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Genc Burazeri, Ulrich Laaser,
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EDITORIAL

First half century of the Association of Schools of Public Health in the European Region

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This year, the Association of Schools of Public Health in the European Region (ASPHER) reaches 50 years [1966-2016] and is engaged in celebration. Its significant achievements on the European stage will appear in the Anniversary Book and tell much of its exciting story (1). The official ceremony will take place in Athens, Greece 25-27 May 2016 with an opening event in the Acropolis Museum. The celebration is hosted by the Hellenic School, an institution finally launched in 1929, following heroic efforts of Greek pioneers in malaria and after a bizarre pandemic of dengue fever and a little known, unique and short-lived revolution in public health, which hiccoughed its way into history (2-5). One powerful driving force was Ludwik Rajchman of the League of Nations who described the health situation in Greece as being "worse than in Brazil".

ASPHER's contemporary vision is expressed in its 2020 strategy, enunciated into five specific strategic objectives that reflect educational quality, research capacity and global governance. These are pivotal to present and future population health challenges and have been elaborated in a spirit of collaboration and solidarity and in concert with the international community. One fundamental goal is the continued improvement of competency training of the European workforce. Appropriately trained public health practitioners are an effective link to crisis intervention such as in the current refugee crisis. ASPHER is a natural link and think tank for Europe and can provide insights into paths towards solution for the current and horrendous set of European problems.

In 1992, with the support of WHO-EURO [Jo Asval, M. Barberro] and the European Commission, DGV [David Hunter, Jos Draijer], a turbulent General Assembly was hosted by the Hellenic School. It received support from the Rockefeller and Goulandri Foundations and from Hellenic Ministries of Health, Education and Culture [Melina Mecouri]. In Athens, i) a Balkan Forum for Public Health was conducted and facilitated Eastern European Schools to become a greater force within ASPHER thus fulfilling the aim of its first Secretary-General, Teodor Gjurgjevic, Zagreb [1968] who travelled unsuccessfully to Moscow, to encourage membership; ii) ASPHER outlined its response to Article 154 of the Maastricht Treaty, and; iii) an award named for Andrija Stampar got underway, which this year goes to Richard Horton, editor of The Lancet (6).

Public health is a paradoxical entity spurned when things go well, called back by society when things fall apart. It is an essential function of society; an organized and systematic concoction for dealing with unpleasant surprises. It is an invigorating interdisciplinary cocktail, which like women's domestic work, does not fit well into the economist's equations of development or into business or market models.

Public health is an anti-hero, not unlike Don Quixote who tilted at windmills and Hucklebury Finn who knew hell awaited him, after he helped the escape from slavery. Like Huck and the Don, Public Health has a nobility of spirit and purpose, wanting to right wrongs. Like a woman spurned, it can take disastrous revenge when rejected by the community or by the state. Think of Ebola [Africa]; lead in Flint [USA].

Social sensitivity to deprivation and the organization of public health in response to dismal outcomes from environmental miasma are both constructs and products of the Enlightenment (7). Its thinkers aimed to improve living conditions of the population impacted by the Industrial Revolution and urbanization. They embraced such powerful thoughts as: *"there but for the grace of god go I, do onto others as you would have them do onto you and that the reduction of mortality had an economic value to society"*. Nevertheless, the danger still exists that the ship of state is operating with an insufficient ratio of lifeboats to passengers while avoidable death climbs (8).

ASPHER's homunculus-logo depicts both heart and brain, thus echoing the ancient maxim of *"healthy in body, healthy in mind"*, for the individual, the community and the body politic. Perhaps we should listen more to female voices; Hygiene, daughter of Asclepius, goddess symbol of public health; Peitho goddess of persuasion. Linguistically, public health suggests political tension and ideological divisions. It is a strange couplet from which the polar "public-private" surfaces. Etymologically, Idiocy-idiot derives from the Greek word private and health lacks importance until lost.

At this time of humanitarian crisis in Europe, ASPHER calls for greater tolerance of diversity; color, creed, opinion nurtured within cultures of peace and science and within a framework of equality. Public health policy must be equal in complexity to the current problem space; refugee waves, austerity measures, terrorism. It must demonstrate flexibility in approach and draw upon alternative but convergent conceptualizations as either in terms of reducing vulnerability or in terms of resilience building. As we step into the future we may be faced by health indicator decline and health determinant disasters.

ASPHER's 50 year legacy must be seen as a vital contributor to socio-economic progress, a bulwark against health damage and a pillar for our common European future. We say that investing in Schools of Public Health is a good thing! Schools of Public health do make a difference (9)!

No better gift can come from the political world than greater recognition of Schools and Institutions of Public Health in tandem with the ascendancy of public health up the political agenda.

From Athens, ASPHER's thoughts and concerns go out to all victims of abominable terrorist attacks, those suffering the consequences of austerity and to the plight of being a refugee. We must resist the dastardly and merciless acts of terrorism and mount a more effective response to population deprivation and environmental dangers and not permit them to derail Europe.

With pride we draw attention to our appealing Association ASPHER as it reaches a half century, while simultaneously, appealing to the European world of politics to make more room for public health.

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Bozikov J. Half century of the Association of Schools of Public Health in the European Region: A significant contribution to public health education (Editorial). SEEJPH 2016, posted: 23 April 2016. DOI: 10.4119/UNIBI/SEEJPH-2016-115

EDITORIAL

Half century of the Association of Schools of Public Health in the European Region: A significant contribution to public health education

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Conflicts of interest: The author is the Director of the Andrija Stampar School of Public Health in Zagreb, Croatia, which is one of the founding members of ASPHER.

Abstract

The Association of Institutions Responsible for Advanced Teaching in Public Health and of Schools of Public Health in Europe was established in 1966. It was in response to the initiative of the World Health Organization (WHO) Regional Office for Europe as part of a worldwide initiative to set up Regional Associations of Schools in every WHO region as a channel for initiating innovative policies. The Organisation's name was later changed into Association of Schools of Public Health in the European Region (ASPHER).
ASPHER has established a tradition in terms of an annual award named Andrija Stampar, which has become a prestigious European reward for merits in public health. A significant contribution to public health education has been made during half century and the Association is today stronger than ever before.

Keywords: Association of Schools of Public Health in the European Region (ASPHER), public health education, public health teaching.

Establishment and early years

In response to the World Health Organization (WHO) Euro initiative, representatives of the leading Schools of Public Health (or Hygiene) including the Schools for Tropical Medicine (and, in addition, the Institutes of Hygiene/Healthcare) gathered together at meetings held between 1964 and 1966 in Rennes (December 14-18, 1964), Lisbon (February 14-16, 1966) and Ankara (October 17-21, 1966). Already in 1964, Professor Sénécal from the School of Medicine in Rennes was appointed to draft the Statutes based on the statues of several international associations and taking into account specificities of the "Old Continent" and suggestions from representatives of the schools. The Statutes were unanimously adopted at the meeting in Ankara on the 20th of October, 1966. The Organisation was first given the French name and acronym (AIRESSPE – *Association des Institutions Responsables d'un Enseignement Supérieur en Santé Publique et des Écoles de SP en Europe*) and later (in 1973) the Association's name was changed into ASPHER (Association of Schools of Public Health in the European Region). The history of the Association has been already described (1-3).

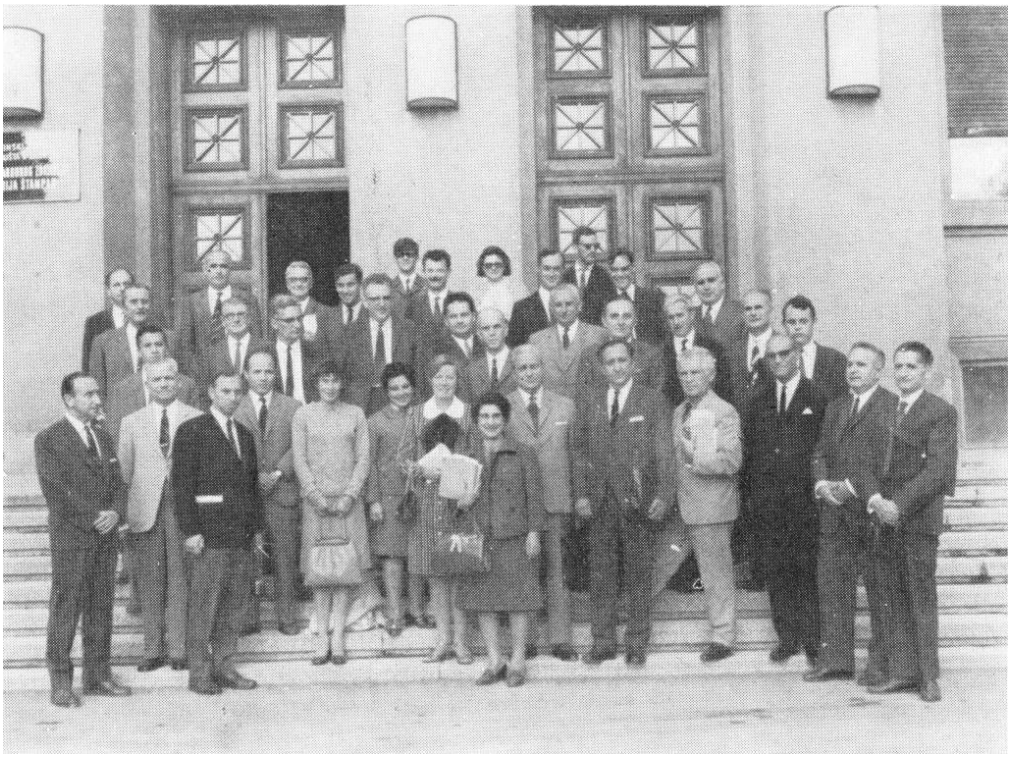
The Article 24 of the Statutes stated that its text, written in English, French and Russian (the working languages of the WHO Regional Office for Europe), was to be deposited in the archives of the WHO Regional Office in Copenhagen accompanied with versions in Spanish (also, official and working language of WHO Euro) and German. An Interim Committee was elected with the task of carrying out the decisions of the Ankara Symposium and to convening the first General Assembly of the newly established Association. Prof. Dr. Hans Harmsen from Hamburg was elected as President, Dr. Frans Doeleman from Leiden as Vice-president and Prof. Dr. Jean-Simon Cayla as the Secretary-General of the Interim Committee (4, Preface, pp. 1-3). The Statutes were signed by the President, Vice-President and two Rapporteurs (Professor Jean Sénécal and Dr Stuart W. Hinds) and it was later approved and published in English, French and Russian in the Bulletin No. 1-2 together with the list of member institutions with full addresses and phone numbers, delegate name and his/her alternate representing the respective member according to the Article 6 of the Statutes (4,5).

The author of this article, currently acting in the capacity of Director of the Andrija Stampar School of Public Health, takes pride from the fact that our institution hosted the first General Assembly of the newly-established organisation, convened in 1968 (Figure 1), on the occasion of which the Statutes were approved and Dr. Jean-Simon Cayla, the Director of the *Ėcole Nationale de la Santé Publique* (ENSP; today's EHESP) established in Rennes, was elected as President; Dr. Christian Lucasse, representing the *Koninklijke Instituut voor de Tropen* (Royal Tropical Institute from Amsterdam) was elected as Vice-President; whereas Dr. Teodor Gjurgjevic, acting in the capacity of the Administrative Secretary of the Andrija Stampar School of Public Health, was elected as Secretary-General. Prior to that, Dr. Gjurgjevic was personal secretary of Andrija Stampar himself. At the time of the First General Assembly, the Director of the School was Professor Branko Kesic, while Prof. Fedor Valic was the third one who contributed significantly to the AIRESSPE's foundation acting in the capacity of the delegate. It was decided that a seat of the newly established organization would be at the School in Zagreb as long as Dr Gjurgjevic was Secretary-General. The bulletin of the Association was launched and the first two double-issues were published during 1969 (No. 1-2 and No. 3-4) bringing in printed form records of all sessions thanks to the efforts of the Secretary-General who wrote the respective prefaces too (4,5).

According to the published lists of the members, the Association counted 33 members at the time of its First General Assembly and it reached 40 members by the end of 1969. Interesting to mention, those 40 members represented the following 16 countries: Algeria [1], Belgium

[5], France [5], Germany [2], Greece [1], Hungary [1], Ireland [1], Italy [4], Portugal [1], The Netherlands [6], Spain [1], Sweden [1], Czechoslovakia [1], Turkey [3], UK [4] and Yugoslavia [3], where number of members is denoted in squared parentheses including one French Institute that already in 1969 announced an intention to withdraw from membership (4,5).

Figure 1. Participants of the first ASPHER General Assembly, convened from October 7-12, 1968, in front of the Andrija Stampar School of Public Health in Zagreb, Croatia



The School of Public Health in Zagreb was established in 1927 by funds of the Rockefeller Foundation and the efforts of Dr. Andrija Stampar as one of the oldest Schools of Public Health in Europe. At the ceremonial opening of the School's building which took place on October 3 , 1927, speeches were delivered by the representatives of Rockefeller Foundation (Selskar M. Gunn), the League of Nations (Dr. Ludwig Rajchman and Prof. Léon Bernard), as well as by many others including the representatives of the Institutes of Hygiene from Warsaw, Prague and Budapest. The School became part of the Zagreb University School of Medicine after World War II under the Directorship of Andrija Stampar who also chaired the Department of Hygiene and Social Medicine. At the same time, Stampar was preparing the Constitutions and other documents for the establishment of the World Health Organization, chaired the Interim Commission and was elected by the virtue of acclamation as the President of its First Assembly convened in Geneva. *"He was not only a Founding Father of the latter Organization, but also one of its most stalwart bulwarks during the first and formative decade of its existence"* wrote WHO Director-General Dr. MG Candau in his letter to contribute as a foreword of the publication of selected papers by Andrija Stampar in 1965 (6). The school proudly took Stampar's name after he passed away in 1958.

Dr. Teodor Gjurjevic (1909-1976) was an interesting person: educated in Law in Zagreb and later in international affairs in Paris and Haag, he was a polyglot fluent in several foreign languages (he used to speak and write in English, French, German and Italian and spoke Polish, Russian and Spanish). He had pursued the path of the career diplomat already before World War II and was a holder of two PhD degrees, one in Law obtained at the University of Zagreb in 1933 and the second in Humanities from the University of Oxford in 1956. He was an employee of the Zagreb School of Public Health since January 1, 1948 till his death on March 20, 1976 with a 3-year break (in 1954-1957) which he used for preparation of the PhD dissertation at the Faculty of Modern History, University of Oxford (7).

Dr. Gjurgjevic had every intention to evoke the interest of SPHs established in the East Europe and encourage them to join the Association; to that goal, he even travelled to Moscow, but was unsuccessful. Moreover, in ASPHER written history it reads: *"Dr. Gjurgjevic had a fatal heart attack whilst visiting Libya in the pursuit of his heroic efforts to set up a world federation of schools of public health"*, while in official documents it is stated that he died on 20 March 1976 in Zagreb (1,7).

Ever since the Foundation Day, ASPHER has regularly organised its annual conferences. From 2008 on, these annual conferences have been organised in collaboration with the European Public Health Association (EUPHA) and have run under the name European Public Health Conference (EPH). On top of the EPH attendance, the School principals get to meet once more on the occasion of the Deans' and Directors' Retreat (D&D Retreat), also organised on an annual basis. Since 2014, when Zagreb had the privilege to host the D&D Retreat, the event has become even more important, given that within its frame the annual session of the General Assembly, earlier convened on the occasion of the annual conference, takes place.

The prestigious Andrija Stampar Medal

ASPHER has made it its tradition to present an accolade (a medal) in memory of Andrija Stampar; the Medal became a reality in 1992 and has been awarded annually since 1993 to the key opinion leaders in recognition of their international-scale achievements in the field of Public Health. The Andrija Stampar Medal has become the most prestigious European award presented in recognition of one's achievements in Public Health leadership and education. The credit for introducing this accolade and making it a tradition should go to Prof. Jeffrey Levett from Athens, who presided over the Association in the 1992-1993 timeframe, and to his successor, Prof. Ulrich Laaser from Bielefeld, who had acted in the capacity of ASPHER President when it was coined and firstly awarded during the 15th ASPHER Annual Conference held in Bielefeld, Germany, from November 28 to December 2, 1993.

On one side of the Medal, the name of the Association and its logo can be found, while on the edge of its other side the following words, allegedly spoken by Dr. Andrija Stampar, are embossed: *"Public Health Investment Harvests Rich Rewards"*. In the centre of the Medal, the name of the Medallist is engraved (Figure 2). The awardee is selected by the ASPHER Executive Committee, and the award is presented on the occasion of the ceremony organised during the ASPHER Annual Conference. The ceremony includes the laudatio to the awardee delivered by a prominent figure, followed by the "Thank You" speech given by the awardee. The very first awardee was Dr. Léo Kaprio, WHO EURO Regional Director Emeritus at the time (WHO Regional Director 1966-1985), whereas the laudatio speech was delivered by Prof. Jeffrey Levett, the Dean of the Athens School of Public Health (Figure 3). It is worth mentioning that Dr. Kaprio, representing the World Health Organization in his address given at the first General Assembly convened in Zagreb in 1968, stated the following: *"This*

General Assembly of your Association can be an important milestone along the road to further progress in European Public Health" (4, pp 35-39). The list of the Medallists, the pertaining conference venues and the names of the laudatio speakers are available at ASPHER's website (8).

Figure 2. The Andrija Stampar Medal*

* In order to express her gratitude for the Medal awarded to her in November 2011, Dr Zsuzsanna Jakab, the WHO Regional Director for Europe, gave a Thank You speech in words most carefully selected which was recorded and made available through the WHO website (9); WHO Regional Director also took the opportunity to proudly advertise her Medal Awardee achievement while presenting her annual report during the 62nd session of the WHO Regional Committee convened at Malta on September 10th, 2012 (10, slide 12).

Figure 3. Ceremony of the first Andrija Stampar Medal*

* The very first Stampar Medal Award Ceremony was held during the XV ASPHER Annual Conference held in Bielefeld from November 28 to December 2, 1993. From left to the right: Prof. Ulrich Laaser, ASPHER President, Evelyne de Leeuw, ASPHER Secretary-General, awardee Dr. Léo Kaprio accompanied by Mrs. Kaprio and Prof. Jeffrey Levett, ASPHER immediate Past-President who delivered the laudatio speech *(courtesy of ASPHER)*.

Congratulations and best wishes for a productive and prosperous future

Currently, ASPHER has reached 110 members in terms of Schools or Departments of Public Health established in 43 countries of the WHO European Region and, on top of that, some of the Schools from other continents (Australia, Canada, Mexico, Lebanon and Syria) are affiliated with the organization as "associated members" (11).

This year ASPHER is celebrating the 50th anniversary and the schools' heads will meet end of May 2016 in Athens, where Deans' and Directors' Retreat together with the General Assembly is hosted by the National School of Public Health under the aegis of the Hellenic Ministry of Health (12). The fiftieth Anniversary book with member schools' profiles is already in press (13).

Congratulations! Long live and best wishes for a successful and prosperous next 50 years!

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ORIGINAL RESEARCH

Performance of the public health care sector in the Republic of Macedonia

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Abstract

Aim: Healthcare authorities constantly search for new approaches of assessing the performance of the health sector. Comparative studies help for improvements in healthcare by learning from each-other. Our aim was to assess the performance of the public healthcare system in the Republic of Macedonia, through the analysis of preparedness of institutions to fulfill the population‟s healthcare needs and expectations.
Methods: This study had a regional character. The national research team interviewed 175 randomly selected participants from Macedonia. The research was performed in the period March 2012 – March 2013. For the research purposes there were used especially designed questionnaires for cancer, stroke, myocardial infarction, diabetes mellitus and injuries. For assessment of the performances, the appropriate techniques were developed.
Results: Macedonians consider public healthcare system as being medium-good in all aspects: accessibility, availability, quality of health care services and population‟s confidence. The knowledgeable observers (N=125) believe that state-of-the-art treatment exist all over the country ("yes": 33.6% and "rather yes": 44.8%). They believe that the services are accessible to everybody, free of major charges ("yes": 31.2% and "rather yes": 45.6%). The individual witnesses (N=50) argued toward lack of pharmacies and proper medicines in rural areas, with a gap between the availability and quality of services in rural vs. urban areas.
Conclusion: The future goals for Macedonia include better public healthcare financing, cost definition of health packages, improved disease prevention and effective human resources.

Keywords: assessment of services, availability, public healthcare system, quality of care.

Conflicts of interest: None.

Introduction

Health authorities are in constant search for systematic ways and new approaches of assessing the performance of the health sector at national, or cross-national level. Main arguments for the necessity of measurement include identification of the quality of healthcare service delivery, support for design of the health sector reforms, improvement of healthcare system and production of better outcomes for the patients and payers. The healthcare performance can be followed and measured by different indicators, such are: life expectancy, morbidity, or mortality. There are many determinants of health that have influence on the health status of the population, but are not considered as direct indicators (1).

The performance assessment can be defined as comparing or measuring deviations of observed clinical practice from recommended practice. This assessment may range from a formal in-depth evaluation process to a much less elaborate simple review of practice. The most common performance assessment methods are: (i) audits/audit groups, (ii) peer-review groups, and (iii) practice visits (2,3).

Noncommunicable diseases (NCD), principally cardiovascular diseases (CVD), diabetes mellitus (DM), cancer, and chronic respiratory diseases, are the most common diseases which have caused million deaths worldwide. The scientists predict an increased number of deaths from noncommunicable diseases that are projected to further 17% over the next 10 years (4).

Republic of Macedonia is not different in disease prevalence values compared with other European or neighboring countries. According to the data from the National Public Health Institute in the Republic of Macedonia, in the year 2011, the most frequent diseases for which the patients had received treatments at out-patient services were: cardiovascular diseases (23.6%), respiratory diseases (18.2%), diseases of the muscular-skeletal system (7.7%), diseases of digestive system (7.2%), and diseases of the endocrine system (7.1%), out of 2695233 registered cases (5).

For the same year, the total number of hospitalized patients was 253906 (6), out of which for: cancer 33836 (13.3%), endocrinology system diseases 6422 (2.5%) patients, musculoskeletal system diseases 11150 (4.4%), cardio-vascular diseases 38133 (15.0%) and for injuries 12955 (5.1%).

The Republic of Macedonia has a compulsory health insurance system that provides universal health coverage for the whole population. The goal of the health sector reform in Republic of Macedonia is the creation of a system that is aligned to the needs of the population, which can operate efficiently within the resources available.

The government and the Ministry of Health provide the legal framework for operation and stewardship and the Health Insurance Fund (HIF) is responsible for the collection of contributions, allocation of funds and the supervision and contracting of providers. In the year 2002, the HIF has started contracting the private primary health care facilities (family doctors or general practitioners-GPs), introducing a capitation-based payment system.

The medical examinations by the GPs are provided free of charge for all citizens. The population participates in covering the health expenditures by paying some amount of money which is calculated from HIF special scales and generally is 20% of the total costs of health services.

This practice was changed and even improved in the year 2012, by introduction of a law for health protection (7). Free-of-charge healthcare services receive all patients with monthly salary lower than the average official salary for the previous year.

From co-payments are excluded blood donors, children with special needs, persons under permanent social care, patients in mental institutions and mentally retired abandoned persons.

