



Understanding the Effect of Economic Recession on Healthcare Services: A Systematic Review

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(Received 23 Mar 2021; accepted 19 May 2021)

Abstract

Background: We aimed to examine the available evidence about the impact of the crisis on the use of healthcare services in Europe.

Methods: We developed a systematic review of scientific literature for the period 2008-2017. The researchers searched three databases Medline/PubMed, Scopus and Web of Knowledge. For manual searching, several specialized journals of related scope as well as the finalized articles' reference list were searched. Descriptive and thematic analyses were carried out. PRISMA quality criteria and the recommendations of the Centre for Reviews and Dissemination were followed.

Results: Of 3,685 studies, 35 met inclusion criteria. Regarding “Effects of the social structure” healthcare accessibility inequalities increased by socioeconomic levels, especially in unemployed, people with low educational levels and migrants. Regarding “Healthcare effect”, the impact of the recession was observed in unmet needs, pharmaceutical spending containment, reduction of hospital beds, and privatization of services.

Conclusion: Austerity policies have contributed to increasing inequalities in the use of health services during the economic downturn. In the current economic climate, new management and health planning strategies such as hospitalisation at home, new models of integrated care and pharmaceutical management are needed to help achieve greater equity and equality in health.

Keywords: Systematic review; Economic recession; Healthcare systems; Inequities; Inequalities

Introduction

Since 2008, the European Union (EU) has suffered one of the most severe debt crises in history. Several countries faced declining gross domestic product, increasing public debt, and rising borrowing costs. Individual households have experienced financial insecurity created by job loss, salary reduction and reduced national spending on

social protection. This situation worsened in 2010, when the European Central Bank and the International Monetary Bank had to intervene in the economy of countries such as Greece, Cyprus, Portugal and Ireland (1).

In this context, several countries developed austerity measures according to the specific type of



crisis, duration, and societal impact (2). Many countries reduced health budgets, workers' wages, healthcare provision, pharmaceutical spending, and increased hours worked by healthcare professionals. These measures have had an impact on the healthcare the population (3).

Recently, there is a great interest in the study of the impact during times of economic crisis on health outcomes (1,4). However, scientific evidence on the role of a recession in healthcare is very fragmented and there is not a global vision. To date, studies have focused on the impact of the crisis on different EU countries (5-7), social groups and different health outcomes (8). The effect of the crisis on healthcare systems requires special attention, because of the healthcare policies making an impact directly on health (9).

The aim of this systematic review was to examine the available evidence about the impact of the crisis on the use of healthcare services in Europe.

Methods

This systematic review was conducted to analyze current scientific literature referring to the effects of the 2008 economic crisis on the use of healthcare services in EU countries. For the use of healthcare services, was considered "the achievement of the care provided by them in the form of care contact, or the population's access to health services" (10). The steps followed for the data collection and analysis were based on the Centre for Reviews and Dissemination recommendations (PROSPERO, www.crd.york.ac.uk/PROSPERO, "CRD42017068554") (11).

Search strategy

A literature search was performed on the following research platforms: PubMed, Scopus and ISI Web of Knowledge. Furthermore, we hand searched key healthcare journals, such as The Lancet, PLoS One Medicine, Social Science and Medicine, European Journal of Public Health, Health Policy and The British Medical Journal, among others. The search was conducted with different strategies (Table 1) using the following key words

"economic recession", "recession", "economic crisis", "financial crises", "fiscal crisis", "economic depression", "austerity", "financial constraint", "crises", "economic downturn", "economic adversity", "health services access", "Health care", "health service utilization", "access to health services" and "Europe, together with their possible combinations.

Inclusion and exclusion criteria

Only publications in peer-reviewed journals were included if the search terms were mentioned in the title or abstract, and their contents explicitly referred to the effects of economic crisis on healthcare for the different countries of the EU. Reference lists of all studies included in the qualitative analysis were examined manually to identify additional studies that could meet the inclusion criteria.

We selected three publication types: conceptual (including commentaries, editorials, and viewpoints); review (excluding systematic reviews (12)) and original research papers (longitudinal, quasiexperimental and experimental studies). Editorials, correspondence and commentaries are frequently excluded from systematic literature reviews, but in other studies, they were deemed acceptable for inclusion if they reported data on the impact of economic crisis on EU healthcare, so we included them (13).

