mosca I and Vladescu C. *Can people afford to pay for health care? New evidence on financial protection in Romania*. Copenhagen: WHO Regional Office for Europe, 2022.
48. Mitrasevic M, Radovanovic S, Radevic S, et al. The unmet healthcare needs: evidence from Serbia. *Iran J Public Health* 2020; 49(9): 1650–1658.
49. Popovic N, Terzic-Supic Z, Simic S, et al. Predictors of unmet health care needs in Serbia; analysis based on EU-SILC data. *PLoS ONE* 2017; 12(11): e0187866.
50. Morrison SD, Banushi VH, Sarnquist C, et al. Levels of self-reported depression and anxiety among HIV-positive patients in Albania: a cross-sectional study. *Croat Med J* 2011; 52: 622–628.
51. Tomini F and Tomini S. Can people afford to pay for health care? New evidence on financial protection in Albania. Copenhagen: WHO Regional Office for Europe, 2020.
52. Dimkovski V and Mosca I. *Can people afford to pay for health care? New evidence on financial protection in North Macedonia*. Copenhagen: WHO Regional Office for Europe, 2021.

53. Reeves A, McKee M and Stuckler D. The attack on universal health coverage in Europe: recession, austerity and unmet needs. *Eur J Public Health* 2015; 25(3): 364–365.
54. Branas CC, Kastanaki AE, Michalodimitrakis M, et al. The impact of economic austerity and prosperity events on suicide in Greece: a 30-year interrupted time-series analysis. *BMJ Open* 2015; 5: e005619.
55. McKee M and Stuckler D. Health effects of the financial crisis: lessons from Greece. *Lancet Public Health* 2016; 1(2): e40–e41.
56. Laliotis I, Ioannidis JPA and Stavropoulou C. Total and cause-specific mortality before and after the onset of the Greek economic crisis: an interrupted time-series analysis. *Lancet Public Health* 2016; 1(2): e56–e65.
57. Hessel P, Vandoros S and Avendano M. The differential impact of the financial crisis on health in Ireland and Greece: a quasi-experimental approach. *Public Health* 2014; 128(10): 911–919.
58. Chowdhury N, Naeem I, Ferdous M, et al. Unmet healthcare needs among migrant populations in Canada: exploring the research landscape through a systematic integrative review. *J Immigr Minor Health* 2021; 23(2): 353–372.
59. Thomeer MB, Moody MD and Yahirun J. Racial and ethnic disparities in mental health and mental health care during the COVID-19 pandemic. *J Racial Ethn Health Disparities* 2023; 10(2): 961–976.
60. Organisation for Economic Cooperation Development. *Waiting times for health services: next in line*. Paris: OECD Publishing, 2020.