All citizens that do not have regular health insurance (for example: stateless persons and social care recipients), are subsidized by the state budget (8).
In the year 2010, general government expenditure on health as a percentage of total government expenditure was 12.9%. The total expenditure on health (PPP in US$) in the same year was 791 $ per capita, which increased from 423 $ in the year 1995.
The healthcare system in the Republic of Macedonia is organized at three levels: primary, secondary and tertiary level. Some of these services are part only of the public healthcare sector, whereas some other services are provided in public and private healthcare facilities. In the year 2011, there were 3375 at primary level and 386 at secondary level private healthcare practices that had contracts with HIF. The total number of hospital beds in 2012 was 9076, or 4.4 beds per 1000 inhabitants (9). The hospital services are organized in: 14 general hospitals, 13 special hospitals, 30 university clinics and 19 other clinical hospitals, centers and units (9).
In this framework, the objective of this study was to assess the performance of the public healthcare system in the Republic of Macedonia, through the analysis of the expected (state-of-art treatment) and actual public health care of the patients.

Methods

The performance of the public health care system in the Republic of Macedonia was analyzed trough assessment of the access of the population to health care services developed by Wismar et al. (10), where "the state-of-the-art" of the healthcare system is defined as: diagnosis, treatment and recovery, which are accessible to every citizen covered by a health insurance, free of major additional charges. Accessibility of the health care system is defined as "a measure of the proportion of the population that reaches appropriate health services".
The assessment of the expected and actual performances of public health care system was based on the data collected from 175 interviewed respondents: 125 knowledgeable observers (family physicians and medical specialists in hospitals or emergency centers), and 50 individual witnesses (patients or their family members who were diagnosed during the period between the 1st of January 2010 to the 31st of December 2011). The structured interviews were performed for those two groups of the study participants, using ten different questionnaires tailored according to the five selected health problems/diseases: cancer, stroke, myocardial infarction, diabetes mellitus (type II) and injuries. The selection of these health problems/diseases was due to the fact that they represent the major causes of death in the country and require different approaches in the health care response (emergency versus long-term monitoring and care). We combined two different sampling methods: selective expert sampling for knowledgeable observers and non-probability convenience sampling method for the individual witnesses. The field work was carried out in the period from March 2012 to March 2013.
The data obtained through interviews with knowledgeable observers and individual witnesses, for each of the five selected health problems, was organized and analyzed in relation to an adjusted 6-access-steps model based on the following sequence of themes: the extent to which the national benefit packages cover diagnostic, treatment, monitoring and rehabilitation in the specific health problem; the extent to which payments, co-payments, and out-of-pocket expenditure are involved and threaten equity of access; geographical access and availability of services; availability of public and private health-care providers; waiting lists and other aspects of system organization that can result in barriers to the health care access; and groups with limited access and risk factors related to the specific health problems.
The expected performance of the health care system was assessed by measurement of four dimensions of the health care system: accessibility, availability, quality of health-care

services and the population‟s confidence in the public health system, based on the opinion of the knowledgeable observers. Assessment for each dimension was made using the Likert scale from 1 („very poor‟) to 5 („very good‟). Results were presented as the average of the scored values for each dimension.

For measurement of the general assessment of the health system, the opinions on the four dimensions were aggregated into a dominant opinion index, using the method basically developed by Hofstede in 1980 (11) and the formula: (P-N) * (T-NR)*100/T*T, where P – positive answers („very good‟ or „good‟), N – negative („very poor‟ or „poor‟), NR – neutral or non-response, and T – total number of variables. This type of index varies between -100 (generalized negative attitude) and 100 (generalized positive attitude toward the issue).

For assessment of the actual performance of the public health care system, the analysis of the opinions/experience of the individual witnesses and knowledgeable experts was made with a focus on the history of the health problem. The main focus was on the factors hampering the access to the health care system, as essential elements for the assessment of the actual performance of the public health care system.

Results

Health status of the population in Macedonia shows many different characteristics and tendency, caused by economic, political, socio-demographic changes, as well as health care reforms which have been in process in the past 20 years. Figure 1 presents the standardized death rate (SDR) of five health problems: malignant, cerebrovascular and ischemic heart diseases, diabetes and injuries in the period 1990-2010 (12).

SDR of malignant neoplasms shows higher rate and increasing trends in the Republic of Macedonia, compared with the EU and the European region countries. Hence, the SDRs of cerebrovascular diseases and diabetes are 3.5 times higher in Macedonia than in the EU countries and much higher than in the countries of the European region. SDR of cerebrovascular diseases follows the similar trend as in the other European countries, but the SDR of injuries is two times lower than in the European countries.

In the current research, all respondents were divided into two groups: individual witnesses (n=50) and knowledgeable observer (n=125). Their distribution is presented in Map 1.

The demographic characteristics of the individual witnesses that have participated in the study are presented in Table 1.

The dominant characteristics of the respondents from the group of the individual witnesses included: patients (64%) that live in a large urban residency (48%), pensioners (34%), with high school level of education (54%) and middle income (38%).

The characteristics of the knowledgeable observers are presented in Table 2.

According to demographic data, the dominant group of respondents from knowledgeable observers consisted of doctors (34.4% GPs and 31.2% specialists), males (58.4%) that live in a large urban residency (66.4%), with a mean age of 43.3 years.

The results of the assessment of the performance of public health care system in the country are presented in Table 3.

Knowledgeable observers consider the health system as being medium/good in all four dimensions: accessibility, availability, quality of healthcare service and the population‟s confidence in the public health system, with an average score of 3.5. The scores vary from

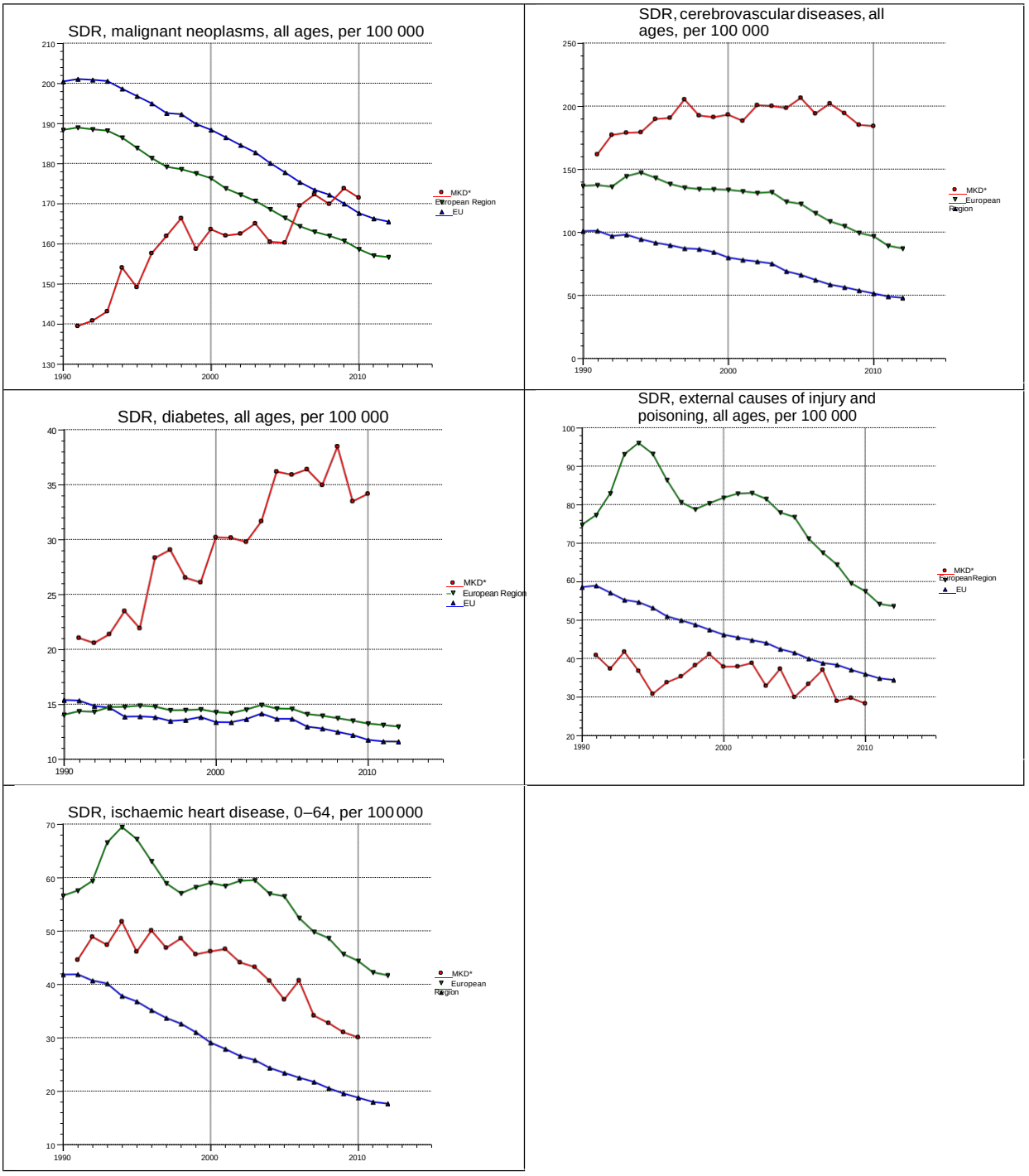
points for the population confidence to 3.7 points for the availability of the services.

The biggest part of respondents from the group of the knowledgeable observers believes that state-of-the-art treatment exists all over the country (“yes”: 33.6% and “rather yes”: 44.8%) and that they are accessible to everyone free of major charges (“yes”: 31.2% and “rather yes”:

%). Yet, health professionals from rural areas tend to assess the system performance with lower remarks.

At the level of the overall sample, the dominant opinion index about the health care services showed an average value of 34 points in a scale from -100 to +100. This index had very little variations from 38 for diabetes mellitus, 37 for injuries, 35 for stroke and myocardial infarction, but it was significantly lowest for cancer, with only 23 points. These findings are shown in Figure 2.

Figure 1. SDR for selected diseases in the Republic of Macedonia during 1990-2010



Map 1. Distribution of respondents

X Knowledgeable observers
✓ Individual witnesses

Table 1. Demographic characteristic of individual witnesses

VARIABLE	CATEGORY	NUMBER	PERCENT
Type of respondent	Patients	32	64
	Family member	18	36
Residence	Large urban	24	48
	Small urban	14	28
	Rural	12	24
Ethnicity	Macedonian	37	74
	Albanian	11	22
	Other (Roma, Serbian)	2	4
Age (average)	Cancer	54.9	?
	Stroke	65.3	?
	AIM	53.8	?
	Injuries	43	?
	DM	61.6	?
Employment status	Manager	1	2
	Clerical staff	6	12
	Non-manual worker	5	10
	Manual worker	11	22
	Pensioner	17	34
	Student	3	6
	Housewife or inactive	7	14
Level of education	None	3	6
	Elementary	10	20
	High school	27	54
	College or more	10	20
Income	Low	10	20
	Middle low	13	26
	Middle	19	38
	Middle high	6	12
	High	2	4

Table 2. Demographic characteristic of knowledgeable observers

VARIABLE	CATEGORY	NUMBER	PERCENT
Type of respondent	General practitioners	43	34.4
	Specialist doctors	39	31.2
	Representatives of regional or national directions of public health	7	5.6
	Hospital representatives	11	8.8
	Emergency centers representatives,	3	2.4
	Representatives of NGOs active in the field	2	1.6
	Representatives of patient organizations	3	2.4
	Other	17	13.6
Residency	Large urban	83	66.4
	Small urban	32	25.6
	Rural	10	8
Age (average)		43.3 (min=24; max=67)	
Gender	Male	73	58.4
	Female	52	41.6

Figure 2. The value of the Dominant Opinion Index

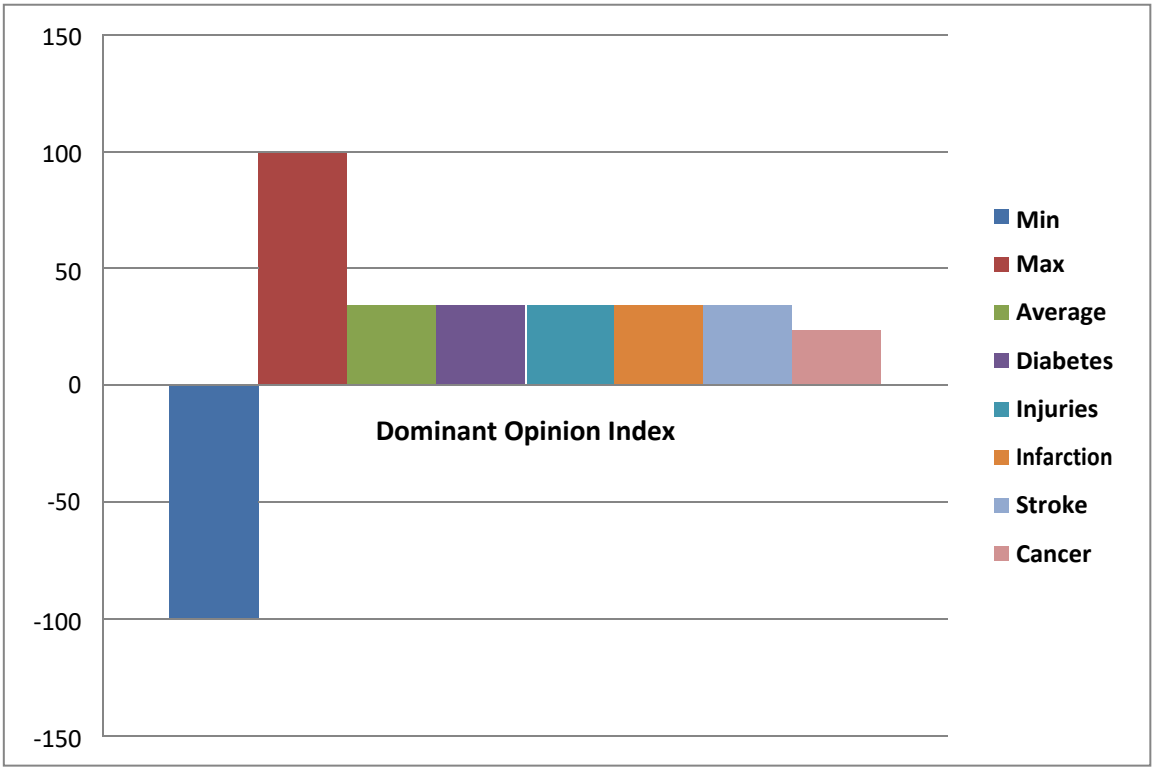


Table 3. Assessment of the performance of public health care system in the Republic of Macedonia

ASSESSMENT OF PUBLIC HEALTH PERFORMANCE	CATEGORY	NUMBER	PERCENT	SCORE (1-5)
Availability of health care services	Very poor	0		
	Poor	11	8.8	
	Medium	43	34.4	
	Good	48	38.4	
	Very good	23	18.4	
Average Score				3.7
Quality of health-care services	Very poor	1	0.8	
	Poor	11	8.8	
	Medium	52	41.6	
	Good	44	35.2	
	Very good	17	13.6	
Average Score				3.5
Population's confidence in the public health-care system	Very poor	3	2.4	
	Poor	14	11.2	
	Medium	52	41.6	
	Good	40	32	
	Very good	16	12.8	
Average Score				3.4
Health-care services are accessible to any person who needs them, regardless their economic situation	Very poor	8	6.4	
	Poor	16	12.8	
	Medium	32	25.6	
	Good	37	29.6	
	Very good	32	25.6	
Average Score				3.5
State-of-art treatment (of the respective health problem) is available?	Yes	42	33.6	
	Rather yes	56	44.8	
	no	6	4.8	
	Rather no	21	16.8	
Is the state-of-the-art treatment (including diagnostics, monitoring etc.) accessible to everybody, which means free of major charges?	Yes	39	31.2	
	Rather yes	57	45.6	
	No	6	4.8	
	Rather no	23	18.4	
Dominant opinion index (overall)				34

When analyzing which group of knowledgeable observers are most satisfied, it is remarkable to note that physicians (general practitioners and specialists) are the most satisfied observers, with a score on the dominant opinion index of 40 points, despite the NGO and representatives of the patients‟ organizations who are the least satisfied observers (approaching to the 0 point on the scale). However, it should be emphasized that the simple size and the profile of the observers influenced on the observed results of this research work.

Regarding the assessment of the actual performance of the public health care system, Table 4 provides descriptions about the main barriers of access to services in Macedonia.

Table 4. Main access barriers in public health care of the five selected health problems

ACCESS BARRIERS	1		2		3		4		5	
	IW	KO	IW	KO	IW	KO	IW	KO	IW	KO
Delayed first contact with a doctor		X		X	X				X	
Poor knowledge and low level of prevention and information of population		X		X	X				X	X
Doctor or medical services are not available in some areas		X		X	X		X	X		X
Diseases‟ related services are available only in some areas			X	X	X					
Rehabilitation units/ services are not available/enough in some areas				X				X		
Pharmacies are not available in some areas		X		X				X		
Emergency services are not available in some areas or are underdeveloped		X	X	X			X	X		
Transport services are underdeveloped or too costly					X					
The waiting time for being received by a specialist is very long		X			X	X				
The waiting time for getting medication is very long						X		X		
The waiting time for rehabilitation services is very long						X	X			
Lack of trust in doctors, nurses or medical staff					X	X	X			
Lack of interest or unprofessionalism of the doctor or medical staff						X	X	X		
Lack of humanness of the staff					X					
Lack of money to pay the doctor		X								
Lack of money to pay the needed tests										
Lack of money for out-of-pocket payments			X							
Low quality and effectiveness of medical services	X		X	X		X	X	X	X	X
High costs of medication	X	X	X	X		X	X		X	
Poor equipment of public clinics/hospitals		X			X	X	X		X	X
Lack of accessibility and continuity of care	X			X						
Specialists of certain subspecialties are missing or insufficient										

Legend: 1 = infarction; 2 = stroke; 3 = cancer; 4 = injuries; 5 = diabetes
IW = individual witnesses; KO = knowledgeable observers

There are four major aspects of the health care system that are major barriers in accessing state-of-the-art treatment, for all the selected health problems:

- low quality and effectiveness of medical services;

- high cost of medication;
- poor equipment of public health care clinics/hospitals, and;
- availability of doctors and medical services.

Additionally, the respondents gave high priority to the poor knowledge and the low level of information and the lack of preventive health-related behavior; availability of emergency services and lack of trust in medical staff and their unprofessionalism as possible barriers hampering state-of-the-art treatment of the patients.

The respondents in this study confirmed a delayed first contact with a doctor in four of the analyzed diseases (myocardial infarction and stroke from knowledgeable observers, cancer and diabetes from individual witnesses), as well as unavailability of healthcare services in some areas (for stroke and cancer) and long waiting time for specialized care (myocardial infarction and cancer).

More than 70% of participants in the study referred to a low quality of medical services, high cost of medication and poor equipment of public clinics and hospitals. Despite these remarks, Macedonian citizens showed a high level of trust in doctors. The trust in medical doctors or nurses in this study was pointed out for cancer (knowledgeable observers) and injuries (individual witnesses and knowledgeable observers).

Discussion

Considering the health challenges that are facing all countries in the Southeastern European (SEE) region, a comparative qualitative study about assessment of the performance of the public health care system was performed in 2013, with participation of eight countries. This paper is focused on the research results obtained in the Republic of Macedonia. The main idea was to compare the actual level of health care delivery in comparison with the highest, "state-of-the-art" diagnosis, treatment and recovery, related to five deadliest health problems in the country: myocardial infarctions, stroke, cancer, diabetes mellitus type 2 and injuries.

The results of the study showed that health professionals consider the Macedonian health care system as being "medium/good" with no significant variations in the accessibility, availability, quality of health care service and the population"s confidence. The overall performance of the health care system was similarly assessed as "good" with no significant differences for different health care problems/diseases. Regarding the opinions of study participants, low quality and effectiveness of medical services, high cost of medication and uncommon preventive health related behavior were pointed out as the main barriers in delivery of the state-of-the-art health care treatment.

There is a lot of information about the risk factors for non-communicable diseases and preventive measures in the country, but apparently they do not reach the needs and expectation of the citizens, even though the GPs are obliged to make regular preventive examinations among the population, according to the national preventive programs.

The strategic objective to the Ministry of Health (2010-2014) aimed to provide healthcare services for the population with good quality, improved availability and accessibility, as well as better primary health care services for the population (13). There are a lot activities that are conducted to meet this goal (including provision of new equipment, education of medical staff, preventive programs and the like). In 2011, the Ministry of Health started a project for public procurement of new equipment. With a budget of 70 million Euros, there were provided over 609 new sophisticated medical devices.

The research that was performed in Macedonia (in May, 2012) with 531 respondents, showed that citizens expect better behavior of the medical staff, shorter waiting time for medical examination or diagnostic procedures and better hygiene (14).

In comparison with the results from the other seven countries included in the research comparative study, Macedonia shares the same situation as the other SEE countries, where poverty, financial and geographical barriers are major factors that lead to a lack of access. In most of the countries (especially in Moldova, Bulgaria and Kosovo), out-of-pocket payments constitute more than 40% of the total payments for health care services, in contrast with the responses from participants in Macedonia, where out-of-pocket payments as a barrier is mentioned only for cancer.

However, the performance of the public health care system in Macedonia has differences compared with other SEE countries, from the point of view of knowledgeable observers, because the knowledgeable observers from Croatia, Montenegro and Serbia tend to assess their health systems in positive terms. On the other side, representatives of Romania, Moldova and Kosovo are rather critical in evaluating their health systems. Bulgarians and Macedonians consider their health systems as being "medium-good" in all respects.

Macedonian citizens showed a high level of trust in doctors, similar to the results from the whole study, where from a total number of 845 respondents, 70.8% reported trust in doctors, % did not, and the remaining 7.8% were neutral (15).

The future reforms in health policies in the Republic of Macedonia, as well as in other SEE countries should be oriented toward six major goals (15,16):

- *The need to better define, and evaluate the costs of benefit packages:*

All eight countries provide, by national laws, comprehensive packages of health-care services. None of the studied health systems has the capacity to ensure the universal provision of such services.

- *The need to develop prevention services:*

The community nursing system, considered to be the most powerful "equalizer" in the health system is still largely unutilized in most of SEE countries. Despite efforts to develop primary care, access to adequate and holistic community, health care remains a challenge for certain segments of the population (low-income groups, residents of rural areas and small towns, Rom, and the like).

- *The need to develop rehabilitation, palliative and long-term care services:*

Palliative, long-term and rehabilitation care are not sufficiently developed as parts of the healthcare systems in the region. Most long-term care is provided in the family, and there are few resources available for informal cares.

- *The need to improve the financing of the public health care systems:*

Public health-care systems in the region are under-financed, primarily as a result of fiscal constraints. Hence, political will is a major factor for improving the performance of public health care systems.

- *The need for an effective human resource policy in health:*

In nearly all countries included in this survey, the availability of all types of medical professionals is far below the European average. Shortages of some specialties and skills are also reported in the studied countries such as Croatia, Macedonia, Kosovo and Moldova, and are not necessarily related to health professional mobility.

- *The need to address informal payments in the public health care system:*

The study showed that informal payments still represent an access barrier to state-of-the-art treatment, in particular in relation to chronic diseases. Informal payments primarily represent a response to the poor capacity of the public health-care system to provide adequate access to basic services.