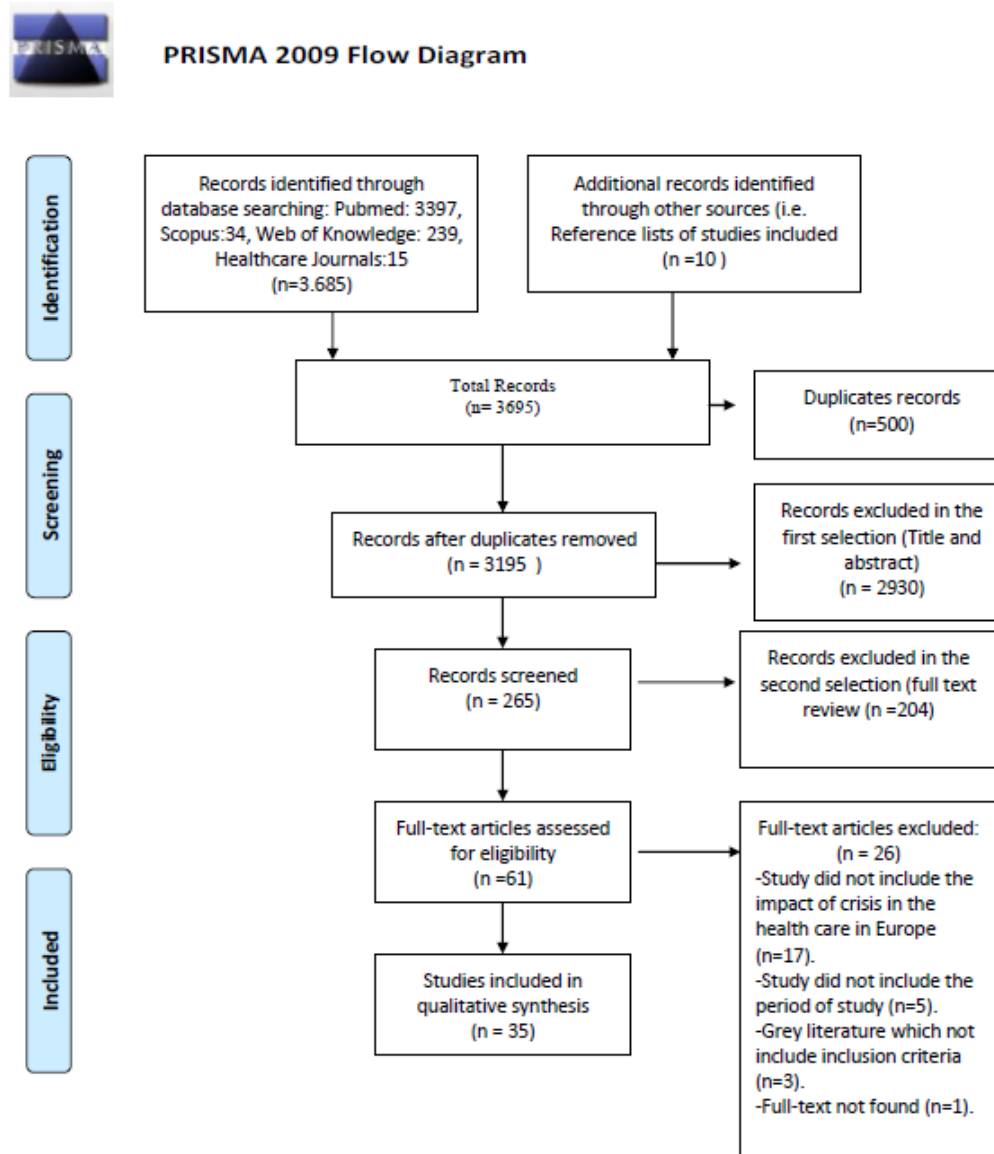
Study Appraisal

Critical reading and schematization of the information was performed using Osteba's critical-reading card (available on request) (13). We assessed the quality of the selected studies through Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) methodology (14) for quantitative studies and the EPICURE assessment method for qualitative studies (Engagement, Processing, Interpretation, Critique, Usefulness, Relevance and Ethics) (15). This process was carried out by two independent researchers, and in the event of non-consensus, a third reviewer was involved. Finally, data synthesis was performed with the use of thematic analysis (16).