In conclusion, over the last ten years, many efforts have been undertaken to establish a common conceptual framework for health system performance assessment which is defined

as the way how the individuals/patients are treated encompassing the notion of the patients‟ experience. Measuring of the health care performances is a key tool in aiding decision makers to describe, analyze, compare and improve the delivery and outcomes achieved by health care systems (17). This study applied the method of measuring qualitative parameters received by structured interview to quantitative indicators. The results from the first research study performed in the country show that Macedonians consider their health systems as being "medium-good" in all respects. The research methodology used in this paper has the potential to extend the applied methods to the large population taking into consideration other socio-economic characteristics (income, education, cultural influences and the like). It would help to obtain stronger scientific evidence on health care system performances and to foster the development of measuring tools of its components**.**

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ORIGINAL RESEARCH

Trends and demographic characteristics of hemorrhagic stroke in Albania during the period 2004-2015

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Abstract

Aim: Our aim was to describe the trend over time and the demographic distribution of hemorrhagic stroke in Albania in the past decade.
Methods: This study included all patients diagnosed with hemorrhagic stroke and admitted during the period 2004-2015 at the University Hospital Center "Mother Teresa" in Tirana (988 cases overall; 34% women; overall mean age: 57.8±19.3 years). Information about selected demographic characteristics was also collected for all study participants.
Results: The proportion of older patients (≥70 years) was slightly, but not significantly, higher in women than in men (32% vs. 27%, respectively; P=0.163). Furthermore, the proportion of Tirana residents was similar in both sexes (47% in men vs. 45% in women). Overall, there was evidence of a significant linear trend over time (Mann-Kendall test: P<0.01), indicating a gradual increase in the number of hemorrhagic stroke cases in Albania for the period 2004-2015.
Conclusion: This study provides useful information about the increasing trend of hemorrhagic stroke in Albania, a transitional country in Southeastern Europe which is characterized by rapid changes including unhealthy dietary habits.

Keywords: Albania, cerebrovascular disease, hemorrhagic stroke, time trend, Western Balkans.

Conflicts of interest: None.

Introduction

It has been shown that the sudden appearance of acute ischemic stroke is a consequence of a hasty interruption of blood flow to a part of the brain (1). It is argued that in most of the circumstances this situation occurs from embolic or thrombotic arterial vascular occlusion (1,2). In addition, lacunar strokes, arteritis, arterial dissections, and cortical venous occlusions constitute some other vascular events which may result in stroke syndromes (1,2). Intraparenchymal intracranial hemorrhage from a variety of causes (including the spontaneous or hypertensive hemorrhages, vascular malformations, or aneurysmal origin) are observed fairly frequently in the clinical practice. Normally, these additional conditions are involved in the initial differential diagnosis of stroke. Actually, these different conditions have been referred to as stroke subtypes and are considered in the classification of this major disease.

According to the first national health report for Albania which was published in 2014, there is evidence of an increase in the mortality rate from cerebrovascular diseases in the past two decades in this post-communist country (3,4). As a matter of fact, Albania is the only country in the Southeastern European region that exhibits an increase in the death rate from cerebrovascular diseases (3,4), which raises serious concerns for health professionals and policymakers in this transitional country. The increase in the death rate from cerebrovascular diseases has been bigger in males (from about 85 per 100,000 population in 1990 to 157 per 100,000 population in 2010) compared to females (100 and 169 per 100,000 population, respectively) (3,4). It has been argued that this increase in the mortality rate of cerebrovascular diseases in Albania indicates an early evolutionary stage of these conditions, a trend which was evident several decades ago in the Western countries (3).

In any case, accurate information on the extent of cerebrovascular diseases in Albania is scant. As a matter of fact, there is no scientific information about the incidence or prevalence of cerebrovascular diseases in the Albanian adult population. In this framework, we aimed to describe the distribution and the demographic characteristics of hemorrhagic stroke in Albania, a transitional country in Southeastern Europe which has been undergoing a rapid change in the past decades including also drastic changes in lifestyle/behavioral factors.

Methods

We conducted a case-series study which included all patients with hemorrhagic stroke admitted during the period 2004-2015 at the University Hospital Center "Mother Teresa" in Tirana. It should be noted that this is the only tertiary care hospital in Albania. Overall, during the 12-year time period under investigation, there were hospitalized 988 patients (66.1% men and 33.9% women).

For all cases included in this study, the diagnosis of stroke and differentiation of its subtype was done with magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA) (5).

Data on selected demographic characteristics (age, sex and place of residence) of all study participants was also collected. Age was categorized in the analysis into four groups: <50 years, 50-60 years, 61-70 years and >71 years. Place of residence was dichotomized into: Tirana vs. other districts of Albania. The time period under investigation was treated as a discrete variable (for the purpose of time trend analyses), but it was also dichotomized into: 2004-2009 vs. 2010-2015.

T-test was used to compare mean age between male and female stroke patients. On the other hand, Fisher's exact test was used to compare the sex-differences related to age-groups, place of residence and time period under investigation (2004-2009 vs. 2010-2015). Conversely,

Mann-Kendall test was used to assess the linear trend in the distribution of the number of hemorrhagic stroke cases in Albania for the period 2004-2015. In all cases, a p-value of ≤0.05 was considered as statistically significant. Statistical Package for Social Sciences (SPSS, version 15.0) was used for all the statistical analyses.

Results

Overall, mean age of study participants was 57.8±19.3 years, whereas median (interquartile range) was 61.0 years (51.5-71.3 years). Mean age in men was slightly higher than in women (58.4±17.8 years vs. 56.6±21.9 years, respectively), but this difference was not statistically significant (P=0.174).

The distribution of ischemic stroke cases by selected demographic characteristics of the study participants is displayed in Table 1. On the whole, 29% of hemorrhagic stroke cases were 70 years or older; 24% were 61-70 years; 25% were 50-60 years; and 22% were less than 50 years of age. Overall, 46% of the hemorrhagic stroke cases were residents in Tirana, whereas the remaining 54% of the patients were residents in other districts of Albania. Notably, most of the hemorrhagic stroke cases (70%) occurred during the period 2010-2015 compared with only 30% of the cases registered in the period 2004-2009.

Table 1. Distribution of hemorrhagic stroke cases by selected demographic characteristics in Albania during the period 2004-2015

Characteristic	Number	Percentage
Sex:		
Men	653	66.1
Women	335	33.9
Total	*988*	*100.0*
Age-group:		
<50 years	222	22.5
50-60 years	243	24.6
61-70 years	237	24.0
>70 years	286	28.9
Residence:		
Tirana	456	46.2
Other districts	532	53.8
Time period:		
2004-2009	298	30.2
2010-2015	690	69.8

Table 2 presents the distribution of selected demographic characteristics by sex of the hemorrhagic stroke cases. The proportion of older patients (70 years and above) was somehow higher in women than in men (32% vs. 27%, respectively), but this difference was not statistically significant (P=0.163). Furthermore, the proportion of Tirana residents was similar in both sexes (47% in men vs. 45% in women, P=0.638). Also, there was no statistically significant difference between male and female hemorrhagic stroke cases regarding the time period under investigation dichotomized into 2004-2009 vs. 2010-2015 (P=0.213).

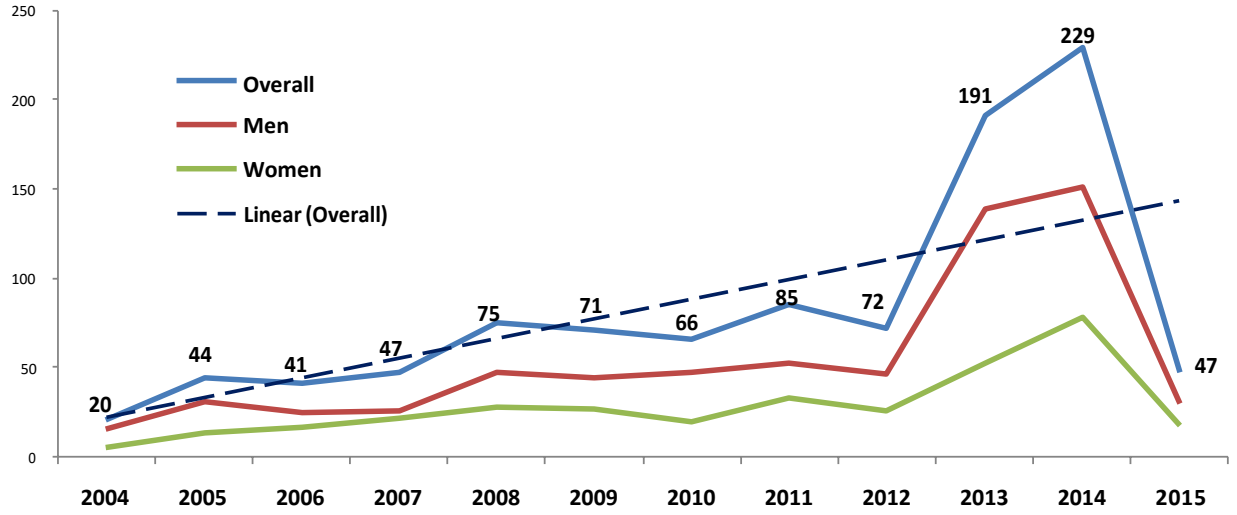
Table 2. Demographic distribution of hemorrhagic stroke cases by sex

Characteristic	Men (N=653) Number (percentage)	Women (N=335) Number (percentage)	
Age-group:			
<50 years	142 (21.7)	80 (23.9)	
50-60 years	165 (25.3)	78 (23.3)	0.163
61-70 years	168 (25.7)	69 (20.6)	
>70 years	178 (27.3)	108 (32.2)	
Residence:			
Tirana	305 (46.7)	151 (45.1)	0.638
Other districts	348 (53.3)	184 (54.9)	
Time period:			
2004-2009	188 (28.8)	110 (32.8)	0.213
2010-2015	465 (71.2)	225 (67.2)	

* P-values from Fisher's exact test.

Figure 1 presents the overall and the sex-specific distribution of hemorrhagic stroke cases for each year included in the study (from 2004 to 2015). Overall, the number of hemorrhagic stroke cases increased from 20 (in 2004) to 44 (in 2005) and, in the next couple of years, remained quite stable. From 2008 to 2012, the number of cases ranged from a minimum of 66 (in 2010) to a maximum of 85 (in 2011). Next, there was a steep increase to 191 cases in 2013, and even more so in the following year (229 cases). Conversely, in 2015, there was a sharp decrease, where there were registered only 47 cases of hemorrhagic stroke. The trend over time was more or less similar in both sexes, notwithstanding the generally higher number of cases in men for each year under investigation.

Figure 1. Trend of hemorrhagic stroke cases in Albania during the period 2004-2015



Overall, there was evidence of a significant linear trend over time (Mann-Kendall test: P<0.01), indicating a gradual increase in the number of hemorrhagic stroke cases in Albania for the period 2004-2015 (Figure 1).

Discussion

This study provides evidence on the distribution and demographic characteristics of hemorrhagic stroke cases hospitalized in Tirana, the Albanian capital for the period 2004-2015. The proportion of older patients was slightly but not significantly higher in women than in men. Furthermore, the proportion of Tirana residents was similar in both sexes. On the whole, there was evidence of a significant linear trend over time, which points to a steady increase in the number of hemorrhagic stroke cases in Albania in the past decade.

The reasons for the sharp decline of hemorrhagic stroke cases in Albania in 2015 are difficult to explain. One reason may be the incomplete reporting for this particular year, pointing to quality deficits in the Albanian health reporting system. Another explanation may relate to the reduction of transferred stroke cases from other districts to Tirana, the Albanian capital, where the only tertiary health care facility is located. In any case, such considerable fluctuations in the number of hemorrhagic stroke cases in Albania deserve further investigation.

We have previously reported about the distribution and demographic characteristics of ischemic stroke in Albania for the same period of time (from 2004 to 2015) (6). According to this previous report, the proportion of older women (70 years and above) with a diagnosis of ischemic stroke was significantly higher compared to men (55% vs. 41%, respectively, $P<0.001$). On the other hand, there was evidence of a higher proportion of men residing in Tirana compared to women (35% vs. 30%, respectively, $P=0.002$). Contrary to the current study involving hemorrhagic stroke patients, there was no evidence of a statistically significant trend over time for ischemic stroke for the period 2004-2015, notwithstanding a sharp increase in 2014 (6).

The official reports from the Albanian Institute of Statistics (INSTAT) regarding the death rate from cerebrovascular disease are substantially lower than the Global Burden of Disease (GBD) estimates for both men and women (4). From this point of view, INSTAT reports that mortality rate from cerebrovascular disease in 2009 was about 100 and 120 (per 100,000 population) in males and females, respectively – values which are 57% lower in males and 41% lower in females compared with the GBD estimates for the year 2010 (4). Regarding the age-standardized mortality rate from cerebrovascular disease, in Albania, in the year 2010 it was about 147 deaths per 100,000 population – which constitutes the second highest rate in the region after Macedonia (which, in turn, shows a particularly high mortality rate from this condition, with about 203 deaths per 100,000 population) (3). It should be noted that, among countries of Southeastern Europe, Slovenia has achieved a remarkable decrease in the mortality rate from cerebrovascular accidents (from about 124 to 54 per 100,000 population in 1990 and 2010, respectively). As a matter of fact, all countries except Albania have experienced various degrees of decline in the mortality rates from cerebrovascular disease due to effective treatment, as well as effective primary prevention measures introduced in several (routine) national health programs (3,7).

In the clinical practice, the diagnosis of acute stroke is straightforward in most of the circumstances. From this perspective, the unexpected onset of a focal neurologic deficit in an identifiable vascular distribution with a common presentation (including hemiparesis, facial weakness and aphasia) indicates a common syndrome of "acute stroke" (6,8). However, there are several manifestations which are similar and very difficult to distinguish from an ischemic stroke syndrome (8,9). These are referred to as "stroke mimics" and include both processes occurring within the central nervous system and systemic events (8). Taking into consideration the various treatment regimens of stroke which are currently very complex and

also bear the risk of undesirable effects, it is very important to differentiate these non-cerebrovascular "stroke mimics" from real strokes, as argued elsewhere (8,9).

This study may suffer from several limitations. Stroke patients included in this study may not be fully representative of all stroke cases in Albania. In any case, we included in our study all patients hospitalized in Tirana during more than a decade, regardless of their place of residence (Tirana, or other districts of Albania). Furthermore, the clinical diagnosis and discrimination of the stroke subtype was based on modern technology and scientific protocols employed in similar studies. Demographic information for all patients was based on the medical charts and consisted of hard data such as age, sex and place of residence. Given the administrative requirements, such demographic information is completed accurately and, therefore, there is no evidence of any kind of information biases in this regard.

In conclusion, this study provides useful information about the increasing trend of hemorrhagic stroke in Albania, a transitional country in Southeastern Europe which is characterized by rapid changes including unhealthy dietary habits. Nevertheless, further studies should be conducted in Albania at a national level in order to obtain valuable information about the extent, distribution and the main risk factors of both ischemic and hemorrhagic stroke.

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ORIGINAL RESEARCH

Discrimination of elderly patients in the health care system of Lithuania

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Abstract

Aim: This study aimed to explore and describe the barriers that elderly Lithuanians experience with respect to going to court or other institutions to defend their right not to be discriminated regarding medical care.
Methods: We used a mixed methods approach due to the scarcity of information in Lithuania. First, the review of laws was done using the e-tar database and court cases were searched using the e-teismai database followed by policy analysis. Additional sources of information were identified searching Google Scholar and PubMed, as well as Google for grey literature. The keywords used were: ageism in patient care, discrimination against elderly, elderly and health (English and Lithuanian: 2000-2015). Secondly, we conducted in-depth individual interviews with 27 clients of newly-established integrated home care services: 13 elderly patients, and 14 informal caregivers.
Results: This study identified five groups of barriers explaining why Lithuanian elderly are hesitant to fight discrimination in the health system. The results of the study disclose the following barriers that the elderly in Lithuania face: i) the lack of recognition of the phenomenon of discrimination against the elderly in patient care; ii) the lack of information for complaining and the fear of consequences of complaining; iii) the deficiencies and uncertainties of laws and regulations devoted to discrimination; iv) the high level of burden of proof in court cases and lack of good practices; v) the lack of a patient (human) rights-based approach in all policies and in education as well as the lack of intersectoral work.
Conclusions: This study disclosed the need to: encourage training of legists and lawyers in expanding knowledge and skills in human rights in patient care; encourage training of health care professionals – the burden of leadership for this has to be assumed by universities and public health professionals; incorporate a new article in the „Law on the rights of patients and compensation for the damage to their health", clearly stating where to complain in case of discrimination; create a webpage and brochures with readable and understandable information for elderly persons and their families and caregivers; establish legal consultation and mediation cabinets in health care facilities; establish an older persons" rights protection service under the Ministry of Social Security and Labour in close cooperation with the Ministry of Health; promote sustainable results by incorporating a human rights-based approach regarding elderly persons in all policies.

Keywords: aging, discrimination against elderly patients, human rights, legislation, Lithuania, patient care.

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Conflicts of interest: None.

Introduction

Although ageism, i.e. stereotyping and discriminating against individuals or groups on the basis of their age, has been described already since 1969 by Robert Neil Butler (1), it is still prevalent, and in some societies even growing (2). Roots of ageism are gerontophobia and the fear of death, which are deeply embedded in people‟s minds. Discrimination against the elderly exists in all spheres of life and in patient care as well (3,4). Discrimination against the elderly in patient care combines two main actions: discriminating behaviour on the ground of a patient‟s age and the lack of „good behaviour‟ by someone who has a duty and responsibility for patients in the health context. This type of discriminating behaviour may occur when professional health care providers are not educated enough to question their own personal culture, views or attitudes (subjective causes), or when the state violates the legally-recognized human rights principles by creating discriminatory policies. In one of the interviews, an over-80-year-old man said *"It surprised me how children and young people show love and respect for the elderly in their family and yet disrespect and ignore the elderly outside"* (5). This „outside‟ can be a hospital, hospice or elderly home or system of laws. French researchers Herr et al. (6) disclosed that *„socioeconomic position influenced the risk of having unmet health care needs, but the main risk factors identified were advanced age and homebound status.<...> The oldest-olds are the most affected by unmet health care needs". The United Nations Special Rapporteur believes „…that the promotion and protection of human rights of older persons is not only in the interest of senior persons, but should also be of concern to everyone, because every person ages"* (7).

Europe is aging and Lithuania is aging twice as fast as Europe on the whole (8). The main causes are low birth and high emigration rates of younger Lithuanians. At the beginning of 2015, the population of Lithuania was 2.9 million, including more than 650,000 (or 22.3%) of pension-age individuals (work according to a moving age-scale in 2015 ends at 61,4 years of age for women and 63,2 for men) (9). The elderly have become a significant part of society, but this does not mean in any way that they have become a privileged part of society.

Europe, including Lithuania, has clear legal protection - a convention - for children (10), but does not have a convention for older persons. Both are vulnerable groups and need more protection than the working age subgroup of the population. Elderly are only covered indirectly, e.g. by the European Charter of Patients‟ Rights (11), or the Council of Europe in its Convention for the Protection of Human Rights and Dignity of the Human Being (12). Policy makers do not seem to be very interested in an additional document specifying the elderly person‟s rights (13), but it is time to connect patient care and public health law with a human rights-based approach. According to Gostin (14): *"…public health law is the study of the legal powers and duties of the state, to assure the conditions for people to be healthy. The prime objective of public health law is to pursue the highest possible level of physical and mental health in the population, consistent with the values of social justice"*.

According to the Eurobarometer survey, "Discrimination EU 2012", discrimination against old age and disability is very frequent in Lithuania, respectively 59% and 45% percent (15). Lithuanian research reveals a deep and ingrained discrimination in all fields of life, especially in the labour market (16). Although discrimination of elderly occurs also in patient care in Lithuania (17,18) there is lack of multi-facetted and comprehensive research showing how widespread the discrimination of elderly in fact is. Discrimination in patient care in Lithuania resembles the allegory about the three wise monkeys that hear, see, and speak no evil. But in real life an older person faces many discriminating phrases like: „What do you expect at your age?‟; „You don‟t need breast at your age‟; „Come on, pensioners can wait‟…and „Never tell the ambulance operator your real age, they will not hurry‟. Given this situation, questions

remain as to why Lithuanian elderly do not use institutions or courts to insist on their rights. After all, health issues are the most pertinent to survival. *"Ageist attitudes are not only hurtful; they are harmful<…> the fact is that older people get sick from disease, not old age" (19). „The right to health requires that facilities, goods, and services be available, accessible, acceptable, and of quality"* (20). This is not only the question of a patient"s right to health, but of the person"s human rights perse.

The research question has derived from the description of the situation in Lithuania and the aim of the research was to identify the barriers preventing elderly patients from filing legal action against experienced discrimination which could be successful and, even more, would indicate the magnitude of the problem.

Methods

In this study two main methods were employed. Firstly, a review of the legislation using the e-tar database (21). Court cases were searched employing the e-teismai database (22) followed by policy analysis. Furthermore, Google Scholar and PubMed and, for grey literature, Google were screened. The following key words and terms were used: „ageism in patient care", „discrimination against elderly", „elderly and health" (all in English and Lithuanian: 2000-2015).

Secondly, in-depth individual interviews with elderly patients and their family members (informal care givers) were conducted to answer questions like: What is your current health care situation? What difficulties do you face concerning health care? What actions do you think you could take in order to change the situation and to receive proper medical care? The answers were analysed with the research focus on how discriminating behaviour towards elderly patients manifests in patients" everyday day life, and what do patients and their caregivers think of taking legal action to protect their rights of access to and receipt of proper medical care. The targeted sample of informants was the users of the newly-implemented integrated home care services from ten Lithuanian municipalities (out of 21 municipalities where the services were started). The users were chosen according to their availability for an interview on the day that the interviewer was visiting the municipality. Overall, 34 patients and their care-givers were visited, but seven patients were not interviewed because they were younger than 65 years. The final sample comprised 13 patients and 14 family members. The patients were present during the interview, but seven of them were not contributing significantly because of having difficulties to express their thoughts. All informants (including the family members) were older than 65 years. The elderly patients had chronic conditions and required long-term care around-the-clock. The informal caregivers were nine daughters or daughters-in-law, and five spouses (four wives and one husband). Although the intention of interviewing family members was to hear about the person they take care of, the result always was that the carers additionally volunteered to provide information about their own experience in health care as patients. The interviews focused on informants" experiences, perceptions, and opinions concerning medical care services.

All interviews were conducted by a team of authors (LD, RJ, RB). The interviews took place in patients" homes and lasted 60-90 minutes each. All interviews were tape-recorded (audio) with the informants" consent, both the patient and the family member. All three interviewers/authors repeatedly read the material, selected, and coded the „meaning units" related to the manifestation of discriminating behaviour by health care providers and the opinions of taking legal action to protect the elderly persons" rights to proper medical care. The main categories were developed and reached by the team of authors after thorough discussion.

Definitions: Discrimination: i) the unjust or prejudicial treatment of different categories of people, especially on the grounds of race, age, or sex (23), or ii) any distinction, exclusion or preference that has the effect of nullifying or impairing equal enjoyment of rights (WHO) (24).
The study was conducted in accordance with the Declaration of Helsinki (25).

Results

Examination of the Lithuanian legal framework and the court practice and litigation procedure

i) Article 29 of the Lithuanian Constitution does not mention age specifically but is inclusive in regard to equality of all persons under the law and non-restriction of rights of human beings - and contains a limited list of categories of persons whose rights cannot be restricted or to whom special privileges cannot be granted on specific grounds: *"All persons shall be equal before the law, the court, and other State institutions and officials. The rights of the human being may not be restricted, nor may he be granted any privileges on the ground of gender, race, nationality, language, origin, social status, belief, convictions, or views"* (26).
ii) The main law, "Law on the rights of patients and compensation for the damage to their health" (27), which describes different patient rights and establishes a particular institution to which to complain (Article 23), does not mention any institution which has the authority to solve disputes regarding discrimination in Lithuania.
iii) The law, „Law on Equal Treatment" (28), which sets up the categories of discrimination and empowers the Ombudsperson to investigate alleged instances of discrimination, does not define describe discrimination in health care – whereas discrimination in the education system or labour marked is clearly mentioned.
iv) Regarding court practice and litigation procedure as of now (early 2016) there are no cases in the Lithuanian Supreme Court and other courts" records. In 2015, Lithuania still did not have an effective procedure or best practice in formulating court suits linked to discrimination of elderly persons in the delivery of patient care (29). It seems that the majority of Lithuanian elderly do not use legal means.
v) There is a lack of complaints in the Office of the Equal Opportunities Ombudsperson in spite of the Provision 13 of the European Charter of Patients" Rights is the „Right to Complain" (11). In Lithuania, on 1 January 2005, a new Law on Equal Treatment came into force, guaranteeing the right to file complaints to the Equal Opportunities Ombudsman in cases of discrimination on grounds of age, sexual orientation, disability, race and ethnic origin, religion or beliefs (30). The ombudsman is a pre-litigation body in Lithuania for discrimination cases. Until now, the ombudsman service had only one case regarding age discrimination in health preventive programs (31). An analysis of the webpage of the ombudsman service revealed that almost all information, complaints and researches are devoted to age discrimination in the labour market.
vi) In 2015, Lithuania created an „Inter-institutional operations plan for promotion of non-discrimination" for the period 2015-2020, the main aim of which is to raise public awareness and foster respect for human beings. The plan recognized: *"Lithuanian public awareness is still too low, only a small proportion of the population knows where to go for fighting discrimination"* (32). The same is demonstrated in our findings. In interviews, „I do not know what to do" was repeated in almost all conversations. Furthermore, in the action plan there are lots of general and specific steps and recommendations to act in fighting age discrimination; but this does not ensure that educational activities will reach those persons

who discriminate against the elderly in patient care. This type of discrimination is not mentioned in the action plan, and among actors (implementing authorities) there is no inclusion of the Ministry of Health. Implementing authorities are: Ministry of Social Security and Labor, Ministry of Education and Science and Ombudsman.

vii) There is a lack of institutions and organizations that provide legal help for elderly persons in resolving disputes and defending their rights in health care facilities. We did not find elder law clinics or older persons‟ rights protectionservices.

viii) There is a shortage of easy, understandable, and easily-obtainable information for elderly persons regarding their rights. We did not find web pages or specialized easily understandable, and obtainable information for elderly. To prove discrimination against elderly in legal cases is often challenging: A citation of the chief of the Lithuanian Supreme Court in 2007 may serve: *"There is no racial discrimination in Lithuania, <…> there are some complaints for some not-equal treatment in other spheres, but then proceedings are completed and discrimination is not proven"* (33).

Analysis of the interviews

The initial idea of the study was to gather information from elderly patients who were most in need of care as they required long-term care around-the-clock. However, what the family members provided as their experience of taking care and of being patients themselves, broadened the scope of the study. Thus, information about discrimination not only of the bedridden people, but also of healthier old people was gathered. In spite of all the interviewees reporting their experience as patients, the research team will further on call the two groups "patients" and "informal caregivers" according to their social roles. As concerns the discrimination because of age, there was no difference between the two groups found in what they were telling about themselves as patients, therefore, the findings about ageism are presented for both groups together.

The analysis of the interviews with patients and their informal caregivers revealed manifestation of discrimination due to age. Older persons very often confronted with violation of their rights as a human and as a patient to receive health care services and proper treatment. They often were ignored and were not treated seriously. Their right to information was violated and their right of participation in the process of decision making regarding to their own health situation was ignored. An older person with special needs (overweight) was left without appropriate care, because hospitals and elderly homes are poorly equipped and do not even have simple hoists. The detailed manifestation of discrimination and ageist behaviour revealed in the interviews is presented in Table 1.

Table 1. Ageist behaviour and manifestation of discrimination

Ageist behaviour	Manifestation of discrimination
Violation of the patients‟ rights to health care because of their age	*"The nurse is talking [to me, the caregiver] on a phone: „87 years old! And you want our doctor to pay a home visit to such a patient!? No, he [doctor] won‟t come. And it‟s illegal for me to provide infusion therapy without a prescription of the doctor." And what should I do?" (Daughter, 67 years old, site 1).*
Violation of the patients‟ rights to the information because of their age	*"Nobody really cares to explain to you in what case you are eligible for rehabilitation services. The doctor says „you are too old to understand"" (Spouse, 82 years old, site 1).*

Ignored or not taken seriously because of their age	*"I am not able to talk with the doctor about my mother"s condition. When I go for a consultation I get the only answer „Such an age [94 years old]!" She even said to me, „in your seventies you want to be healthy?" And I got so angry at that moment. Our town is small; we know each other. She is only several years younger than I am and she thinks that she is young! I tell her about my condition and she is not even listening. I never get any prescription. If not for our pharmacist, my mother would have been dead. My mother had a very bad erysipelas. And only the pharmacist told me that there is a special antibiotic, but the doctors usually do not prescribe it. I went to the doctor and insisted that she give the prescription for this medication. She was very unpleasant, but gave the prescription. And my mother got better straight away. But if I did not know about this type of medication, I would have never got it." (Daughter, 70 years old, site 6).*
The system serves only the interests of the system when the client is old, overweight and has special health problems	*"The family doctor did not even come and look at her [mother]. <...> She said she has too many patients registered! Then she [doctor] wrote a referral to a hospital for treatment without seeing her. She [mother] did feel very bad, she was coughing up to suffocation. And my mom, she weighs 120 kg. <...> We went [to the hospital] to look for an illness in the lungs, and ended up in Vilnius [the capital] to do a computer tomography of the intestines, because they came up with an idea that there is a tumour in the intestines. But nobody hospitalized her, and the night was approaching! So I called the nurse of the integrated care team at 8.30 pm: "What should I do? Nobody hospitalizes us. And how am I supposed to take my bedridden mother who weighs 120 kg home?" Everything went on through the phone: send her, bring her, go… The nurse somehow arranged that an ambulance brought us back from Vilnius, so we were finally back in a district hospital at 2.30 am. And here again I hear: "We are not going to hospitalize her; she is old and her condition is too severe." And they sent us back home. And I think to myself, what I should do now? My mother was dragged around through half of Lithuania and now I have her back at home with the inflammation of the lungs on my own" (Daughter, 65 years old, site 2)*
When the patient is old, the doctor is reluctant to visit that patient with acute disease at home.	*"<...> in April it happened that the doctor refused to visit my wife. Over the weekend my wife had gotten even worse. On Monday I went to [our] ambulatory centre to ask for a doctor"s visit. And there I was told that "today we do not have any times free for registration; for tomorrow we also cannot register. And from the first of May our doctor leaves for the holiday". It felt like a mockery. And in the cases of acute conditions they [personnel of primary health care centre] have to take the patient in without any registration. In the waiting room there were no patients at all. Then I asked, "maybe now she [doctor] could come and examine her [my wife]? We live so close, just across the street. It would take only a few minutes to come and examine." And her answer was, "No, I cannot leave the ambulatory". And at the same time there were two nurses there sitting. You realize how it is? They do not care about old patients. What should we do? The fever was very high. I called for an ambulance. The ambulance took her to the hospital. And there in the hospital, she, having pneumonia and high fever, had to stay in the corridor on a transfer trolley for almost over twenty-four hours. The hospital could not refuse to*

	take her in with high fever… " (Spouse, 78 years old, site 1)

How do the older persons deal with the experience of ageist behaviour? As findings reveal, in most cases the older persons recognize ageist behaviour, but do not perceive it as a violation of their rights. Instead of trying to change anything, the people use emotional coping and remain with the feeling of helplessness. The findings disclosed that older persons face certain barriers that prevail on taking legal action in order to protect their rights to proper medical care. Among the barriers were internal barriers, health limitations, readiness and willingness of legal representatives to identify ageist and discriminatory behaviour and to represent the older person in a legal action based upon the discrimination (Table 2).

Table 2. Barriers in taking legal actions to protect the rights of older persons to proper care

Barriers	Description of the barrier
Health state limitations	*"…at this age you are not supposed to go to fight in the courts. [In order] to go to the court and to fight you ought to have good health and a lot of strength." (Woman, 75 years old, site 1).*
Prolonged court processes	*"You need help here and now and not at the time when the process will be over and the court will decide. People might be in the suit for years there, and what result does it give? <...> And on the other hand, the winning of the court after half of a year or a year might be too late. By that time my husband or I myself might be below ground." (Spouse, 70 years old, site 4).* *"There were two court processes [about using the handicapped spouses" money for nursing]. The procedure seems quite simple, but it took half a year <...> And you have to live now, to buy medications and nursing items now. You have to live your life now." (Spouse 78 years old, site 1)*
The lack of positive experience in dealing with the courts	*"The old person has no chance to win the court. In our courts the justice is on the side of the one who has more money. It is as simple as that…" (Man, 77 years old, site 2)* *"... I had already gone through the court in order to get the permission to use her money for her care. After her stroke she is not able to go to the bank or to sign [documents]. Her speech is limited. <...> There were two court processes. The procedure seems quite simple, but it took a half of a year <...> And you have to live now, to buy medications and nursing items now. You have to live life now. And what the result was: the decision that I can take from her account only 1400 Euro - even though at the time I had already spent over 1700 Euro just for her medications. If you want more money, you have to appeal to the court from the very beginning again. And they questioned my daughter and my son, and they both [daughter and son] were not against it. But still such decision." (Spouse, 82 years old, site 1)*
The lack of special knowledge	*"If you want to fight for justice in the court, you have to have*

	knowledge. These things are not for an old person." (Woman, 71 years old, site 2).
Need of other resources	*"You need somebody who could drive you to the court. And not once, but constantly through all the procedure. And at the moment I feel lucky that my daughter and son-in-law drive me to the doctor or to the shop, or to the church. And you would additionally ask to drive to the court? Everybody is busy with their own affairs and duties." (Women, 74 years old, site 5).*
The lack of recognition of the discrimination even by lawyers	*"And regarding the court… Now I think to myself. My son-in-law is a lawyer. And he has never mentioned the possibility of the court. He knew our situation in details; he saw everything. Apparently he really knows that the court cannot help there. And he is really good at those things..." (Spouse, 76 years old, site 10)*
Inner barriers and fear of consequences to be left without any care	*Researcher: "Have you ever thought of looking for justice [regarding being discriminated by the doctor] or looking for another doctor?"* *"I have never thought about it... And when I think now, I realise that I would never do it. I would really feel uncomfortable regarding the doctor. I know her and she knows our family for so many years. And you are used to her and she knows all my health problems. Somehow you cannot go into the conflict [with the doctor]" (spouse, 76 years old, site 10).* *"If you start to conflict, you may stay without any help. And what should one do in such an age and health condition. You completely depend on the doctor. She prescribes medications… And in our ambulatory she is the only doctor." (Woman, 78 years old, site 9).*
The lack of a patient (human) rights-based approach in all policies, lack of education, and the lack of intersectoral work	*"...I could not imagine that it would be hard to take care of your own mother? She raised us, so can't I now take care of her? It is five years now [since then]. <...> She cries day and night: mum, mum. You don't get if she has pain, or not. This cry, - it seems I will get crazy. When I cannot bear it anymore, I go out, walk around with my head in my arms, and come back. I used to hire people [to nurse] <...> but nobody wants to stay with such a hard patient. They stay for a month and leave. Where haven't I looked for help? <...> The answer was that we understand that it is hard for you, but it is your mother and you have to take care of her." (Daughter, 66 years old, caregiver of 91- year- old mother, site 8).*

For the caregivers, taking care itself is already a huge emotional and physical overload. *"Well, when I get tired at night, I think to myself sometimes, "God, oh, God"... [...] The nursing is very difficult. You cannot leave anywhere. I step out, sit on a bench for a while and back into the house. Oh, and I go to the shop. I long for the fresh air… He is sick for 8 years already. You can imagine what it means to stay with a patient for so many years"* [she is moved and gets tearful, cannot talk for some time] (Spouse, 74, site 16).

It can be rewarding experience when you help, but there is ample research about caregivers feeling depression, somatic disorders and the like (35,36). When somebody is discriminated and does not receive proper medical care, s/he can already feel disappointed and rejected.

When you additionally do not get help with the one you take care of, the helplessness that you feel is double, because you have to see the suffering of a person close to you. The question *"and what should I do?"* without finding appropriate answer and with the feeling of helplessness was very often on the lips of the caregivers in the study.

Some participants of the study had interesting suggestions regarding how the situation could be changed to a less-ageist attitude. One of them suggested that the problem was that the fight against ageist behaviour was seen as a private matter and it has to be made into a public one. Moreover, because of their homebound, bedridden situation the people are not able to take proper care of themselves; therefore it is improbable that they would additionally fight against discrimination. As concerns the carers, having to deal with the situation where the sick relative totally depends on you made them learn a lot about nursing, filling appropriate documents, achieving that help is provided - and this round-the-clock job without holidays often left them exhausted, was causing health problems, and did not allow to fight for change against discrimination: there were other, more urgent problems at hand and not enough resources to deal with everything. Even people with political positions could not achieve change in patient-care, in spite of writing about the situation extensively (Rūta Vanagaitė, active politician: She used her position in parliament to change the situation of people, who are dependent and need home care. She iniciated discussions on the topic and raised the problems in media. Even wrote a book. Vanagaitė R. Pareigos metas [Time of duty], 2014 [In Lithuanian]). Therefore it came as a natural suggestion, that there is a need for professionals such as social workers, who would be legally entitled to act against discrimination based on age*: "I think that an older person has to have a legal representative such as a social worker. The social worker could present cases of violation of the rights of an older person. Social workers should be entitled to file a suit to the court when an older person is left without care or when a patient has to take care of another patient at home without formal support and without proper attention of doctor and nurse - in such cases like my situation was [when I was caring for my late husband]. Me, with a heart pacemaker, had to take care of my bedridden husband for over three months. I had to wash him, to lift him, and day and night to nurse him on my own. After such an intensive care I walked wobbling. Thanks God, he died in time"* (78 years old women, site 5).

Summary of the empirical findings

i) Discrimination is not perceived as such and often is considered a lack of attention.
ii) The fear to lose doctors‟ friendly support dominates, especially in rural areas, were only one doctor works.
iii) There is no elderly-orientated or easily-operational legal information that clearly states steps to fight discrimination in patient care.
iv) There is a lack of confidence in justice, courts, and institutions.
v) The results of the study disclose the following barriers which the elderly in Lithuania face:
   a) lack of recognition of the phenomenon of discrimination against the elderly in patient care;
   b) lack of information for complaining and fear of consequences of complaining;
   c) deficiencies and uncertainties of laws and regulations devoted to discrimination;
   d) a high level of burden of proof in court cases and lack of good practices;
   e) lack of a patient (human) rights-based approach in all policies and in education as well as the lack of intersectoral work.

Discussion

While other authors (35) often discuss how to fight hidden discrimination, we found it necessary to speak about open discrimination of elderly patients. The review of court cases, and more specifically interviews disclosed that the phenomenon of discrimination is neither perceived nor recognized. On the contrary, findings show that wide and open discrimination against elderly persons is manifest in patient care. In line with discussion by Williams in „Age discrimination in the delivery of health care services to our elders" (36), we found that the main barrier to changing practice still is the lack of recognition.

In regard to the second important barrier, the lack of information and fear of consequences, Clough and Brazier asked similar questions in their work „Never too old for health and human rights?"(35). They cite barriers in the context of the United Kingdom: The elderly patients "may not complain because of a fear of consequences, for example, that they will be evicted from their care home if they do, may not complain because they lack confidence, may feel they are „just making a fuss", may find there is a lack of accessible complaints, mechanisms or information about how to complain, may have particular communications/language difficulties or may face limited access to legal aid providers or be limited by the scope of legal aid, or may be put off by complex legal procedures such as Conditional Fee Arrangements" (35).

This comes close to our empirical findings: the lack of information and especially the fear of consequences - are additional major barriers in Lithuania. Differently from the UK context, the fear of consequences can be explained in Lithuania by „renter mentality and conformity that are lingering of soviet society mentality" (37) because the older generations in Lithuania lived during the Soviet period (1940-1990). We found that elderly persons do not trust courts and they do not see any possible real way to change the system. They do not know who can help them or who can inform them. They need health care now, not after long-lasting, expensive litigation. They believe that a doctor is the only person who could help them and that is why they do not want to risk losing their doctor"s favour.

The third barrier in Lithuania is the deficiencies and uncertainties of laws and regulations devoted to discrimination. In this study we found that in 2004, when entering the European Union (EU), Lithuania changed or supplemented laws according to EU requirements. In most laws, non-discriminatory sentences were added. However, the implementation of laws, in general, is a real issue. Perhaps it is due to a lack of brave and new practice for forming decisions of the Lithuanian Supreme Court. Lithuanian laws should be written more clearly; their examination revealed a lack of precise articles in two basic laws (27,28) that should indicate the way for complains and, ultimately, the Constitution of Lithuania does not pay attention to age discrimination at all.

In line with the European Union Agency for Fundamental Rights finding that „interviews with legal experts, equality bodies and health ombudsmen indicate that proving that a discriminatory act has taken place is often challenging for plaintiffs and their lawyers (38), we found that the lack of court cases is the result of the difficulty to prove discrimination, and *vice versa the* difficulty of the burden of proof is the result of the absence of successful litigation. There is one possible solution: in Lithuanian civil law court cases, the aim of averment is a court"s reasonable belief of existence or non-existence of certain circumstances (Art.176) (39). That is why anti-discriminatory policies could educate judges to see discrimination more often. Also more frequent complaints (starting with civil cases) would slowly change the practice and burden of proving in civil and administrative cases (including ombudsman"sprocedures).

Finally, a change in policy regarding a human rights approach influencing education and fostering intersectoral coordination and cooperation in terms of health in all policies would

accelerate the already visible slow movement forward as regards the European context. Tonio Borg, ex-EU Commissioner for Health, said: *"I believe health is for all. Everybody should have access to good quality healthcare regardless of gender, age, race, and sexual orientation, type of condition, social status, education, or country of residence. For this to become reality, we need to fight discrimination in health"* (40). Unfortunately, the new Lithuanian Action plan for "Healthy Aging" (32) that derived from the Strategy and Action Plan of Healthy Aging in Europe, 2012-2020 (41) interprets „Healthy Aging" from a non-human rights perspective and is in itself discriminatory. Its main focus is to inspire the elderly to be active, as a cause of healthy living, not as a consequence of healthy living. There is a policy deficiency regarding a non-active, almost-disabled or very old person who cannot be active. Lithuanian „Healthy Aging" itself has to tackle discrimination and health inequalities in its approach and focus more on „strengthening health systems, in order to increase older people"s access to affordable, high-quality health and social services" (41).

One of the reasons for the incomplete implementation of human rights in elderly patient care is likely the non-binding character of many conventions and charters instead of binding legislation. The European Charter of Patients" Rights of 2002 (4) contains 14 provisions, the second being the „Right of access": *„The health services must guarantee equal access to everyone, without discriminating on basis of financial resources, place of residence, kind of illness or time of access to services"*. It seems that Lithuanian lawmakers are afraid of the word „guarantee" and its consequences, especially when the talk is about financial resources. This can be illustrated by the words of the Secretary-General to the UN General Assembly: *"Older persons suffer discrimination in health care and tend to be overlooked in health policies, programmes and resource allocation"* (42). Or by the research, where Aleksandrova investigating the question of financial resource allocation in her study *„Should Age be a Criterion for the Allocation of Health Resources?"* (43) gives different arguments „for" and „against" focusing on the usefulness of the elderly.

The Universal Declaration on Bioethics and Human Rights of 2005 is not legally binding either, but has expedient content such as its Article 11: *„No individual or group should be discriminated against or stigmatized on any grounds, in violation of human dignity, human rights and fundamental freedoms"* (44). Even binding instruments, as the International Covenant on Economic, Social and Cultural Rights with its article 12 *„The States Parties to the present Covenant (e.g. Lithuania) recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health"* do not change the situation.

The crucial point, however, is the lack of successful practice in the European Court of Human Rights (ECHR) (34). Examples of ECHR cases show that Lithuania has no strong outside incentive or rather pressure, different from the period of accession to the EU in 2004. The fear of sanctions/consequences for not complying with the Acquis Communeautaire was a powerful incentive. But later, in 2005, the Protocol 12 to the European Convention on Human Rights – devoted to the extension of prohibition of discrimination – was not signed by Lithuania (45).

The Americas likely will become the first region in the world to have an instrument for the promotion and protection of the rights of older persons (46). If it is ratified, the member states will "adopt and strengthen such legislative, administrative, judicial, budgetary, and other measures as may be necessary to give effect to and raise awareness of the rights recognised in the present Convention, including adequate access to justice, in order to ensure differentiated and preferential treatment for older persons in all areas" (47). This is a good example setting standards for a stronger legislation.

Most barriers - not only in Lithuania - seem to be concerned with policy. Now it is time to ask about the place of elderly people in public health policy. First, there is an "inner level" question: what person is able to notice the discrimination and the barriers? Answer: a person who is trained to notice. Our study revealed a big gap between the occurrence of discrimination and fighting that discrimination in the health system. We agree with the statement by Bjegovic-Mikanovic et al. that: *„…public health education needs to include a wider range of health-related professionals including: managers, health promotion specialists, health economists, lawyers and pharmacists. <…> Investing in a multidisciplinary public health workforce is a prerequisite for current challenges"* (48).

Secondly, there is an "external level" question. When asking how/where can the barriers be removed, we find that in a State, where there are appropriate and enforceable instruments and an older person-friendly scene in which to enforce them. Historically, from the ancient times it was a taboo to complain about the doctor‟s work; it appears that it is still a taboo to complain about human rights violations. The State must improve the legal basis and have a strong will to help improve and protect older persons‟ rights in allspheres.

Thirdly, there is a question dealing with information and leadership. The need for a workforce that is educated in the needs and rights of elderly persons (lawyers, judges, health care providers, politicians, and even the church clerks) is obvious. These professionals need multidisciplinary knowledge in order to think "out of the box". Good practices from other countries for elderly legal consultation can be used, for example elder law clinics (49) and „e-help‟ as a compilation of useful information (50). The burden of leadership is to make this a reality that belongs to everyone.

However, we are aware of the limitations of our research. The narrative literature review was performed in order to show the need to solve the problem of discrimination and because of scarcity of prior research in Lithuania. However, a systematic review of good practice abroad might have yielded more specific evidence. Also a bigger sample size might have allowed comparing the group of patients with the caregivers. Nevertheless even our small study reveals serious violations of elderly patients‟ rights and should arose the attention of politicians, stakeholders and professionals and help to initiate further studies to analyse the quantity and quality of human rights neglect in elderly patient care.

Conclusions

In spite of the obvious limitations of our study, we were able to identify three main barriers that blockade improvements in elderly patient care:

- Recognition of open and hidden discrimination of elderly patients.
- Lack of information and fear of consequences experienced by patients and caregivers facing discrimination and considering complaint.
- Deficient non-binding legislation and court practice.

In consequence this study disclosed the need to:

- Encourage training of health care professionals. The burden of leadership has to be assumed by universities and public health professionals;
- Encourage training of legists and lawyers in expanding knowledge and skills in human rights in patient care;
- Incorporate a new article in the „Law on the rights of patients and compensation for the damage to their health‟, clearly stating where to complain in case of discrimination;
- Create a web page and brochures with readable and understandable information for elderly persons and their families and caregivers;

- Establish legal consultation and mediation cabinets in health care facilities;
- Establish an older persons‟ rights protection service under the Ministry of Social Security and Labor in close cooperation with the Ministry of Health;
- Promote sustainable results by incorporating a human rights-based approach regarding elderly persons in all policies.