Results

We screened 3,685 studies by title and 265 by abstracts for possible inclusion (Fig. 1). The full texts

of 61 papers were assessed for eligibility. Finally, 35 studies (18-52) were included in the systematic review. Table 1 shows the quantitative studies and Table 2 shows the qualitative studies included.



From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit www.prisma-statement.org.

Fig. 1: Diagram flow-chart

Table 1: Characteristics of quantitative studies included in the review. Results ordered by first author

<i>Ref- er- ence num- ber</i>	<i>Topic</i>	<i>Types of studies</i>	<i>Assess- ment of the qual- ity of arti- cles*</i>	<i>Risk of Bias (Score)**</i>
48	Access to healthcare.	CSS**	High	18
52	To provide novel causal evidence on the short-term impact of changes in healthcare provision and regulations on health outcomes.	Quasi-natural experiment	High	17
21	To develop econometric models to explain changes in growth for different health expenditure and their influence on health system	CSS	High	20
40	Unmet needs on Primary Healthcare.	CSS	High	19
30	Access to health care through unmet healthcare needs in the last 12 months.	CSS	High	19
50	Unmet needs medical examination or treatment during the last 12 months.	CSS	High	20
49	Unmet needs medical examination or treatment, did not get it on at least one occasion during the last 12 months.	CSS	High	19
51	Unmet needs for medical examination or treatment during the last 12 months.	CSS	High	19
41	Access to Primary healthcare.	CSS	High	19
19	Access to health care through unmet healthcare needs in the last 12 months.	CSS	High	18
18	Rate of discharges, the in-patient length of stay, and the average cases' complexity.	CSS	High	19
20	Unmet needs such as medical examinations or treatments during the last 12 months.	CSS	High	20
47	To provide evidence on the adaptation of public sector physicians.	CSS	High	18

*To assess the quality of the articles, the criteria set out in the OSTEBa critical reading sheets were followed (High quality means that studies present the following items correctly and clearly: research question, methodology, results, conclusions, conflict of interest and external validity)(13). **The risk of bias was assessed using the STROBE criteria for quantitative studies (range 0-22 points). ***Cross-Sectional Study. EU-STLC: European Statistics on Income and Living Conditions; PC: Primary Care

Table 2: Characteristics of qualitative studies included in the review. Results ordered by first author

<i>Ref- er- ence num- ber]</i>	<i>Topic</i>	<i>Types of studies</i>	<i>Assess- ment of the qual- ity of ar- ticles*</i>	<i>Risk of Bias* (N)</i>
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33	Changes in the healthcare system.	Commentary	High	EpI-CUR E (6)
31	User charges in health care after MoU measures.	Commentary	High	EpI-CUR E (6)
38	To analyse of the Italian health policy	Commentary	High	EpI-CUR E (6)
43	To study the measures introduced by central and regional	Commentary	High	EpI-CUR E (5)
42	To study the unmet needs of health	Commentary	High	EpI-CUR E (6)
25	To discuss some effects of the downturn in the Irish economy	Commentary	High	EpI-cuRE (4)
44	To analyze the impact of the financial crisis on the Spanish health system	Commentary	High	EPI-cURE (6)
23	To explore how health workforce policies have evolved in three southern European countries	Non-systematic review of scientific literature	High	EpI-CURE (4)
37	To study the impact of the economic crisis on health care.	Commentary	High	EPI-CUR E (7)
34	To study magnitude of the major consequences for the health sector	Non-systematic review of scientific literature	High	EpI-CuRe (3)
28	To analyze the importance of health policies, within the European Union	Non-systematic review of scientific literature	High	EpI-CUR E (5)
45	To explore how primary health care physicians working in Madrid experienced austerity measures.	Commentary	High	EPI-cURE (6)
35	To trace terms and review the effects of previous economic downturns on health status, to predict the economic crisis effect on health systems in Europe and the responses of governments.	Commentary	High	EpI-CURE (5)
22	To document how these policy responses affected health coverage and examine challenges ahead.	Commentary	High	EpI-CUR E (6)
32	To study empirical evidence from Greece's experience about the impact of health restrictive policies.	Non-systematic review of scientific literature	High	EpI-CUR E (6)