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ORIGINAL RESEARCH

Correlates of rheumatoid arthritis among women in Albania

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Abstract

Aim: Our aim was to assess the association of rheumatoid arthritis with socio-demographic characteristics and lifestyle factors among women in transitional Albania.
Methods: A cross-sectional study was carried out in 2012-2013 including a sample of 2198 women aged 30 years and above who attended the Rheumatology services at primary health care clinics in Tirana municipality (mean age: 60.2±9.7 years; overall response rate: 95%). The diagnosis of rheumatoid arthritis was based on the American College of Rheumatology/European League Against Rheumatism (ACR/EULAR) 2010 criteria. In addition, a structured questionnaire was administered to all study participants including information on demographic and socioeconomic characteristics and behavioral factors. Binary logistic regression was used to assess the association of rheumatoid arthritis with covariates.
Results: Overall, 437 (19.9%) women were diagnosed with rheumatoid arthritis (both incident and prevalent cases). In multivariable-adjusted models, rheumatoid arthritis was positively and significantly related to older age (OR=1.8, 95%CI=1.3-2.6), a lower educational attainment (OR=1.4, 95%CI=1.1-1.9), smoking (OR=1.5, 95%CI=1.1-2.0), alcohol intake (OR=1.9, 95%CI=1.2-3.1) and overweight and obesity (OR=1.5, 95%CI=1.2- and OR=1.6, 95%CI=1.2-2.0, respectively).
Conclusion: This study provides useful evidence about selected correlates of rheumatoid arthritis among women attending specialized primary health care services in Albania. Health professionals and policymakers in Albania should be aware of the magnitude and consequences of this chronic condition in the adult population.

Keywords: Albania, behavioral factors, rheumatoid arthritis, socio-demographic factors, Western Balkans.

Conflicts of interest: None.

Introduction

Rheumatoid arthritis is currently considered a clinical syndrome across several disease subsets (1), involving inflammatory flows (2), leading to an ultimate common pathway in which persistent synovial inflammation and associated damage to articular cartilage and underlying bone are present (3). Overproduction of the tumor necrosis factor is the principal inflammatory process in the pathophysiology of the rheumatoid arthritis (1,4). This leads to overproduction of many cytokines such as interleukin 6, which causes persistent inflammation and joint destruction (1,5).

Regarding the etiology, genetic factors account for about 50% of the risk of developing rheumatoid arthritis (6,7). These factors are primarily related to either autoantibody-positive disease (ACPA-positive) or ACPA-negative disease (1). As for the lifestyle factors, smoking is considered the main environmental risk factor (1,8), doubling the risk for development of rheumatoid arthritis (9).

Rheumatoid arthritis affects 0.5%-1.0% of adults in developed countries (1). Women are three times more affected than men (1). However, the prevalence of this condition is positively related to age in both men and women (1). In women, hormonal factors play an additional role as the prevalence of rheumatoid arthritis is highest among individuals over 65 years (10). Regarding the incidence of rheumatoid arthritis in developed countries, it varies from 5 to 50 cases per 100,000 adults (11). On the other hand, the prevalence of rheumatoid arthritis displays significant geographical variations (12). The prevalence of this condition is higher in Northern Europe and North America compared to developing countries (13). Such geographical variations have been linked both to different genetic inclinations as well as to different environmental factors which expose individuals from different regions to different levels of risk for rheumatoid arthritis (1).

The information about rheumatoid arthritis in former communist countries of the Western Balkans including Albania is scarce. In general, the burden of musculoskeletal disorders has increased in Albania in the past few decades (14). The proportion of musculoskeletal disorders comprised only 8.5% of the total burden of disease in Albania in 1990, whereas in 2010 it increased to 11.0% (14). There is evidence of a steeper increase in women than in men (3.7% vs. 2.0%, respectively) (14).

In this context, the aim of our study was to assess the association of rheumatoid arthritis with demographic and socioeconomic characteristics and lifestyle/behavioral factors among women attending specialized primary health care services in transitional Albania.

Methods

This was a cross-sectional study which was carried out in 2012-2013.

Study population

This study included a sample of 2198 women aged 30 years and over who attended the Rheumatology services at primary health care clinics in Tirana municipality. Beforehand, the required sample size was estimated at 1870 women in order to obtain sufficient cases of rheumatoid arthritis among women who attended the Rheumatology services in different polyclinics of Tirana. In order to increase the study power and account for potential non-response, we decided to include 2500 consecutive women aged≥30 years who attended t he Rheumatology services. Of these, 198 women were ineligible (too sick to participate), whereas 104 further women refused to participate. The final study sample consisted of 2198 eligible women who agreed to participate (overall response rate: 2198/2302=95%). Of 2198

women who participated in the study, 437 (19.9%) were diagnosed with rheumatoid arthritis (both incident and prevalent cases).

Data collection

The diagnosis of rheumatoid arthritis was based on the American College of Rheumatology/European League Against Rheumatism (ACR/EULAR) 2010 criteria (15). These criteria consist of joint involvement, serology, acute-phase reactants and duration of symptoms (15).

In addition, a structured questionnaire was administered to all study participants including information on selected demographic and socioeconomic characteristics and lifestyle/behavioral factors. Socio-demographic factors included age (which in the analysis was dichotomized into: ≤50 years vs. >50 years), marital status (dichotomiz ed into: married vs. not married), employment status (employed and/or retired vs. unemployed) and educational attainment (trichotomized into: low, middle and high). Conversely, lifestyle/behavioral factors included smoking, alcohol intake, coffee consumption and tea consumption – all dichotomized into: no vs. yes), as well as the body mass index (BMI, trichotomized into: <25, 25-29.9 and ≥30).

Statistical analysis

Independent samples t-test was used to compare the mean ages between women with and without rheumatoid arthritis. Conversely, Fisher's exact test was used to compare the distribution of socio-economic characteristics and behavioral factors between women with and without rheumatoid arthritis. On the other hand, binary logistic regression was used to assess the association of rheumatoid arthritis (outcome variable) with socio-economic characteristics and behavioral factors (independent variables). Initially, crude (unadjusted) odds ratios (ORs) and their respective 95% confidence intervals (95%CIs) were calculated. Subsequently, multivariable-adjusted models controlling simultaneously for all covariates were run. Multivariable-adjusted ORs and their respective 95%CIs were calculated. In all cases, a p-value of≤0.05 was considered as statistically significant. Statistical package for Social Sciences (SPSS, version 15.0) was used for all the statistical analyses.

Results

Overall, mean age of study participants was 60.2±9.7 years; median age was 60.0 years (interquartile range: 54.0-67.0 years). On the other hand, the age range was 30-92 years. Women diagnosed with rheumatoid arthritis were older than those without rheumatoid arthritis (mean age: 62.0±9.8 years vs. 59.8±9.7 years, respectively; P<0.001) [not shown in the tables].

The distribution of socio-demographic characteristics and lifestyle/behavioral factors of women by rheumatoid arthritis status is presented in Table 1. As expected, the proportion of older individuals (over 50 years of age) was higher among women with rheumatoid arthritis compared with their counterparts without this condition (91% vs. 85%, respectively, P<0.001). The proportion of a lower educational level was more prevalent in women with rheumatoid arthritis than in those without rheumatoid arthritis (20% vs. 16%, respectively, P=0.02). Conversely, no differences were evident for marital status or employment between the two groups of women. Regarding behavioral factors, the prevalence of smoking and alcohol intake were significantly higher in women with rheumatoid arthritis than in those without rheumatoid arthritis (for smoking: 15% vs. 11%, respectively, P=0.02; for alcohol consumption: 7% vs. 4%, respectively, P=0.01). Similarly, the prevalence of coffee

consumption was higher among women with rheumatoid arthritis, but this finding was not statistically significant. The prevalence of tea consumption was similar in the two groupings. On the other hand, the prevalence of overweight and obesity were significantly higher in women with rheumatoid arthritis compared with those without this chronic condition (for overweight: 35% vs. 29%, respectively, whereas for obesity: 30% vs. 25%, respectively; overall P<0.001) [Table 1].

Table 1. Distribution of socio-demographic characteristics and lifestyle/behavioral factors in a sample of Albanian women by rheumatoid arthritis status

Variable	Total (N=2198)	Rheumatoid arthritis (N=437)	No rheumatoid arthritis (N=1761)	P†
Age-group:				
≤50 years	298 (13.6)*	37 (8.5)	261 (14.8)	<0.001
>50 years	1900 (86.4)	400 (91.5)	1500 (85.2)	
Employment:				
Employed and/or retired	1746 (79.4)	342 (78.3)	1404 (79.7)	0.509
Unemployed	452 (20.6)	95 (21.7)	357 (20.3)	
Marital status:				
Married	1793 (81.6)	363 (83.1)	1430 (81.2)	0.408
Not married	405 (18.4)	74 (16.9)	331 (18.8)	
Educational level:				
Low	364 (16.6)	89 (20.4)	275 (15.6)	0.021
Middle/high	1834 (83.4)	348 (79.6)	1486 (84.4)	
Smoking:				
No	1947 (88.6)	372 (85.1)	1575 (89.4)	0.015
Yes	251 (11.4)	65 (14.9)	186 (10.6)	
Alcohol intake:				
No	2105 (95.8)	407 (93.1)	1698 (96.4)	0.005
Yes	93 (4.2)	30 (6.9)	63 (3.6)	
Coffee consumption:				
No	758 (34.5)	136 (31.1)	622 (35.3)	0.103
Yes	1440 (65.5)	301 (68.9)	1139 (64.7)	
Tea consumption:				
No	1200 (54.6)	242 (55.4)	958 (54.4)	0.747
Yes	998 (45.4)	195 (44.6)	803 (45.6)	
BMI:				
Normal weight	971 (44.2)	155 (35.5)	816 (46.3)	
Overweight	655 (29.8)	151 (34.6)	504 (28.6)	
Obesity	572 (26.0)	131 (30.0)	441 (25.0)	

* Absolute numbers and their respective *column* percentages (in parentheses).

† P-values from Fisher's exact test.

Table 2 presents the association of rheumatoid arthritis with demographic and socioeconomic characteristics and behavioral factors. In crude (unadjusted) models, there was a positive association of rheumatoid arthritis with older age (OR=1.9, 95%CI=1.3-2.7), a lower educational attainment (OR=1.4, 95%CI=1.1-1.8), smoking (OR=1.5, 95%CI=1.1-2.0), alcohol intake (OR=2.0, 95%CI=1.3-3.1) and overweight and obesity (OR=1.5, 95%CI=1.2- and OR=1.6, 95%CI=1.3-2.3, respectively). Furthermore, there was a weak and

borderline statistically significant relationship with coffee consumption (OR=1.2, 95%CI=1.0-1.5). On the other hand, there was no association with employment, marital status, or tea consumption.

Table 2. Association of rheumatoid arthritis with socio-demographic characteristics and lifestyle factors

Variable	Crude (unadjusted) models		Multivariable-adjusted models	
	OR (95%CI)*	P*	OR (95%CI)*	P*
Age-group:				
≤50 years	1.00 (reference)	0.001	1.00 (reference)	0.001
>50 years	1.88 (1.31-2.70)		1.82 (1.26-2.62)	
Employment:				
Employed and/or retired	1.00 (reference)	0.497	1.00 (reference)	0.522
Unemployed	1.09 (0.85-1.41)		1.08 (0.84-1.43)	
Marital status:				
Married	1.00 (reference)	0.369	1.00 (reference)	0.654
Not married	0.88 (0.67-1.16)		0.94 (0.71-1.24)	
Educational level:				
Middle/high	1.00 (reference)	0.017	1.00 (reference)	0.008
Low	1.38 (1.06-1.80)		1.44 (1.10-1.89)	
Smoking:				
No	1.00 (reference)	0.012	1.00 (reference)	0.017
Yes	1.48 (1.09-2.01)		1.46 (1.07-2.00)	
Alcohol intake:				
No	1.00 (reference)	0.003	1.00 (reference)	0.005
Yes	1.99 (1.27-3.11)		1.93 (1.22-3.05)	
Coffee consumption:				
No	1.00 (reference)	0.099	1.00 (reference)	0.210
Yes	1.21 (0.97-1.51)		1.16 (0.92-1.46)	
Tea consumption:				
No	1.00 (reference)	0.714	1.00 (reference)	0.421
Yes	0.96 (0.78-1.19)		0.92 (0.74-1.14)	
BMI:		**<0.001 (2)**†		**<0.001 (2)**†
Normal weight	1.00 (reference)	-	1.00 (reference)	-
Overweight	1.54 (1.23-2.02)	0.001	1.53 (1.18-1.98)	0.001
Obesity	1.59 (1.29-2.28)	<0.001	1.57 (1.22-2.02)	<0.001

* Odds ratios (OR: rheumatoid arthritis vs. no rheumatoid arthritis), 95% confidence intervals (95%CIs) and p-values from binary logistic regression.

† Overall p-value and degrees of freedom (in parentheses).

Upon multivariable-adjustment for all covariates entered simultaneously into the logistic regression models, rheumatoid arthritis was positively and significantly related to older age (OR=1.8, 95%CI=1.3-2.6), a lower educational attainment (OR=1.4, 95%CI=1.1-1.9), smoking (OR=1.5, 95%CI=1.1-2.0), alcohol intake (OR=1.9, 95%CI=1.2-3.1) and overweight and obesity (OR=1.5, 95%CI=1.2-2.0 and OR=1.6, 95%CI=1.2-2.0, respectively) [Table 2].

Discussion

This study provides evidence on selected socio-demographic and lifestyle correlates of rheumatoid arthritis among women seeking specialized primary health care in post-communist Albania. Older age, low education, smoking, alcohol intake and overweight and obesity were strong and significant "predictors" of rheumatoid arthritis in this sample of adult women in Albania.

The positive association of rheumatoid arthritis with age which was found in our study is in line with several previous reports (1). On the other hand, the positive relationship with a lower educational attainment is appealing and deserves further investigation in population-based samples.

Regarding the environmental factors, we found that, in multivariable-adjusted models, smoking was related to a 50% increase in the risk of rheumatoid arthritis. Several studies have indicated that smoking is the main environmental risk factor which increases twice the risk of developing rheumatoid arthritis (9). It has been demonstrated that the effect of smoking is confined to patients with ACPA-positive disease (8). Nonetheless, at a population level, the risk associated with smoking is quite low and has limited clinical relevance regardless of the pathogenetic importance of this factor (1).

In our study, we found a positive relationship between rheumatoid arthritis and alcohol consumption. The risk in women who reported to consume alcohol was about 90% higher than in those who did not report alcohol intake. This finding is generally compatible with previous studies conducted elsewhere (1,16). Other potential environmental risk factors for development of rheumatoid arthritis may include coffee intake, vitamin D status, and oral contraceptive use (1,16). We did not assess the effect of vitamin D, or oral contraceptive use, but found a weak and borderline significant relationship with coffee consumption in unadjusted logistic regression models only. In any case, smoking excluded, the effect of environmental factors in the risk of rheumatoid arthritis is controversial (1).

At present, there are many unresolved difficulties for individuals suffering from rheumatoid arthritis. Yet, the constant introduction of innovative and ground-breaking treatments can overcome many of these difficulties and challenges (1). One of the main requirements involves the characterization of disease subsets in individuals with early onset of rheumatoid arthritis in order to target intensive treatment regimens for those who need them most and are also likely to respond (1). From this perspective, it is suggested that that the new direction of treatment and management of rheumatoid arthritis should be towards short intensive therapeutic courses that result in remission instead of the traditional approach which consist of long-term suppressive treatment strategies (1).

This study may have several limitations. The study sample may not be representative of all women who attend Rheumatology services at the primary health care level in Tirana. Nonetheless, we included consecutive women who fulfilled the eligibility criteria in order to ensure, to the extent possible, a representative sample of female primary health care users seeking Rheumatology services in Tirana municipality. Yet, as our study was conducted in Tirana only, the sample may not be necessarily representative of all the Albanian women. Assessment of rheumatoid arthritis was based on the ACR/EULAR 2010 criteria (15), which is reassuring. However, the information related to lifestyle/behavioral factors of women included in this study may have been biased in the context of a traditional and patriarchal society such as Albania. Notwithstanding this possibility, there is no plausible reason to assume different reporting of behavioral factors in women with and without rheumatoid arthritis.

In conclusion, this study provides useful information about important correlates of rheumatoid arthritis among women attending specialized primary health care services in post-communist Albania. Health professionals and policymakers in Albania should be aware of the magnitude and consequences of this chronic condition in the adult population.

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ORIGINAL RESEARCH

Global health in foreign policy in South Africa – Evidence from state actors

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Abstract

Aim: There are currently debates about why South Africa integrates global health into its foreign policy agendas. This study aimed at exploring motivation and interests' South African policy actors pursue to advance global health and the processes that lead to such integration.
Methods: The study utilized a mixed-method design from a sample of state policy actors at the National Department of Health of South Africa. Participants were selected purposively and had experience of more than three years participating in various international health activities. All participants completed semi-structured questionnaires. Quantitative data was analysed to determine frequencies and transcribed text was analyzed using qualitative content analysis.
Results: A total of 40 people were invited, of whom 35 agreed to participate. Of the respondents, 89.7% (n=32) strongly argued that health should facilitate 'free movement of people, goods and services'. Majority (79.0%, n= 29) agreed that 'development and equality' are the main elements of foreign policy. Of the respondents, majority 77.1% (n=27) agreed that 'moral and human rights' are the main elements of foreign policy. Furthermore, 82.8% (n=29) agreed that the country should advance 'Africa regionalism and south-south cooperation' and 85.7% (n=30) strongly argued for a 'whole-government approach' in addressing global health challenges. 'HIV/AIDS' and 'access to medicines agenda' were the main policy issues advanced. The main domestic factors shaping South Africa's involvement in global health were its 'political leadership' and 'capacity of negotiators'.
Conclusion: It is evident that within South Africa, state policy actors are largely concerned with promoting global health interest as a normative value and a goal of foreign policy, namely, human dignity and development cooperation. Furthermore, South Africa drives its global health through building coalition with other state and non-state actors such as civil society. HIV/AIDS, as a policy issue, presents a potential entry point for engagement in global health diplomacy.

Keywords: diplomacy, foreign policy, global health, global health diplomacy, South Africa.

Conflicts of interest: None.

Acknowledgment: National Department of Health, South Africa.

Introduction

Global health diplomacy (GHD) has dramatically increased in the recent years in global health and international relations (1,2). Amid this enthusiasm, it is apparent that the concept of GHD is an emerging concept, with new evidence and debates emerging but with clearly diverse and sometimes poorly clarified meanings ascribed to the terms (3,4). In addition, rapid increase in the number of state and non-state actors in global health is an important development. However, the main challenge for governments and non-state organizations is to develop a multisectoral and coherent approach to overcome fragmented policies (5).

While the global health practitioners have welcomed this elevated political priority, there have been questions and debates about why and how South Africa has conceptualized and contributed to global health diplomacy. Furthermore, there has been less examination of why South Africa incorporates global health into its foreign policy agenda since 1994 elections. This then raises the question: why South Africa incorporates global health into its foreign policy? Therefore, these questions, and the broader issue of understanding the relationship between global health and foreign policy in South Africa are the focus of this study. Along this pathway, the study explored in-depth information on the views of senior state policy actors with the intention of generating new explanations or theory to account for pattern of such health influenced behaviour. As such, deductive process from existing knowledge and theory will be followed which would then be further tested and refined. Furthermore, the study explored the strategies, policy issues, domestic factors and diplomatic practices that would shape South Africa's involvement in global health.

Several authors have tried to introduce frameworks to analyse the relationship between global health and foreign policy. Whichever framework of GHD is used, most of the authors have agreed that no single policy framework offers a fully comprehensive description or understanding of the integration of global health into foreign policy as each answers somewhat different questions. Furthermore, some authors indicated that there are differing arguments between and within these policy frames, while others are overlapping, and can also be contradictory. In this study, Labonte and Gagnon framework was used to better explain why South Africa incorporates global health into its foreign policy agenda. Labonte and Gagnon (2010) use the deductive approach using six policy frames, namely: security; development; global public good; trade; human rights and ethical/moral reasoning (6). Therefore, this paper, using the framework developed by Labonte and Gagnon's health and foreign policy conceptualizations, contributes to this goal by reviewing health in foreign policy through an empirical research case study of South Africa.

Methods

Participants

The study utilized a mixed-method design including both qualitative and quantitative methods (7). A cross-sectional study was conducted amongst state policy actors at the National Department of Health (NDoH), in Pretoria, the capital city of South Africa. Purposeful sampling (8) was used to identify and recruit interviewees based on relevant peer-reviewed or grey literature, as well as the lead author's professional networks in global health and development. We then employed snowball sampling to enrol additional interviewees until we achieved theoretical saturation, that is, until successive interviews produced no new concepts. Participants eligible for in-depth interviews were key informants who had extensive experience in international negotiations for improved access to medicines in each of the three cases. Inclusion criteria consisted of key informants who had extensive experience and skills

(such as more than five years) in participating in international negotiations, which include bilateral, regional and multilateral activities and more than five years working in the health sector. Key informants not meeting the above inclusion criteria were excluded.

The reason for using semi-structured interviews was to help to reduce bias, sequence, clarity and face validity (9). The need for 'extra' sampling arose during the process of interviewing and preliminary theorizing or analysis. The total of eligible participants was 40, and 35 individuals participated in the study giving a response rate of 87.5%. All participants completed a semi-structured questionnaire. Nevertheless, the study sample in general was limited by the number of state policy actors who normally participate in international health activities, especially in multilateral negotiations. Participants provided written informed consent.

The items in the questionnaire were adapted from the previously published instrument used by Labonte (6,10). However, the questionnaire was adapted to fit South African context and discussed thoroughly until a consensus was reached, based on agreed criteria. In order to improve clarity, the questionnaire was pilot-tested amongst three state policy actors within the NDoH representing different areas. This pilot test provided the opportunity to refine the questions for clarity and local adaptation.

Data collection

Data for this study was gathered by using a self-administered semi-structured questionnaire. The closed questions provided an assessment of views and perspectives of state policy actors regarding what interests South Africa pursue when it engages in global health issues. The first five items provided socio-economic indicators of the respondents, namely: ranks; gender; health programme or service responsible for; experience working in health sector; and experience in participating in global health activities. The following 14 items were scored on a five-point Likert scale anchored at 5 as strongly agreed and 1 as strongly disagreed, with a mid-point for unsure. The structure of each question was in the following form: *'The main motivation and/or interests used to justify why health should be a prominent element of foreign policy is that health is a global public good'*.

For these 14 items, participants were asked to provide a detailed narrative explanation or provide examples. By use of written individual narratives to explain their views, this process provided a validity check and complemented the findings. One item asked participants to identify the biggest challenges that South Africa face in fulfilling its commitment to global health.

Procedures

In the first stage of data collection, a semi-structured self-administered survey was given to 40 state policy actors within the NDoH who had participated in global health negotiations in various global health forums. All the potential participants were approached, and were asked if they were willing to participate in the study. In addition, the questionnaire was also given two present and previous health attachés who were willing to participate in the study. The questionnaires were delivered during lunch breaks and all potential participants were explained the purpose of the study and were asked about their willingness to participate. A register was made to record the number of questionnaires issued out. In case where participants were not in the office or were absent, appointments were made for a follow-up visit.

The second stage of data collection included a review of published literature and reports on why South Africa incorporates global health into its foreign policy agenda. Searches were

conducted in numerous databases (PubMed, MEDLINE, Social Science Citation Index and Science Direct), selecting articles and reports that either directly addressed the relationship between global health and foreign policy, or were case studies of an interaction between global health and one or more of the six dimensions of foreign policy in South African context.

Quantitative data was entered anonymously into the database. The data editing and data capturing on spreadsheet were initially done on site by the research team as soon as the completed questionnaires became available. Double data entry and validation was done by two operators at the University of Pretoria using the statistical package Epi-info, version 13. In the case of qualitative data from both the primary (questionnaire) and the secondary sources, the data were transcribed into Microsoft Word, and initial notes were written which were used during the coding cycle. The process, settings, events, as well as discussions with respondents were all meticulously recorded.

The study received ethical approval from the Research and Ethics Committee of the University of Pretoria and the NDoH of South Africa. In addition, participants provided informed consent to participate in the study.

Analysis

Quantitative data was exported using Start Transfer and analysis was done using the statistical package Stata (Version 12). Following cleaning of the data, variables were recorded. The main outcome measure was successful participation in global health diplomacy. Descriptive statistical analysis was used to compute frequency distributions and sample characteristics in order to summarize and describe data in a concise form.

In the case of qualitative variables emanating from survey questionnaire, published literature and government reports on global health and foreign policy, data was analyzed for content (9). All the texts were read several times and were labelled with codes to conceptualize and categorize the respondents' experiences. Codes sharing communalities were grouped into sub-categories, which later supported the construction of categories. Analysis was done concurrently with data collection, making interpretations and preliminary reports on ongoing basis. The explanations given by participants in the survey questionnaire illuminated the experiences, perspectives and views of state policy actors. A 'thick description' of both participants and document quotes were presented throughout the results section to contribute to the trustworthiness of the research (9).

The study used a combination of emerging codes and those that fitted already predetermined codes. Secondary sources were also used to support and give context to the findings. The analysis was characterized by constant comparison of the sub-categories and categories with the original text to ensure that the interpretations were grounded in the data (9).

Limitations

A limitation is that it was not possible to examine all papers across a broad range of public health, political science and international relations literature dealing with the understanding of international networks' GHD processes. Thus, this study is not a comprehensive review of every published article related to this subject; rather, this study sought key literature that illuminates the relationship between global health and foreign policy. Furthermore, this study did not interview all possible key informants. In addition, there was a potential for selection bias resulting from the purposive sampling and initial selection of documents to be analyzed. In an attempt to mitigate or overcome this problem, we expanded the analysis to examine documents from other sources. Furthermore, there was a high rate of responsiveness of many

potential respondents who had knowledge and experiences in participating in negotiations for integration of health into foreign policy in South Africa. The responses from the questionnaire served as a useful purpose of validating the data from the published literature and reports, and acted as a control mechanism to test the validity of the findings.

Results

A total of 35 state policy actors completed the questionnaire, providing their views about why South Africa incorporates global health into its foreign policy agendas. The response rate was 87.5%. Table 1 presents the socio-demographic characteristics of the study participants. Of the 35 respondents, 54.3% (n=19) were female; 45.7% (n=16) were at post level 13 (Directors); 48.6% (n=17) had more than 15 years experience working in health sector; and 34.3% (n= 12) had between 5 to 10 years experience participating in global health activities.

Table 1. Socio-demographic characteristics of study participants

Variable	Number	Percentage
Gender:		
Male	16	45.7
Female	19	54.3
Total	*35*	*100.0*
Rank:		
Post level 15	2	5.7
Post level 14	6	17.1
Post level 13	16	45.7
Post level 12 or below	11	31.4
Experience in the health sector:		
>15 years	17	48.6
10-15 years	8	22.9
5-9 years	8	22.9
<5 years	2	5.7
Experience in the health sector:		
>15 years	6	17.1
10-15 years	7	20.0
5-9 years	12	34.3
3-4 years	10	28.6

Analysis of the quantitative and qualitative data from the questionnaire and published literature resulted in 16 categories that correspond to four content areas, namely: motivations and interests used to advance global health agenda; strategies and approaches used to advance global health; domestic factors affecting South Africa's participation in global health discourse and policy issue(s) to be advanced in global health.

Motivations and interests used to advance global health agenda

The responses are shown in Table 2. Of the respondents, the majority 89.7% (n=32) agreed that health is a global public good. Conversely, only 42.8% (n=15) agreed that health is part of global security concerns. However, a significant number of respondents, 34.3% (n=12) disagreed that security concerns is the main motivation why health is an element of foreign policy. Of the respondents, 45.9% (n=16) agreed that trade and economic interest are the

main elements of foreign policy. Of the respondents, majority agreed 79.0% (n=29) that development assistance for health is the main element of foreign policy. Furthermore, the majority 77.1% (n=27) agreed that human rights and ethical/moral reasoning are main elements of foreign policy.

Table 2. Motivation and interest used to advance global health

Variable	Number	Percentage
Global public good:		
Strongly disagree	0	-
Disagree	0	-
Not sure	3	8.6
Agree	8	22.9
Strongly agree	24	68.6
Security argument:		
Strongly disagree	0	-
Disagree	12	34.3
Not sure	8	22.9
Agree	6	17.1
Strongly agree	9	25.7
Trade and economic interest:		
Strongly disagree	4	11.4
Disagree	8	22.9
Not sure	7	20.0
Agree	9	25.7
Strongly agree	7	20.0
Development agenda:		
Strongly disagree	1	2.9
Disagree	1	2.9
Not sure	5	14.3
Agree	11	31.4
Strongly agree	17	48.6
Human rights and moral reasoning:		
Strongly disagree	0	-
Disagree	2	5.7
Not sure	6	17.1
Agree	11	31.4
Strongly agree	16	45.7

In order to complement the quantitative results presented above, the qualitative analysis of the narratives from the semi-structured questionnaires, published literature and government reports regarding why health is a prominent element of foreign policy in South Africa, post 1994, resulted in the following categories:

Free movement of people, goods and services

Most of the respondents believe that due to globalization, health is becoming a global public good, as indicated below:

'Globalization and movement of people into the country and out of the country due to country to country interactions, asylum seeking activities, wars that cause people to be displaced, health tourism, sports. People movement and goods may result in transfer of disease pathogens from country to country' [respondent no 25].

Human security and better health for all

Most respondents have argued strongly on focusing on human security, safety and protection of the individuals more than the state security, as indicated below:
'Public health issues goes beyond bioterrorism and outbreaks of influenza. Public health is about addressing inequalities and social determinants of health and therefore must be an important element of all foreign policy. Health has no geographic border, it affect all people, everywhere' [respondent no 8].
However, some respondents are of the view that acute outbreak of infectious diseases such as SARS and H1N1, threaten the citizens and security of the country. As a result, there is a need to establish effective cross border disease control and management, as indicated below:
'The world we live in has become highly permeable and an attack on one nation has got a ripple effect in term of other nations. This was evident during the H1N1 influenza outbreak' [respondent no 26].

Socio-economic development and equality
Most of the respondents have argued strongly that trade and commerce should not lead to reduction of the fundamental rights to health and dignity, as indicated below:
'The issue of trade and socio-economic interest should not be at the centre stage undermining people's rights to health and dignity' [respondent no 26].
Some of the responses from state policy actors clearly indicate tensions in the trade-and-health relationships due to conflict between economic interests and global health goals, as indicated below:
'Again, although this is a realistic and driving force for many countries' foreign policy, it would be better if this was discounted, but that would be regarded as naïve' [respondent 20].

Development, equality and solidarity
Most respondents have argued that South Africa's engagements in global health should lead to the advancement of developmental health agenda and equality, located within African solidarity, as indicated below:
'SA in line with its foreign policy has always prioritized development and equality, such as making spaces available for training of students from SADC, assist other countries such as DRC, Rwanda during humanitarian situation' [respondent no 28].
Furthermore, most respondents are of the view that South Africa should strengthen its international cooperation and developmental assistance, and also address issues of poverty and underdevelopment, as indicated below:
'Consolidation of the African agenda is key to the RSA' foreign policy. To this end, the goal of this priority is for the Continent to be able to resolve conflicts and building of an environment in which socio-economic development can flourish' [respondent no 3].

Rights-based structural cooperation
Most respondents argued that South Africa's engagements in global health should be framed within human rights, morality and democratic principles, as indicated below:
'(SA) Constitution, align with it. Regional perspective in terms of our moral and human right standing in the Africa Continent' [respondent no 23].
The review of the available published literature highlighted the need for South Africa to use its role of peace making and institutions building in Africa, as part of its continent's renewal and advancement of interest of the developing countries (11). The literature also revealed that South Africa should use its moral power, its own struggle for democracy, commitment to promoting human rights, and multilateral focus, to leverage its own sovereignty and that of weaker states, especially in the areas of access to medicines and migration of health

professionals (12). Many authors argue that South Africa needs a stronger and focused foreign and global health policies (12,13). This focused global health policy can include the identification of strategic global health priorities, greater institutional co-operation with agencies dealing with health and foreign policy; and the need for South Africa to develop a stronger leadership role in the African continent on global health.

Strategies and approaches used to advance global health

The responses are shown in Table 3. Of the respondents, majority 82.8% (n=29) agreed that South Africa build coalition with other countries.

Table 3. Strategies, approaches and domestic factors used to advance global health

Variable	Number	Percentage
Coalitions with other countries:		
Strongly disagree	0	-
Disagree	3	8.6
Not sure	3	8.6
Agree	13	37.1
Strongly agree	16	45.7
Capacity building for actors or negotiators:		
Strongly disagree	11	31.4
Disagree	12	34.3
Not sure	11	31.4
Agree	1	2.8
Strongly agree	0	-
Role of other ministries:		
Strongly disagree	0	-
Disagree	0	-
Not sure	5	14.3
Agree	13	37.1
Strongly agree	17	48.6
Role of academia and private sector:		
Strongly disagree	0	-
Disagree	0	-
Not sure	2	5.7
Agree	15	42.9
Strongly agree	18	51.4
Role of civil society:		
Strongly disagree	1	2.9
Disagree	2	5.7
Not sure	1	2.8
Agree	14	40.0
Strongly agree	17	48.6
Domestic factors:		
Strongly disagree	1	2.9
Disagree	1	2.9
Not sure	9	25.7
Agree	10	28.6

Strongly agree	14	40.0

However, 65.7% (n=23) said that there is no national programme for capacity building for South African actors or negotiators on global health issues. Of the respondents, 85.7% (n=30) agreed that other ministries have a role to play in addressing global health challenges. Of the respondents, 94.3% (n=33) agreed that academia and private sector have a role to play in addressing global health challenges. Of the respondents, 88.6% (n=31) agreed that civil society have a role to play in addressing global health challenges.

To complement the quantitative results shown above, the qualitative analysis of narratives from the semi-structured questionnaires and available literature regarding strategies and approaches used to advance South Africa's involvement in global health, post 1994, resulted in the following categories:

Whole-government approach

Most respondents argued that South Africa's engagement in global health should include consistency of purpose across all government sectors, as indicated below:

'Health needs a "whole government approach". This is very well illustrated with regards to NCDs, where we need changes in eating, behavior, physical activity, etc. We cannot achieve this without changing pricing of health, foods, involvement of schools, sport, transport, etc.' [respondent no 14].

Role of non-state actors

Most respondents argued that South Africa's engagements in global health should use the soft power of non-state actors such as civil society, academia and private sector as a global health policy instrument, as indicated below:

'... For example the NCD Alliance played a prominent role in advocating for the UNEA political declaration on NCDs and gave perspectives of users and experts, which was critical to the final declaration' [respondent no 14].

African regionalism

Most respondents argued that South Africa's engagements in global health should be framed within Africa's socio-economic development agenda, as indicated below:

'Consolidation of the African agenda is key to the RSA' foreign policy. To this end, the goal of this priority is for the Continent to be able to resolve conflicts and building of an environment in which socio-economic development can flourish' [respondent 3].

South-south cooperation

Most respondents argued that South Africa's engagements in global health should aim at advancing development socio-economic development within the developing world, as indicated below:

' ... IBSA promotes South-South cooperation and build consensus on issues of increasingly trade opportunities amongst the three countries as well as exchange of information, technology and skills to complement each other's strengths' [respondent 3].

The review of the available literature highlighted that non-state actors, including civil society, universities and other academic institutions, as well as private cooperation, have contributed to the advancement of global health goals (11,12). For example, South African health activists community like Treatment Action campaign (TAC) and COSATU, in consultation with transnational activism networks in the global south, have advocated for a broader access to affordable medicines, especially ARVs. Furthermore, the country was successful in

building strategic alliances with countries such as Brazil, during negotiations of 2001 Doha declaration on the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).

Domestic factors affecting South Africa's involvement in global health

The responses are shown in Table 3. Of the respondents, majority 68.6% (n=24) agreed that South Africa's newly assertive foreign policy and global health remains constrained by its domestic challenges. Furthermore, 65.7% (n=23) indicated that South Africa has no capacity building programme for its actors or negotiators. The qualitative analysis of narratives from the semi-structured questionnaires and the available literature regarding domestic factors affecting South Africa's involvement in global health, post 1994, resulted in the following categories:

- *High disease burden:* Most respondents argued that South Africa's engagements in global health should be framed within South Africa disease burden or challenges, as indicated below:
  'RSA is faced with quadruple diseases that impact immensely on the economy and this is compounded by the HR scarce to meet the health needs of the people' [respondent no 6].
- *Political leadership:* Most respondents argued that South Africa's engagements in global health are shaped by the leadership that was provided recently, especially in the area of HIV and AIDS and recently in non-communicable diseases, as indicated below:
  'HCT (HIV/AIDS Counseling and Treatment) campaign initiated by the Minister of Health has drawn interest globally and regionally and has had a positive influence in the global agenda' [respondent no 8].
  'In the past decade SA has taken a particular leadership role in HIV and AIDS, MDGs and now recently in NCDs. Also in Tobacco Framework and now alcohol related harm' [respondent 14].
- *Moderate resources:* Most respondents argued that South Africa's engagements in global health have been shaped by its moderate resources, especially its scientific skills, R&D and private sector, as indicated below:
  'Our technical and expert knowledge will be our entry into new market in Africa, South Americas and Asia. With expansion in develop countries to assist with global financial crises' [respondent 30].
- *Capacity of negotiators:* Most respondents indicated that there is no health diplomacy training programme for actors or negotiators, as indicated below:
  'Available programmes are not specific for health, but assist in orientating health actors, like the orientation programme for Ambassadors by DIRCO' [respondent no 11].

The review of the literature clearly indicated that despite South Africa's increasing participation in global health discourse, it is facing several constraints in implementing its global health initiatives. These constraints are found in South Africa's socio-economic challenges and institutional capacity (13). The country faces challenges of high unemployment, poverty and inequality. On health, the country face quadruple burden of diseases, due to HIV and AIDS and TB, an increasing burden of chronic diseases, high rates of interpersonal violence and injuries (14). This has limited South Africa's scope and influence of its global health assistance programme. That said, literature has also highlighted that South Africa has had broad influence and has provided leadership on global health, especially in terms of clinical research, advocacy and policy (15).

The literature also indicated that South Africa's weak institutional capacity of its negotiators is another major challenge to its ability to deliver a robust global health policy befitting its

newly enhanced global standing. Nonetheless, South African actors or key negotiators have played significant role in major negotiations, such as during negotiations of TRIPS agreement, WHO FCTC tobacco control and WHO Code for Ethical Recruitment of Health Professionals. During these negotiations, South Africa has demonstrated its ability to play a leadership role in the South, as a facilitator and a bridge-builder between North and South.

Policy issue(s) to be advanced in global health

- *Access to medicine agenda:* Most respondents argued that South Africa's success in global health diplomacy has been achieved within access to medicines control, especially in ensuring availability ARVs to all, as indicated below:
  'SA realizes that it will not be able to provide medical care to all unless it assists in bringing prices of medicine down. It therefore collaborate(s) with other countries and strategizes how best this can be done' [respondent no 14].
- *HIV/AIDS:* Most respondents argued that South Africa's success in global health diplomacy has been achieved within area of HIV and AIDS, as indicated below:
  'Without SA's interventions on issues such as HIV, the world would not have moved to where it currently is' [respondent 14].
- *Tobacco control:* Most respondents argued that South Africa's success in global health diplomacy has also been achieved within the WHO's FCTC, as indicated below:
  'FCTC is a(n) excellent example where we were proactive & prepared & followed through with active … actions & perseverance & purpose!' [respondent no 20].
  'SA was one of the first few countries to ratify the WHO FCTC' [respondent no 8].

The literature review highlighted that, given that nearly six million South African are HIV-positive, the country can take up the global leadership on HIV and AIDS (11). The notion of niche or focused diplomacy brings the identification of 'transnational issue networks' that can be used to advocate for improved health outcomes (12). In addition, South Africa need to use its bridge-builder and facilitation ability, to explore closer multilateral ties with Brazil (via IBSA) to seek to advancement of a shared health goals (11,12,16).

Discussion

Findings from the current study reveal that South Africa's participation in global health discourse is limited by its domestic health challenges. The findings confirm other studies in that South Africa is faced with challenges of epidemics such as HIV/AIDS and TB, an increasing burden of chronic diseases including obesity, and high rates of interpersonal violence and injuries (11). Behind these epidemics, there is the continuing mortality of mothers, babies and children, which still primarily affects the poorest families. Hence, the findings of the study are in line with results of other studies which have demonstrated that South Africa has understandably chosen to prioritize domestic health over global health (11). The findings of this study are also in line with other studies in that South Africa should use a human rights framework to position its approach to health diplomacy (11,12). South African government has used its human rights emphasis to champion for increase access to antiretroviral drugs in order to provide universal treatment to all HIV-positive people. However, studies have also revealed that South Africa has experienced a palpable tension between the politics of solidarity and sovereignty on the one hand and human rights on the other, as evidenced in its voting patterns on Zimbabwe to Libya in the UN Security Council and AIDS denialism (17).

This study, consistent with other studies, confirms that overemphasis on health security overshadow the opportunity to use health as a constructive and novel perspective to shape international, transnational and global action (17,18). The findings support other studies in that the governance of health threats should be about the search for equity, justice and well being, other than the current perspective of protection of international commerce from a free-riding epidemics (11,19). The findings of this study are also consistent with other studies in that some state policy actors still tend to focus on "high politics" of health issues, rather than on "low politics" in which health issues are seen as a reflection of human dignity (11,19).

The findings of this study are consistent with many other studies that have argued that South Africa should explicitly pursue issues of poverty and equality within its global health agendas and debates (11,19). Furthermore, studies have highlighted that South Africa's attention on global health diplomacy should focus on global trade, as 'trade and health linkage highlights the new prominence of health within foreign policy' (20).

The findings of this study are consistent with other studies and reports that have reported that South Africa does allocate limited resources to health assistance through multilateral agencies, bilateral channels and other South-South partnerships (15,21). The findings suggest that South Africa can play a more transformative role, through providing focused technical assistance for health projects, supplying medical goods and services to very poor countries in its immediate geographic neighborhood. For example, South Africa has provided funding to Seychelles for infrastructure rehabilitation and Republic of Guinea to boost rice production (21).

The findings of this study are consistent with other studies in that the contribution of non-state actors, including civil society, universities and other academic institutions, as well as private cooperation, is an important development in the advancement of global health goals (11,15). For example, South African health activists community like Treatment Action Campaign (TAC), in consultation with transnational activism networks in the global south, have advocated for broader access to affordable ARVs and health care services in South Africa and developing countries.[15]

This study is consistent with other studies, in that South Africa as an emerging middle income country, should prioritize its global health efforts (17). South Africa should avoid using rhetoric or ineffectual diplomacy, and try to be all and do all for everyone. For example, Brazil used focused diplomacy in areas of antiretroviral drugs, using health rights framework, while Cuba and China used medical diplomacy to achieve their foreign policy goals (22,23). Therefore, given the current burden of diseases, South Africa can use its HIV and AIDS diplomacy as a project of emancipating and transformation, rather than an affirmation of the world as it is (15).

Lastly, this study found that there is no formal training programme for actors and diplomats on global health diplomacy in South Africa. Other studies have also indicated the need for the development of a training programme on global health diplomacy (24,25). All these studies have clearly indicated that for health to be a sustainable lens for foreign policy thinking and agenda setting, it must be mainstreamed into the training of diplomats and health officials. This finding therefore highlights the need for South Africa to take a lead in training of diplomats and health officials within the country and in the Africa region.

Conclusion

This study has showed that South Africa has a limited engagement in global health diplomacy. South Africa is still inward focused, and that its domestic challenges (such as especially the burden of HIV/AIDS and TB) will drive its engagement internationally.

Furthermore, due to its domestic challenges, South Africa has not taken a regional leadership role in global health diplomacy. South Africa's economic diplomacy can presents a potential entry point for engagements in global health diplomacy. Non-state actors might also push the government to be more actively engage in global health diplomacy. It is therefore South Africa's approach to HIV/AIDS and tobacco control which might position it for engagement and a leadership role internationally. Therefore, in order to take its rightful leadership role, South Africa need to develop a focused global health strategy and take a lead in the training of diplomats and health officials within the country and for the Africa region.

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ORIGINAL RESEARCH

An educational initiative for Mexican school-aged children to promote the consumption of fruit, vegetables and physical activity

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Abstract

Aim: To present the results of a community initiative focused on strengthening physical activity and the consumption of fruits, vegetables and natural water while discouraging the use of highly energetic food and sugary drinks in public schools of Morelos.
Methods: A quasi-experimental study with an educational initiative focused on the school community of two primary schools and two junior high schools. Pre- and-post initiative measurements were made. The study took place in the municipality of Yautepec, Morelos, Mexico, in a rural area and an urban area, from August 2010 to July 2011.
Results: Water consumption among school-aged children increased from 15.1% to 20.1% and soda consumption decreased from 21.4% to 13.2%. A slight increase in the consumption of fruits and vegetables was also measured (oranges, jicamas, bananas, tomatoes, prickly pear pads, lettuces), that are accessible in the region. It was found that the supply of fresh food is limited and that high energy density foods have an oversupply in both study areas. Physical activity increased with actions such as football and dancing, in accordance with the baseline measurement. No changes were observed in the nutritional condition of school-aged children (n=150; 13.3% with overweight and 7.3% with emaciation), or in adults who presented a body mass index higher than normal, 60.2% to 88.4%.
Conclusion: In addition to educational activities, schools need to implement strategies to improve the access and availability of fresh foods while limiting the access of high energy-density foods.

Keywords: diet, educational initiative, Mexico, nutritional condition, school-aged children.

Conflicts of interest: None.

Introduction

Currently, the number of Mexican children and adolescents with overweight and obesity (O/O) is a public health problem (1), which has increased in school-aged children aged from 5 to 11 years. According to The National Nutrition Survey (ENN in Spanish) in 1999, the increase was of 19.5%. The National Survey of Health and Nutrition (ENSANUT in Spanish) in 2006 reached 26%, and the ENSANUT 2012 went up to 34.4%, representing an increase of over 80% (1-3).

The "Health in the World 2002" report of the World Health Organization (WHO), has pointed out health risks in different continents. In Latin America, addictions, blood pressure, low weight, together with overweight and obesity, represent one sixth of the morbidity burden. In this report, different cost-effective actions are mentioned to reduce the risks, such as decreasing salt and saturated fats intake to diminish the risks associated with cardiovascular diseases. It also states that one of the priority actions is to promote healthy environments for children (4).

Strategies for healthy communities and schools consider that cities, towns and schools are the most adequate spaces to promote healthy lifestyles for the entire population and specifically for school-aged children. Since children and young people are in a formative stage of life, schools become an ideal place for educational initiatives, so that they can incorporate knowledge, skills and health practices that not only circumvent risk behaviours, but improve health (5).

Various studies report educational initiatives aimed at school-aged children in their educational atmosphere. Some of these studies focus on increasing the knowledge of school-aged children in relation to healthy food (6,7). There are also researches about school-aged children's food intake preferences, which indicate that vegetables are not the food of their choice (8). Other initiatives are aimed at increasing school-aged children consumption of fruits, vegetables and reduce the consumption of beverages and high-energy density products and increase physical activity (9-13). Some authors mention that in the educational initiatives they have carried out, they focus on the entire school community (school-aged children, parents and teachers) in order to obtain better results and because parents and teachers help shape school-aged children behaviour (9-11).