39	To analyze how a series of disconnected "reforms" could, lead to the effective dismantling of large parts of the Spanish healthcare system.	Commentary	High	Epi-CURe (4)
29	To examine the effects of austerity policies on access to health services in Spain.	Commentary	High	EpI-CURe (5)
36	To study how primary care will fare in Europe and what challenges it currently faces.	Commentary	High	EpI-CUR E (6)
27	To discuss the impact of an economic downturn on the social determinants of health and health outcomes.	Non-systematic review of scientific literature	High	EPI-CURe (6)
46	To study the impact of the crisis on healthcare in Europe.	Opinion	High	EpI-CURe (5)
26	To study healthcare practices within current austere economic circumstances.	Non-systematic review of scientific literature	High	EPI-cuRe (4)
24	To study relationships between unemployment, health and use of healthcare.	Non-systematic review of scientific literature	High	EPi-cURE (5)

*To assess the quality of the articles, the criteria set out in the OSTEBA critical reading sheets were followed (High quality means that studies present the following items correctly and clearly: research question, methodology, results, conclusions, conflict of interest and external validity) (13). **For qualitative studies the uppercase indicates compliance of a given item from the 7 items of the EPICURE. N: number of EPICURE criteria accomplished

Crisis and impact in healthcare system use

Thematic areas to classify test segments selected after content analysis were:

A. "Effects of the social structure"

The "effects of the social structure" is related with the fact that people's economic position determines their use of healthcare services (53–55). More than twenty studies reported an increase in inequalities in the use of healthcare services during the crisis and found that vulnerable groups such as the unemployed, women, migrants, the elderly, homeless, those with low levels of education, and with low socioeconomic quintile were significantly affected (more information in the reference section (56)).

Age

In a Greek, the elderly, and among them the migrants have suffered the most from health cuts and inequity in health (26). In Portugal, the crisis has had a negative impact on the accessibility of health services as well as the pharmaceutical copayments thus reducing their ability to purchase medicine, mainly in older people (48).

Gender

During the economic crisis, women (both native and migrant) had greater use of PC, SC and emergency services than men did. Native women showed significantly less hospitalization than men did during the study period (26,30).

Employment/occupation

In different EU countries, health coverage is related to employment, as in Greece. In this case, by

increasing unemployment rates, the population covered decreases and leaves some people without healthcare systems (26,32). Likewise, in other countries there were high rates of double health coverage (public and private). During the economic crisis, at first, private health insurance in households increased to compensate the loss of public healthcare services (34). Subsequently, due to a lack of economic resources, insurance began to decline (26). This led to increased inequities in the use of healthcare systems (34).

In Spain, a decrease was found in the use of healthcare services. These authors highlight people's fear of losing their job if they take sick leave or are incapable of affording the cost of drugs (34).

Income/financial constraints

A more egalitarian income distribution was associated with less negative effects of the use of the healthcare system (49). The most affected countries were those located in the southwest of the EU (35).

Overall, 33% of Italians considered the National Health Services inefficient in ensuring equitable access to healthcare (38). In Spain, it was observed some situations in which the use of healthcare services was reduced in the population in low-income households (45) and that budget cuts, and their consequences increased during the economic crisis (29). In Greece (32), change in healthcare services financing reflected households' decreased ability to purchase health services on an out-of-pocket payment basis, because of a declining income.

In this sense, the educational level (as a proxy of social class) was related to the variability in access to healthcare services more than other factors, such as geographical accessibility (26,36,41).

Finally, public health policies help to improve the health of the population whenever efforts are made to reduce health inequities (27).

Area of residence

Italy had better access than other countries such as Poland and France, but was less accessible than Sweden and the UK (38). In Spain, these measures had not been applied equally, leading to increased

regional inequities in access to healthcare (39,52). In Slovenia, women, pensioners, and people with poorer health reported less geographical accessibility to healthcare systems and this had worsened with the economic crisis (41). Finally, the area of residence was directly related with health inequity and healthcare access (27).