The objective of this manuscript is to present the results of an educational initiative focused on strengthening physical activity and the consumption of fruits, vegetables and natural water, while discouraging the intake of highly energetic food and sugary drinks in the school community of public schools in Morelos, Mexico.

Methods

A quasi-experimental study through an educational initiative focused on the school community of elementary and junior high schools was implemented. Previous and post-initiative measurements were made. The study was conducted in the municipality of Yautepec, Morelos, in a rural area and an urban area, from August 2010 to July 2011. We employed a convenience sampling (n=150 students and n=178 adults) across rural and urban areas, and applied a pre-post test design based on quantitative and qualitative data. The educational initiative was carried out with students of the 4^{th}, 5^{th} and 6^{th} grades of elementary school, and the 1^{st}, 2^{nd} and 3^{rd} grades of junior high school located within the localities. In addition to school-aged children, teachers, managers and administrative staff of the schools,

as well as parents were included in order to strengthen the changes proposed for school-aged children and make them sustainable (9-11).

Tools and techniques for data collection

School-aged children

The following measurements were taken at the beginning and at the end of the study: weight and height using a standardized anthropometric methodology (14). The weight was measured with an electronic scale (Tanita brand, model 1583, Tokyo, Japan) with capacity of 140 kg and accuracy of 100g. Height was measured using a wooden stadiometer with capacity of 2 meters and precision of 1 mm. The ages and dates of birth were provided by the school-aged children and corroborated by their teachers or mothers. Anthropometric measurements were taken by the research team, which was previously trained according to standard techniques (15). The anthropometric indicators used to assess the nutritional condition of school-aged children were weight/height and height/age. Length and weight data were transformed into *z*-scores by using the WHO/ANTHROPLUS (16). A cut-off of -2.0 SD was used for classifying children as stunted based on individual height-for-age z-scores. A cut-off of +2 SD was used to classify children as overweight or obese, based on individual weight-for-height- age-z-scores (BMI)-for-age, according to international standards, sex- and age-specific.

Questionnaires applied at the beginning and at the end of the study included (17): i) *dietary information:* Food Frequency Questionnaire (FFQ). This questionnaire was taken from the school-aged children section of the 2006 National Health and Nutrition Survey, which is validated and was applied in all the regions of Mexico. The information was obtained using a 7-day semi-quantitative FFQ. For each food item, the number of days of intake per week, times-a-day, portion size (very small, small, medium, large, and very large), and number of portions consumed were asked. The food groups were as follows: milk and dairy, fruits, vegetables, sugar sweetened beverages and sugar-free beverages, water and sweets and candy, as well as consumption of fruits and vegetables; ii) *physical activity* questionnaire for school-aged children.

Adults

Initially, measurements of weight, height and waist and hip circumferences were made. The applied technique was in agreement with Lohman and Martorell and standardization was according to Habicht (6,7). Weight and height were measured with the same instruments used with school-aged children. Adults' waist was measured at the midpoint between the lower rib and upper margin of the iliac crest; it was taken with a rigid tape brand "Seca" with capacity of 2 meters and precision of 1mm. Hip circumference was measured horizontally at the widest portion of the buttocks. The indicators used to assess the nutritional status of adults were the Body Mass Index (BMI) and waist-to-hip ratio (WHR) circumference index. The classification used to categorize the BMI was taken from the WHO standards (18), which identifies four categories: malnutrition ($<18.5 kg/m^2$) normal BMI (18.5 to $24.9 kg/m^2$), overweight (25.0 to 29.9 kg/m^2), and obesity ($\geq 30.0 kg/m^2$). The classification of the International Diabetes Federation was used as a reference for the waist circumferences, which defines as cut-off waist circumference of >80 cm for women and >90 cm for men (19). WHR was calculated as waist circumference divided by the hip circumference, and a WHR ≥ 0.90 in men or a WHR ≥ 0.85 in women was classified as that representing abdominal obesity (20).

Schools and communities

In schools and communities there were carried out: i) observation guides for the ethnographic record; ii) guided focus-group interviews, and; iii) community mapping.

Description of educational activities

The educational initiative was based on the Paulo Freire's empowerment education theory, which departs of the knowledge, practices and circumstances of the population involved, and secondly is enriched with theory (new knowledge), so that people can make changes in their environment later on (21-23).

During the educational sessions with school-aged children, participatory and playful techniques were used to promote collective reflection. The sessions were coordinated by facilitators previously trained and lasted 50 minutes. Overall, 15 sessions were held once a week, in each of the school grades (4^{th}, 5^{th} and 6^{th} grades of elementary school and 1^{st}, 2^{nd} and 3^{rd} grades of junior high school). The sessions were divided into two axes: diet and physical activity.

Under the first axis, the following topics were addressed: *a)* the healthy eating plate (24); *b)* the importance of eating fresh fruits and vegetables; *c)* drinking natural water; *d)* the damage caused to the human body by high energy density foods and sugary drinks; *e)* personal commitments to increase the intake of fruits, vegetables and natural water, and; *f)* actions within their family, school and community for healthy eating.

For the second axis, the following topics were addressed: *a)* the importance of physical activity; *b)* the damage caused when being sedentary; *c)* personal commitments to carry out physical activity, and; *d)* actions within their family, school and community to perform physical activity.

School-aged children carried out a series of activities (mural newspaper, school radio, health fairs, community tours, poster competitions, murals, sports tournaments and races within the school and their community) to spread their knowledge and make practical actions, both in their school and in their community.

At the end of the educational sessions, a school committee was established in each school in order to address nutrition and physical activity issues. It also carried out advocacy actions with the schools' directors and local authorities to improve the type of food and beverages that are offered within the educational institutions and the community, as well as various other actions to promote physical activity. Workshops with parents were conducted in eight weekly sessions (two hours per week). With teachers and school staff, the workshops were held in four monthly sessions, where each session lasted five hours long. At the end of each workshop, the groups of parents and teachers made commitments to carry out actions aimed at improving diet and physical activity in various fields such as: personal, family, school and community.

Data analysis

Quantitative component: for the anthropometric analysis, anthropometric indexes based on the measurements of weight, height and age were used. The indicator used for children, adolescents and adults was the BMI. For the classification of children in various categories, BMI distributions were used as well as the criteria proposed by the International Obesity Task Force (IOTF). This system identifies specific BMI breakpoints for each age and gender. The Anthroplus program and the Stata v13 statistical package were used. Univariate and bivariate analyses were obtained from the questionnaires' data. Measures of central tendency were used for numerical variables, whereas frequency distributions were used for categorical variables. Percentages were analyzed and described at the beginning and at the end of the

initiative. The following statistical programs were used for the analysis: Stata v13, Excel 2007 and WinEpi.

Qualitative component: systematization of community mapping, ethnographic records and focus groups.

Results

The analysis was performed with 159 school-aged children with complete questionnaire data: food intake frequency, anthropometry, socio-demographic characteristics, and physical activity (pre- and post-intervention). Mean age was 12.3±1.9 years. Anthropometric data were presented with 150 school-aged children. There were no substantial changes in the nutritional condition (Table 1).

Table 1. School-aged children anthropometry: Body Mass Index (BMI) by community according to gender (percentages)

Parameter		Rural		Urban	
	Total	Men	Women	Men	Women
	(n=150)	(n=17)	(n=19)	(n=59)	(n=55)
Overweight					
Pre	13.3	17.7	21.1	6.8	16.4
Post	13.3	17.7	15.8	11.9	12.7
Obesity					
Pre	1.3	5.9	0.0	1.7	0.0
Post	2.0	5.9	0.0	1.7	1.8
Emaciation					
Pre	7.3	11.8	15.8	3.4	7.3
Post	7.3	11.8	15.8	3.4	7.3

The mean BMI in the pre-intervention phase was 19.4±3.8, whereas in the post-intervention phase it was 20.5±4.0. It was found that most of the adult population was above the normal range of the BMI. In the rural community (n=121), it was found that BMI was between 60.2% (community groups) and 85% (parents) above the cut-off that is considered adequate. In the urban community (n=77), BMI ranged from 69.8% (community groups) and 91.7% (parents). The results for teachers in rural schools were: BMI above normal in 88% of them. In urban schools it was 57.1% above the normal BMI.

In 87% of rural schools parents, a WHR≥0.85 was found and 90.5% of them had a >80 cm waist circumference. Parents in urban areas showed 83.3% WHR ≥0.85 and a >80 cm waist circumference (data not shown).

Consumption changes of drinks, fruits, vegetables and highly energetic food

Natural water consumption increased (not significantly) in school-aged children (from 15.1% to 20.1%) in a 2-4 day range per week. Soda consumption significantly decreased in school-aged children who consumed it daily (from 21.4% to 13.2%) and significantly increased in those who never consumed it or did it once a week (from 8.2% to 9.4% for the first case and from 30.8% to 42.2% for the second case) (Table 2).

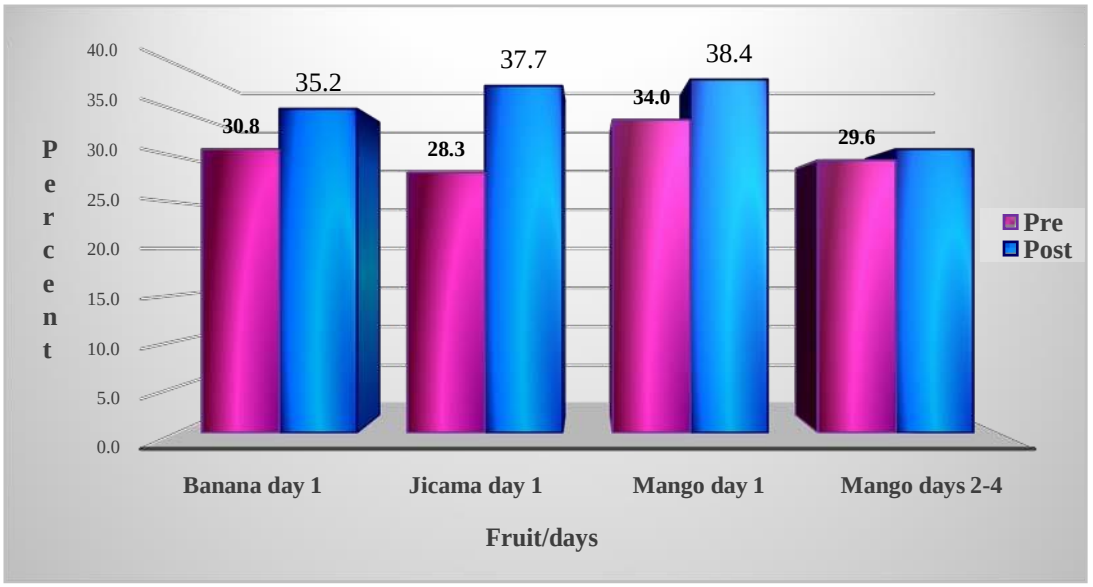
The consumption for at least once a week of some fruits and vegetables, increased regarding products that are common in the area, or inexpensive in certain periods of the year (jicama, apples, pineapples, lettuces, prickly pear pads, cucumbers, squashes and chayote). The intake of oranges, mangos and melons increased from once a week to 2-4 times per week. There was no increase in the consumption of broccoli, cauliflower, cabbage or green beans (Figures 1 and 2). No significant gender differences were found in the consumption analysis of water, soda, fruits and vegetables.

Table 2. Beverages' consumption of school-aged children per community according to intervention phase (percentages)

Type of beverage	Total		Rural		Urban	
	Pre	Post	Pre	Post	Pre	Post
	(n=159)		(n=38)		(n=121)	
Natural water consumption per week						
Never	3.8	0.6	7.9	0.0	2.4	0.8
1 day	13.8	10.7	21.1	7.9	11.6	11.6
From 2 to 4 days	15.1	20.1	7.9	29.0	17.4	17.4
From 5 to 6 days	15.1	15.7	7.9	18.4	17.4	14.9
7 days	50.9	51.0	52.6	42.1	50.4	53.7
Did not answer	1.3	1.9	2.6	2.6	0.8	1.6
Soda consumption per week						
Never	8.2	9.4	2.6	10.5	9.9	9.1
1 day	30.8	42.2	42.1	42.1	27.3	42.1
From 2 to 4 days	30.8	23.9	34.2	34.2	29.8	20.7
From 5 to 6 days	8.8	11.3	5.3	7.9	9.9	12.4
7 days	21.4	13.2	15.8	5.3	23.1	15.7

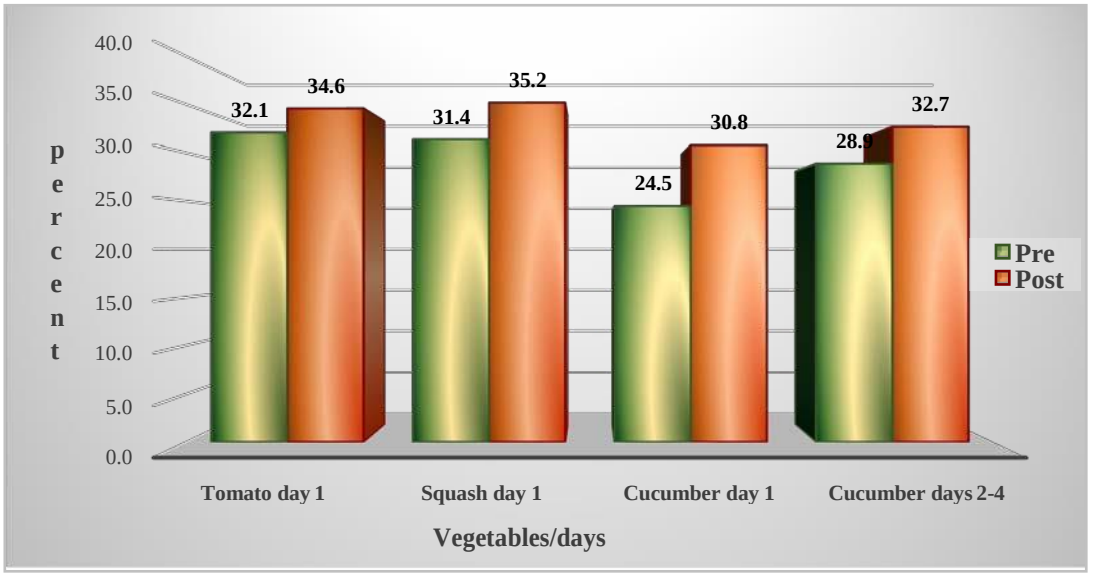
The frequency of fried food consumption decreased slightly (81.2% vs. 79.3%), as well as the intake of industrial pastries.

Figure 1. School-aged children's fruit consumption percentage per week days (n=159)



In schools, teachers promoted the accessibility of natural water for school-aged children, and also made modifications (increased the consumption of fresh food and decreased the intake of high energy density food) in the type of food offered to school-aged children.
Focus groups with school-aged children reported that they increased natural water and fruits intake. Simultaneously, they pointed out that they decreased their sugary drinks and junk food intake.

Figure 2. School-aged children' vegetables consumption percentage per week days (n=159)



In addition, drinking natural water sweetened with fruits and the absence of soft drinks was observed in the ethnographic record of the rural community:

"According to what was taught, did you do any changes?"

> –*"I drink more water and eat more fruits".*
>
> –*"We hardly eat junk food now".*
>
> –*"I barely use Valentina sauce and I add less sugar to my coffee or tea"* (junior high school and rural elementary school focus group: 33-44).

Differences were observed in focus groups with teachers, who reported positive changes for the urban elementary school and the rural junior high school:

> –*"Did you notice any changes in the children?"*
>
> –*"No doubt there were changes in the children and the school in general. Although, as you just said, only 4th, 5th and 6th graders participated in the educational activity, and now the children who were in 4th grade are in 6th grade. There were changes in the school: we no longer sell candy or soft drinks. There has been a change in the food that the school offers to students because of the advices and information that you gave us at the beginning of this project, along with the directions that have been implemented by the Basic Education Institute of the State of Morelos"* (urban elementary school teachers' focus group).

In community mapping exercises of all groups, it was identified that there is a limited offer of fresh food, fruits and vegetables in both communities, while there is an oversupply of high energy density food and sugary drinks.

Physical activity and sedentary lifestyle

The calculation results of the metabolic rate measurement units (MET's) of the students were as follows: mild MET: mean (SD)=17.8±13.7, corresponding to cleaning, games, board games, chats, music, reading and working; moderate MET: 18.2±20.2 corresponding to games or sports with a moderate wear out (skating, gym, swimming, riding bikes or motorcycles); vigorous MET: 64.4±48.1 including high physical performance activities (soccer, basketball, dancing, running, tennis, and the like). Weekly hours dedicated to each of the activities were as follows: mild activities: mean (SD): 6.3±5.2 hours; moderate activities: 3.96±5.1 hours; vigorous activities: 8.5±7.1.

There was a significant increase in the school-aged children's physical activity like playing soccer (14% vs. 27%), and dancing (3% vs. 7%), among other activities, regarding the baseline.

Sedentary activities decreased: the percentage of students who did not watch movies increased (from 23.9% to 30.8%), or played videogames (from 40.9% to 44.0%), and the hours per week children used to watch movies decreased from 6 to 7 hours per week (from 3.8% to 0.6%).

Discussion

This study fostered changes in the eating habits of school-aged children, drinking natural water and eating more fruits and vegetables, while diminishing sedentary activities from the actions taken by the educational initiative.

There were no significant changes between the two anthropometric measurements carried out at the beginning and at the end of the initiative, which happens to be consistent with a study carried out with schoolchildren in Hawaii, who showed no significant changes between the measurements of BMI (25). Bayer et al. have reported similar results in a longitudinal study

in which no significant changes were obtained in the BMI (26). In a literature review of research carried out in Brazil, it was reported that there was an increase in the level of knowledge and food choices in school-aged children, but there were no changes in the nutritional status (27).

It was found that parents and teachers have high percentages of O/O, similar to the percentage reported by ENSANUT in 2012. This aspect is relevant since it points out that one of the factors associated with school-aged children O/O is the high BMI of their parents (28). Due to the above, it is important to incorporate parents and teachers into educational initiatives aimed at school-aged children so that dietary changes can be sustainable. In fact, the incorporation of parents and teachers has been reported in several studies (9-11), and in a study carried out in Mexico, the integration of parents and teachers was recommended since the beginning of the study in order to obtain better results (29).

The post educational initiative data showed an increase in water consumption and the elimination of sugary drinks at school, which is consistent with the findings of James et al. (30), who reported an increase in water consumption and a reduction of sugary drinks.

Other studies have reported an increase in healthy eating knowledge but without showing any changes in the nutritional condition, which is similar to the results of this research (6,31), but differs in that school-aged children made changes in their eating habits with the intake of fruits, vegetables and natural water, which was the main objective of the educational initiative. The results obtained in our study are similar to those reported in other studies (9,11-13).

Changes in the nutritional condition of school-aged children require the link between the educational initiative and structural social actions such as public policies addressing the type of food that is sold at schools and community environments, the production and manufacture of high-energy food and the strict regulations on food advertising aimed at this population. Wijesinha-Bettoni et al. have reported that, in Mexico, educational and health authorities do not have strategies or actions to provide vegetables and fruits to school-age children in food programs carried out in schools (32).

The information gathered from the teachers' focus groups showed that they appreciated the changes in school-aged children involved with the educational initiative, as well as their commitment and concern for school's diet, which is similar to what Schetzina et al. have previously reported (33).

Sedentary activities dropped after the initiative, which coincides with Veugelers et al. (34), and Lawlor et al. (11), who reported similar results in their studies.

The limitations of this study were: the educational initiative was targeted for the 4^{th}, 5^{th} and 6^{th} graders; the implementation time was short and did not include another school for comparison. Other limitations of this study are related to the context of schools and communities, since the supply of fruits and vegetables is low in contrast to the oversupply of products and drinks of high energy density, and there are no spaces to perform physical activity. Due to the size of the population included in the study, the results cannot be extrapolated to other regions of the country.

Conclusions

This study shows that, although moderate, it is possible to achieve a change in behaviour with a specific educational initiative. This study should be expanded to increase the number of

educational sessions with school-aged children and with all members of the school community, to strengthen scientific evidence with diet and physical activity subjects that must be part of the school curriculum, to make progress on the health of this population group.

Educational activities that modify school-age children's behaviours are not enough for reducing overweight and obesity. The implementation of diverse and simultaneous actions is needed, such as an increase in the supply access and availability of fresh and healthy foods. This is why the promotion of policies and regulations regarding the type of food and diet at schools and communities is essential.

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REVIEW ARTICLE

European and North American Schools of Public Health – Establishment, growth, differences and similarities

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Abstract

Unlike European Schools of Public Health, whose development was primarily influenced by the medical profession and was linked to the healthcare system, North American Schools of Public Health operate as independent academic institutions engaged in research and education of Public Health specialists.

While Public Health has been recognised as a distinctive profession in USA and Canada for almost a century, in many European countries it is not recognized as such and, accordingly, there are no well-defined job positions for graduates.

Similarities and differences between the European and American Schools of Public Health are reviewed and the importance of classification of core competences, responsibilities and scope of knowledge required for Public Health practice was pointed out as a prerequisite for accreditation of study curricula. For the professionalization of Public Health in Europe further efforts are needed.

Keywords: competency-based education, public health, public health students, schools of public health.

Origins of the Schools of Public Health

Schools of Public Health (SPHs) operate either as independent institutions or as constituents of academic institutions, and vary widely in their foundation patterns, in particular if comparing North American SPHs against those established in Great Britain and Europe. The eldest institutions of this kind, those established in Great Britain, have evolved from various charity organisations primarily founded for provision of healthcare to seafarers and ship crews affected by numerous communicable diseases, in particular those contracted in the tropics. These institutions began to offer systematic education of healthcare professionals (mainly those willing to practice overseas), while the research conducted under their roofs was primarily focused on the pathology of tropical diseases. The London School of Hygiene and Tropical Medicine (LSHTM) and the Liverpool School of Tropical Medicine (LSTM), both founded at the very end of 19th century (in 1899 and 1898, respectively), were not only the oldest schools of tropical medicine in the world but also leading institutions of this kind until today, well-known due to their educational excellence and scientific breakthroughs (1,2). However, the European continent accommodated only a few SPHs prior to the World War Two and two types of SPHs have profiled – those operating under the wings of the Ministries of Health that are actually the constituents of public (state-governed) healthcare system involved in Public Health (health-related) research and education, and those operating under the wings of Medical Schools/Universities (as their constituents or departments like for instance, Department of Hygiene or Social Medicine Department or, more recently, Public Health or Healthcare Management Departments, as typical examples). Regardless of their status (healthcare facility, or an academic institution or department), the European SPHs were dominated by medical profession from the very start, gradually also affiliating experts of other backgrounds as necessary due to the multidisciplinary nature of Public Health. As opposed to that, the North American model of Public Health education is unique due to the fact that American SPHs operate independently from the healthcare system. Namely, in the times of rapid industrialisation and urban growth, witnessed in the second half of the 19th century when numerous cities were afflicted with major disease outbreaks including cholera and typhoid, city health offices or, more precisely, utility and healthcare services, were established across the US, especially in cities where, among other things, clean water supply and drainage systems of indisputable importance for the prevention of communicable diseases were established. However, this course of events facilitated the struggle for supremacy between experts of medical and non-medical profile. It is astonishing that the American Public Health Association, established in New York by a small group of enthusiasts, was founded as early as in 1872. Within this context, the key role was played by the Rockefeller Foundation under which the Rockefeller Sanitary Commission for the Eradication of Hookworm Disease started to operate as early as in 1909. The Commission was established owing to the initial one million-donation and was led by Wickliffe Rose, a professor of history and philosophy (3).