Vulnerable groups

During the recession, vulnerable groups were most affected by inequitable use of healthcare systems and increased considerably in all EU countries (24), especially migrants, homeless and the number of people in absolute poverty (38, 19). In Spain, children under 16 yr of age was the group most at risk of poverty (37) and one of the most affected groups by economic crisis was undocumented migrants (43). In Greece, vulnerable social groups should be taken into account when planning for different healthcare resources with the aim of reducing inequities in the use of healthcare systems (26).

B. "Healthcare effect"

Measures were mainly applied in four areas: pharmaceutical spending, hospital activity, health workers and other measures. Because of all these measures, the population's unmet healthcare needs have increased (more information in the reference section (56)).

Pharmaceutical spending

The two main measures implemented in EU countries to contain pharmaceutical spending are copayments and changes in pharmaceutical policies. In relation with copayments, eleven studies reported that it was one of the main measures put into effect to maintain spending during the economic crisis. This copayment might erode certain health outcomes as well as the use of free but resource-intensive services such as emergency care (27,28,39). It is necessary to study how these copayments affect the population's health and their use of healthcare services (20,27,28). These affected mainly low-income families (38), and pensioners (25), according to their income, started paying for the drugs, and employed individuals pay

up to 60% more for their medicines (21,32,39). These copayments had negative consequences for the population's health, as many patients stopped attending healthcare facilities because of the difficulties they had to access medication (29,38). In Portugal, during the economic crisis, copayments have increased and many patients have been forced to abandon treatment because they cannot afford to pay for it (19, 31,48). Finally, in Greece restrictions on access to healthcare facilities was reported as well as privatization schemes in relation to the introduction of copayments for outpatient services in public hospitals (32).

In relation with changes in pharmaceutical policies, some authors found that pressure on PC increased because they had to prescribe cheaper generic drugs and electronic prescriptions were used to control pharmaceutical spending (25,32,36). In Ireland, these measures increased the pressure on care, because of the notion that "with less they have to achieve more" (50).

Hospital activity

Some authors have reported a reduction in the number of hospital beds to contain health expenditure (31). In Spain, closure of wards has been observed together with the reduction of hospital beds. This situation, along with changing inclusion criteria for waiting lists, is leading to an increase in waiting time for patients (25,26,36). PC physicians had greater difficulty in referring patients for SC, or that waiting times had been significantly increased (44). The impact of the increased waiting time varied among autonomous regions due to the different policies applied (29). The Irish government observed increased pressure on the provision of hospital beds following the economic crisis-related cuts (28,50). A reduction in beds would need to be compensated by adequate investment in public health infrastructure, health promotion and PC services (28).

Measures imposed on health workers

A number of measures have been developed in relation to health professionals such as cuts in wages, increased working hours and reduced staff turnover (25,26,37-39,46,51). In Spain, these

measures produced an important professional dissatisfaction, problems pertaining to procurement and limited access to some specialties (32,36,46). In Portugal, more pressure was found through increased working hours, which reduced benefits from work. Younger healthcare workers were willing to migrate to countries where working conditions were better (47).

Other measures

Changes in healthcare coverage and healthcare privatizations have been imposed to contain economic expenditure (41). Coverage control measures have been applied in the Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Greece, Ireland, Italy, Latvia, The Netherlands, Portugal, Romania and Spain (27,39,41,47,48,52). During the worst years of the crisis, private health spending increased (21). On the opposite side, the Netherlands implemented several measures to increase health coverage in services such as physiotherapy for low-income people (27).

Unmet need for healthcare

Detollenaere et al.(40) explored the association between the strength of European PC and inequity in unmet needs, and found that more than 1.5 million extra people had unmet needs for healthcare since the crisis began. In this sense, in the Baltic States unmet needs for healthcare had increased significantly in Latvia and Estonia (51).

The most common reason for an unmet medical need in 2012 was the cost of medical care (36%), followed by waiting lists (15%) (50). Non-EU migrants had the highest prevalence of enforced unmet needs in the majority of countries, with the exception of Spain and Portugal (20). In Spain, only undocumented migrants had problems. In Italy, migrants reported a significant increase in needs compared to the indigenous population since the onset of the economic crisis. Likewise, in Europe, people in lower social classes have six times more unmet needs than people from higher quintiles (42).

In Portugal, unmet medical needs, more than doubled in the crisis year (2008) and that the main causes for that were financial barriers, high waiting

times, and an imbalance of time being spent with the job and family (18,19).

Discussion

This systematic review analyzes the consequences of the economic crisis on the use of healthcare services in the EU since 2007. Thirty-five studies met the inclusion criteria. The majority of them are from the southwestern EU countries. Two mechanisms affected healthcare use: “Effects of the social structure” and “Healthcare effect”. Regarding “Effects of the social structure”, we found that age, gender, employment, the lack of household economic resources and belonging to a vulnerable group, being migrant or single parent among others, influenced the use of health services. For “Healthcare effect”, we observed that unmet needs increased in the EU, especially among the most vulnerable social groups. Other measures were found cuts in public health expenditure, pharmaceutical spending containment, reduction in the number of hospital beds, increased waiting times, reduction in the number of healthcare workers (and their salaries), inadequate planning of health services and a growing demand for efficient public healthcare services.

Some studies have shown a significant relationship between unemployment, poor health and inequality in the access to healthcare. In a systematic review made during the beginning of the economic crisis, the economic containment of health and social spending by EU countries affected by the economic crisis will mainly affect vulnerable groups with the least ability to access healthcare (4). This is particularly so in countries where the health system does not guarantee universal coverage. In this sense, in a systematic review on the use of healthcare services by undocumented migrants in Europe, concluded that this group has a lower use of health services than documented migrants and native populations (57). These results are consistent with our findings, and with the systematic review done by Graetz et al.(58). We observed that women and single mothers have significant difficulties in accessing health services as De Jong et

al. (59) found in their systematic review. The lack of knowledge and fear of deportation acted as the primary barriers for undocumented migrant women to use accessible services. Finally, in a systematic review about the role of copayment on health services demand, concluded that copayment reduces the use of health services, especially Primary Care and Specialized Care. These findings are consistent with our results (60).

A limitation of this systematic review is the long-term effects of the economic crisis on health systems, which could not yet be studied. The impact of the economic crisis probably needs more time to be properly assessed (1,52). Another limitation is related with the measures used in the reviewed studies to analyze the use of health services. Some authors argue that use is not equivalent to simple access to health services (61). We need other ways to measure access to define more clearly the extent to which the need and demand is being satisfied or not (62). We only selected Spanish and English language studies published in full text. However, we think this is a minor bias, because we also checked studies published in other languages, in order to confirm that these papers did not meet the rest of our selection criteria. Finally, a high number of studies reviewed pertained to the southwest of Europe. These countries have been more affected by the 2008 economic crisis than other European countries. This fact could have overestimated the effect of recession on healthcare use in EU. Despite these limitations, this systematic review shows a wide range of consequences on the impact of the economic crisis on the use of health services in the EU.

Implications for Policy and Practice

The current economic climate, while challenging, presents opportunities to restructure health interventions in the long term. Promotion of good health and wellbeing are essential elements of all health systems. In this sense, it is becoming increasingly important to promote new forms of health planning such as home hospitalization, new models of integrated care and pharmaceutical management (63). Marmot concluded, “Austerity need no lead to retrenchment in the welfare state.

Indeed, the opposite may be necessary” (2). Policy responses on how to manage crisis are a key issue for healthcare managers. Cuts in employment and healthcare policies, as well as the reduction of citizens’ rights to universal health coverage conducted, have not been based on scientific evidence. In times of economic austerity, it is necessary to establish policies to increase health coverage, so that no one is left behind (2). For this, new strategies of health management are required, as “Not to do” and “Choosing wisely” (64). The sustainability of the health system can only be guaranteed if professionals’, patients’ and health systems’ efficiency are united in the same objective.

Conclusion

Through the 2008 economic crisis, the people’s economic position [effects on the social structure] determines their use of healthcare services [social gradient in the use of health services]. Economic cuts in health systems [healthcare effects] have increased inequalities in their use. Finally, the most affected countries were those located in the south-west of EU.

Ethical considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Conflict of interest

The authors declare that there is no conflict of interests.

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