The famous Flexner Report released in 1910 served as the basis for the substantial reform of medical education, resulting in the cessation of operation of numerous Schools of Medicine in the USA and Canada and the improved quality of medical tuition (4). The Report set new, higher medical education standards. About the same time, in October 1914, the Education Board of the Rockefeller Foundation organised the New York Conference, which further propelled the discussion on, and contributed to, the defining of tasks, responsibilities and scopes of knowledge and expertise required for Public Health practice. The initial ideas were further elaborated by William Welch and Wickliffe Rose, the authors of the famous Welch-

Rose Report, actually compiled in two versions and released in 1915 (5). The Report became the symbol and the blueprint of evidence-based education underpinning the new profession that requires well-defined competencies.

Growth of SPHs and their associations

Public Health as a distinctive profession and the first SPHs, operating as independent academic institutions (optionally, but not necessarily, under the wings of the universities) were established across the US, a number of them thereby being supported by the Rockefeller Foundation. W. Welch was elected the first Dean of the renowned Johns Hopkins School of Public Health (originally named the Johns Hopkins School of Hygiene and Public Health, established in 1916). This school served as the model institution and several SPHs were established soon after under the wings of the Columbia, Harvard, Yale and other universities. Welch was already well-known as one of the "Big Four" founding professors at the Johns Hopkins Hospital established earlier (in 1889) and also the first Dean of its affiliated Johns Hopkins School of Medicine (he was pathologist and bacteriologist) (6). In 1953, the US SPHs united into an organisation named the Association of Schools of Public Health (ASPH), currently joined by approximately 50 members and referred to as the Association of Schools and Programs of Public Health (ASPPH).

Before the World War Two, the "Old Continent" accommodated only a few SPHs (excluding the Institutes of Hygiene that were founded in European capitals already in the 19th and at the beginning of the 20th century as health administrative, but not academic institutions, although often involved in teaching). One of the first schools of this kind that followed into the footsteps of the LSHTM and the LSTM was the School of Public Health in Zagreb, ceremonially opened on October 3rd, 1927. The credit for this development goes to Dr Andrija Stampar and the Rockefeller Foundation that granted funds for the construction and equipping of the School's building. In the subsequent course, the National School of Public Health was established in Athens in 1929, followed by the Ankara School of Public Health, founded in 1936.

Contrary to the American model of education, until late 1960s, in the majority of European countries one could opt for Public Health as a narrow field of expertise only as medical specialization although there were models of postgraduate programmes tailored for experts of various background, both medical and non-medical, mainly those already engaged in the health segment, the showcases hereby being the Andrija Stampar School of Public Health in Zagreb and EHESP School of Public Health in Rennes (today's EHESP - *École des Hautes Études en Santé Publique* was established in 1945 by the French government under the name ENSP - *École des Hautes Études en Santé Publique*). Since, and especially after 1990s, new SPHs were established either as independent high schools or faculties under the wings of universities offering professional (mainly master and post-master) degrees in health sciences (showcase is the Faculty of Health Sciences, University of Bielefeld, Germany).

The Association of European SPHs was established in 1966 in response to the initiative of WHO Regional Office for Europe. The Association was first given the French name and acronym AIRESSPE – *Association des Institutions Responsables d'un Enseignement Supérieur en SantéPublique et des Écoles de SP en Europe*, which was later changed into ASPHER - Association of Schools of Public Health in the European Region. ASPHER has tripled its membership during 50 years of continuing growth, which is described in more detail in this issue of SEEJPH (7).

Upon the implementation of the Bologna process, a number of European countries have virtually been flooded with undergraduate and graduate Public Health study programmes proposed and introduced, but regrettably often lacking clearly defined competencies and, unlike the US, clearly defined labour market prospects and career advancement paths.
Bottom-line, for almost a century, Public Health has been recognised as a distinctive profession both by the US and Canada, a great importance thereby being given to the accreditation of the study curricula. ASPPH membership is allowed only to the institutions of merit, which have satisfied stringent accreditation criteria. However, it should be pointed out that ASPPH can be joined only by institutions that have passed the accreditation procedure entrusted with the special agency operating under the wing of the Council on Education of Public Health (the CEPH), while schools having their study curricula not yet accredited may join the Association only as associated members, provided that the accreditation procedure is already set in motion.

From the past to the present developments

One of the founding fathers of the European Union, Jean Monnet has stated that: *"Nothing is possible without man, nothing is sustainable without institutions"*. Associations of SPHs, established in Europe and North America long time ago were drivers for promotion of Public Health education, research and service and, warranty, of high quality educational standards. ASPHER celebrates its half a century-long establishment in 2016. The Association primarily embraces Schools or Departments of Public Health established in countries belonging to the WHO-EURO, and has only recently opened to associated members beyond the European Region. ASPHER membership reached 110 members in terms of Schools or Departments of Public Health established in 43 countries of the WHO European Region, spanning from Iceland to the west to Kazakhstan to the east, and from Norway to the north to Israel to the south. On top of that, some of the Schools from other continents (Australia, Canada, Mexico, Lebanon and Syria) are affiliated with the Association as associated members (8).
ASPHER became a respectable European organisation in public health workforce development and collaborates with WHO as well as with other European and international organizations and associations such as the European Public Health Association (EUPHA), the World Federation of Public Health Associations (WFPHA), the European Public Health Alliance (EPHA), the European Health Management Association (EHMA), the EuroHealthNet (EHN) and many others.
Despite different patterns of establishment, SPHs from both sides of the Atlantic Ocean have currently a lot in common; one can say they are converging having in mind that SPHs in Europe are currently academic institutions with multi-professional faculty. Many new SPHs were established after 1990 in Central and Eastern European (CEE) countries, as well as in the newly independent states formed after dissolution of USSR. Besides education and training of health professionals, SPHs have the mission to inform and support the planning, development and evaluation of public health interventions, programmes and policies coming from both, governmental and non-governmental sector.
In 1995, Evelyne de Leeuw, at that time Secretary-General of APSHER, published an excellent article in the Lancet based on a survey performed three years earlier encompassing 54 SPHs in Europe in which she labelled eight types of SPHs (9). Two types were found to be most common in CEE countries: (i) SPH within Medical University, and; (ii) SPH which is a branch of the Ministry of Health (MoH), while other types were more typical for western Europe: (iii) SPH within Medical School; (iv) University (multi-school) based programme

designated by MoH, and; (v) an independent research and training institution within the University (what is in fact an equivalent of the accredited SPH in US). Some SPHs in CEE countries, particularly the newly establishing ones, were in transition towards the last type (US-type SPH). It seemed that the European scene of Public Health education had been changing but CEE countries showed to be polarized: in some countries US-type SPHs had been established, whereas in the others even the new initiatives were based at the training under the umbrella of MoHs, likely due to historical reasons as it was stated in the conclusion (9). Twenty years later, the situation is very much the same and Public Health as a profession is still struggling for recognition not only in CEE countries, but also in some western European countries. Besides the need for integration of academic and field activities already in the educational environment, i.e. establishment of US-like academic institutions granting Bachelor and/or Master degrees and not only postgraduate ones, another issue is essential: availability of well-defined jobs for graduates. In many European countries, both in Western and Eastern Europe, it is difficult to change patterns according to which job posts are defined and made available. That is why in some countries (e.g., in Albania), newly established higher education programmes in Public Health were abolished due to non-employability of graduates, while in others after many years of successful training within a common postgraduate MSc study programme in Public Health and Epidemiology that was open to multi-professional student body (e.g., to candidates with medical as well as different non-medical background), separated programmes have been currently introduced (e.g., in Croatia): Public Health Medicine as mandatory part of medical specialization (i.e. for MDs only) and specialized postgraduate programme in Public Health designed for other professionals, mainly those already employed in the health sector or engaged in governmental or local authorities or NGOs. This programme started at the Andrija Stampar School of Public Health already in 1947 followed by the opening of similar programmes in other public health disciplines: Occupational Medicine in 1949, Mother and Child Care in 1953, Environmental Health in 1954, School Medicine and Hygiene in 1955, Sports Medicine in 1965, and two programmes started in 1984 (Gerontology and Medical Informatics). Besides these postgraduate study programmes that led to MSc degree, there were two other tracks opened to MDs only (Family Medicine introduced in 1960 and Medical Microbiology introduced in 1961). While some of the mentioned programmes were designed as a mandatory part of medical specialist training and enrolled exclusively MDs, some others used to mix students of different backgrounds or had two or more tracks (e.g. Public Health and Epidemiology, School Medicine and Hygiene, Environmental Health, Sports Medicine) and students had the option to write a thesis and earn an MSc degree or to complete only the study and exams as mandatory part of medical specialization. The last two programmes were aimed for a mixed student body. All mentioned programmes were terminated in 1998 while since than there are no MSc programmes anymore in Croatia and two types of postgraduate programmes were put in place instead: PhD study programmes as the third cycle of higher education and postgraduate specialized programmes. The later programmes are designed either as part of organized education within medical specializations or for other professionals (market-oriented) looking for expertize in a narrow field and Mag. Univ.degree.

In many European countries, Public Health professionals are still trained at postgraduate level only in Schools or Departments of Public Health located within Medical School/University, in educational structures of type 1 or 2 described in (9). In some other countries professionals of different backgrounds (e.g. lawyers, social workers or economists) are undergoing training in public health in institutions under the responsibility and management

of national health authorities, i.e. in type 5 SPHs according to the referred classification. The best examples for these two forms of postgraduate training institutions were until recently two of the ASPHER's founding schools, Andrija Stampar School of Public Health belonging to the School of Medicine University of Zagreb and the French ENSP in Rennes that was transformed by the Public Health Act in 2004 into EHESP in order to provide France with an outstanding, internationally recognized SPH. Besides many programmes leading to civil service executive degrees for students previously recruited by government departments or local authorities as well as professional development programmes, the School offers a full range of programmes leading to academic degrees covering all three cycles (Bachelor, Master and PhD) for international students (10).

There is evidence that it is possible to build educational structures for education and training of Master level Public Health professionals but they are not sustainable without the changes of labour market. It seems that unlike the West of Europe, its East still lacks well-defined job posts for Public Health graduates unless they have another previously acquired "traditional" qualification. There are even worse examples: more than ten years after the majority of higher education programmes were split into two cycles (Bachelor and Master) with the Bologna reform of higher education in Croatia, we are still lacking job positions for those with Bachelor degrees and more than 90% of them are continuing their studies for Master degree in the same field. Moreover, not only that Bologna reform seems to be unnecessary, but we are already witnessing demands and examples of a backward process at the University of Zagreb: integration of two cycles split previously at the time of Bologna process "passion".

Bottom-line, well-defined qualification standards linked to well-defined learning outcomes within the national qualification frameworks and in accordance with the European Qualification Framework are prerequisites for the creation of jobs, but the policy makers should take into account that changes in job definitions should be made and the labour market must be prepared in order to ensure employability of graduates. This is a necessary prerequisite for sustainability of higher education programmes but also could give an impetus to the professionalization of Public Health and further advancement of public health education, training, and practice. In previous issues of this journal current state of Public Health profession has already been described by Czabanowska et al. (11) followed by an excellent apology towards formulation of a Code of Conduct for the European Public Health Profession formulated by Laaser and Schröder-Bäck (12). There are no contradictions in the fact that the profession includes, besides those graduated in Public Health, also members of different other professions – which also have their own values and conducts. In addition to the adherence to ethical principles of Public Health practice like the ones proposed by the American Public Health Leadership Society already in 2002, the European added dimension and values need to be included and obeyed such as solidarity, equity, efficiency and respect for autonomy.

The way towards the European treasury of Public Health competences/operations and accreditation criteria

The consensus on Core Competency Model for Master's degree in Public Health was reached within the ASPPH at the beginning of the 21st century (13). On the other side of the Atlantic Ocean, similar efforts were already under way. In cooperation with the Open Society Institute (OSI) Public Health Program, APSHER started a project entitled "Quality Development of Public Health Teaching Programmes in Central and Eastern Europe" in the year 2000 aimed

for the quality improvement of Public Health education in CEE countries through review of their teaching programmes by the evaluators coming from the more developed European Schools (14). Results of this five-year project were already available and lessons learned when the programme targeted towards the European Core Competences started in the year 2006 and involved public health teachers, scientists and practitioners from ASPHER member schools in the discussion leading to the first and second list of competences (15,16). It was the base for further discussions taking into account different perspectives of teachers and practitioners, as well as the diversity of public health functions across Europe and between different levels of education what resulted in the third edition of ASPHER's list of competences in 2011 (17-20). Finally, ASPHER's lists of competences were widely recognized and endorsed as the basis for public health education by all European WHO member states at the Regional Committee for Europe Sixty-second session in September 2012 and included in the WHO European Action Plan for Strengthening Public Heath Capacities and Services (21,22). Moreover, in 2013, WHO Europe delegated the responsibility to ASPHER for leading its working group concerning the assurance of a sufficient and competent Public Health workforce (Essential Public Health Operation [EPHO] No. 7).

Despite ASPHER's and other institutions' efforts, the educational capacity in the European Region is still far from being sufficient if compared to aspired US levels (23). As public health opportunities and threats are increasingly global, higher education institutions in Europe as well as in other regions have to look beyond national and even regional boundaries and participate in global networks for education, research and practice (24).

ASPHER leaders planned and completed the survey aimed to assess the desired levels of performance by different categories of potential employers of graduates. Compared to the ranking obtained from member schools, ranks were lower. It means that schools need to reconsider priorities and questions the competences' level (i.e. learning outcomes) of their graduates in accordance with the expectations and needs of their potential employers (25).

ASPHER made also efforts to establish criteria for accreditation of programmes in public health that ended in the establishment of the Agency for Public Health Education Accreditation (APHEA) launched in 2011 which has already accredited some ASPHER members (26,27).

Conclusions

North American SPHs operate as independent academic institutions engaged in research and education of Public Health specialists and Public Health has been recognised as a distinctive profession both by the US and Canada for almost a century. In contrary, the development of the European SPHs was primarily influenced by the medical profession and linked to the healthcare system.

Recent developments at both sides of the Atlantic Ocean seems to be converging towards an academic type of SPH offering all three cycles of study programmes with a great importance given to the accreditation of the study curricula.

The design/redesign of any study curriculum for education and training of professionals must be based on well-defined and work-related set of competences in accordance with the employers' needs. The accreditation criteria for higher education programmes are carefully prepared and formal accreditation procedures exist not only at national, but also at international level.

Public Health workforce in Europe consists of members of different professions working under the same roof and accepting the Public Health professional identity by obeying not only common ethical values, but also the values determined by the European heritage. The Code of conduct for the European Public Health profession must include European added values and is considered as an amalgam for the Public Health professionalization.

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Editorial comment

Launch of the '*One Health* Global Think-Tank for Sustainable Health & Well-being' – 2030 (GHW-2030)

The adoption of the 17 Sustainable Development Goals (SDGs) by the UN General Assembly in September 2015 opens a new era for global, regional, national and local initiatives to ensure the well-being and sustainability of the planet and people (1). *The South Eastern European Journal of Public Health* (SEEJPH) published several papers (Volumes 2,3,5) on the UN Global Goals (2, 3, 4). In addition, Prof Ulrich Laaser and Prof Vesna Bjegovic Mikanovic established together with Dr George Lueddeke a global think-tank on „Global Health, Governance, and Education" (5) to help inform the writing of the Epilogue of Dr Lueddeke"s recent book entitled *Global Population Health and Well-Being in the 21st Century – Towards New Paradigms, Policy, and Practice* (6). In continuation of this process we worked with Dr. Joanna Nurse, head of the *Commonwealth* Secretariat Health and Education Unit* (HEU) (7, 8) and collectively founded the „*One Health* Global Think Tank for Sustainable Health & Well-being – 2030"(GHW-2030).

A synopsis of the think-tank"s remit and membership is set out below. The summary is followed by a background paper outlining the GHW-2030 rationales, particularly in light of the UN 2030 Agenda for Sustainable Development (9), and the pressing need to incorporate holistic *One World, One Health* values, principles and practice (10, 11) - as these relate to environmental, social, economic and geopolitical spheres - with a view to guiding associated frameworks (12, 13), policies and enabling strategies. A listing of current GHW-2030 members and affiliations is also provided.

For the GHW-2030,
April 2016

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* *The Commonwealth is a voluntary association of 53 independent and equal sovereign states. It is home to 2.2 billion citizens, of which over 60% are under the age of 30"* (7).

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THE *ONE HEALTH* GLOBAL THINK TANK FOR SUSTAINABLE HEALTH & WELL-BEING – 2030 (GHW-2030)

PURPOSE, RATIONALES, AND GUIDANCE

Synopsis

Purpose

To bring together global multi-sectoral and multi-disciplinary thought leaders to articulate and advocate for sustainable „planet and people" health and well-being.

Mission and Method

The central mission of the GHW-2030 multi-sectoral think tank is to contribute to the implementation of the UN Sustainable Development Goals (SDGs) by working toward achieving the education and health goals in cooperation with the Commonwealth Secretariat using an international interdisciplinary/multidisciplinary/transdisciplinary global *One Health* approach. A major focus of the think tank will be on the health and well-being – physical, emotional, aspirational – of children and young people particularly as these relate to their personal security, physical and emotional well-being, education and employment and the sustainability of life on the planet.

Referencing contemporary and future-oriented developments, the activities of think tank members include:

- analysing *root causes* with regard to *key issues in environmental, social, economic and geopolitical arenas,* particularly in relation to „well-being" goals, targets and indicators
  underpinning the UN 2030 Agenda for Sustainable Development;
- considering and assessing *future risks*, such as egocentrism, demographic shifts, environmental, and public *One Health* challenges generally – human, animal, plant, environmental – and identifying potential solutions at local, national, regional and global levels;
- exploring *creative and innovative approaches* for informing global and national policy directions, including a „Global Framework for Public Health Systems and Services" (see background paper below, Fig 4) .
- publishing and disseminating *knowledge and evidence-based papers articles* (possibly informed by recognised research tools (e.g., CDC-authored Community Guide) *or interviews* in a creative and sustained fashion;
- producing short summaries of *policy options* and *recommendations* for policy-makers and planners;
- stimulating public *online discussions* as well as potential *consortial activities,* including social media; and
- contributing to *decision-making and policy development* (government and non-governmental) to enhance sustainable „health and well-being" at local, national, regional and global levels, involving existing and potential mechanisms for transformative enabling action.

In addition, along with others, think tank members will have the opportunity to engage in *high level on-line policy discussions* on the Commonwealth Secretariat‟s Health and Education Unit *Hubs* as well as contribute to a range of *policy briefs* which target policy makers and planners on key global health issues.
(Health:<**healthhub@commonwealth.int**> **Education:**<**eduhub@commonwealth.int**>)

Terms of Reference

The overall aim of GHW-2030 is to explore and present evidence-based and refreshing or creative solutions through theme papers / interviews that impact on well-being or quality of life (human, animal, plant, environmental) and that go beyond silo thinking and conventional political interventions. Think tank reviews will be undertaken annually with agendas set out by the Secretariat and will be reported to the Commonwealth Secretariat Health and Education Unit seeking its guidance for dissemination and implementation.

- Papers may originate with any member of the think tank and will be considered a „draft‟ subject to reviews of think tank members.
- Contributions from trans-disciplinary and/or multi-sectoral „primary‟ sources are essential;
- The draft papers will be reviewed first by the Secretariat and subsequently circulated to other members for comments through three review rounds.
- Draft papers should be restricted to significant contemporary global issues (e.g., involuntary migration, food safety and security, unemployment/underemployment, national governance, armed conflict, small island health, climate change, social instability, public health emergencies caused by infectious diseases such as the Ebola and the Zika virus, urban violence and crime).
- The papers should be about 1500-2500 words in length, excluding references.
- Each paper should culminate with recommendations in terms of addressing the issue(s).
- Comments will be returned to originating author(s) for integration of feedback.
- Final papers will be disseminated, first, to all think tank members and, secondly, they will be submitted for consideration to global/public/clinical health and social care journals* and other fora (e.g., social media), to reach a wider audience.
- Up to six papers will be reviewed annually, involving on-line meetings, as required, and agreed through final on-line approval meetings of all members.

Organisation

For the time being the group will function in association with the Commonwealth Secretariat Health and Education Unit (HEU), facilitated by its on-line health and education hubs. Links to other think tanks or working groups addressing similar concerns will be developed wherever possible.

Membership and Affiliations

Think tank members (two year renewable term) involve those who helped to draft the Epilogue „Global Health, Education and Governance,“ for the book, *Global Population Health and Well-Being in the 21st Century: Toward New Paradigm, Policy and Practice* and others working in diverse capacities in such areas as education, politics, health, research, journalism, economics, civil service, business, law, to name several fields. Recommended affiliations include leading organisations focusing on global / national health and well-being.

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THE *ONE HEALTH* GLOBAL THINK-TANK FOR SUSTAINABLE HEALTH & WELL-BEING -2030 (GHW-2030)

PURPOSE, RATIONALES, AND GUIDANCE

The 21st century has been marked by a rapidly accelerating globalization of cultures, religions, trade, and also of conflict. Correspondingly recognition of global threats is rising with regard to environmental degradation, social divides and resulting civil war, enforced migration, and terrorism. Taken together, it has become clear that global and regional governmental structures are struggling to cope effectively with emerging challenges to peace, security, basic human rights and planetary imbalances.

The eight Millennium Development Goals (MDGs) - as a global average – have made considerable progress in several key areas, including increasing the net enrolment rate in primary school education in developing regions from 83 per cent in 2000 to 91 per cent in 2015 and raising official development assistance (ODA) from developed countries by 66 per cent in real terms between 2000 and 2014, reaching $135.2 billion (1).

However, progress has been uneven. As one example, poverty reduction, „which has declined significantly over the last two decades" (1) is partly due to the overachievement of countries like China and cannot be generalised across other – especially low income countries (2). And, while initiatives appear to be promising across the other seven MDGs, many targets remain unfulfilled and many more have emerged or have deepened since the MDG inception in 2000 (3).

To cite a few specific examples: across 53 nations and about 2.5 billion people in the Commonwealth nations „There are still approximately 23 million primary-aged children out of school" and „just over a third (8.5 million) are known to have access to anti-retroviral therapy" for those living with HIV/AIDS. Moreover, given global socioeconomic and political polarizations, „The radicalization of young people and the underachievement of boys are emerging as challenges"(4).

Addressing the global life-threatening issues, as Ban Ki-moon UN Secretary-General highlights in the MDG final report, requires „targeted interventions, sound strategies, adequate resources and political will." What has been demonstrated throughout the MDG initiative, he concludes in the Introduction to the MDG final report, is that „even the poorest countries can make dramatic and unprecedented progress" (1). For the Secretary-General the most important factor is „to tackle root causes and do more to integrate the economic, social and environmental dimensions of sustainable development," thereby working toward resolving the „uneven achievements and shortfalls in many areas".

The recently agreed UN Addis Ababa Action Agenda (5), the 2030 Agenda for Sustainable Development (6), including the 17 Sustainable Development Goals (Figure 1), as well as the Framework Convention on Climate Change (7) may be timely and catalytical in underpinning the establishment of the think tank, elaborated in the Terms of Reference (p. 4)

The Sustainable Development Goals (SDGs) (2016-2030)

By agreeing to the 17 SDGs on 25 September 2015 (6), the 193 Member States of the UN General assembly resolved to:

- end poverty and hunger everywhere;
- combat inequalities within and among countries;
- build peaceful, just and inclusive societies;
- protect human rights and promote gender equality and the empowerment of women and girls; and
- ensure the lasting protection of the planet and its natural resources (6).

Figure 1: Visual representation of the overarching elements of the SDGs

Source: Commonwealth Secretariat, Health and Education Unit, 2015 (4)

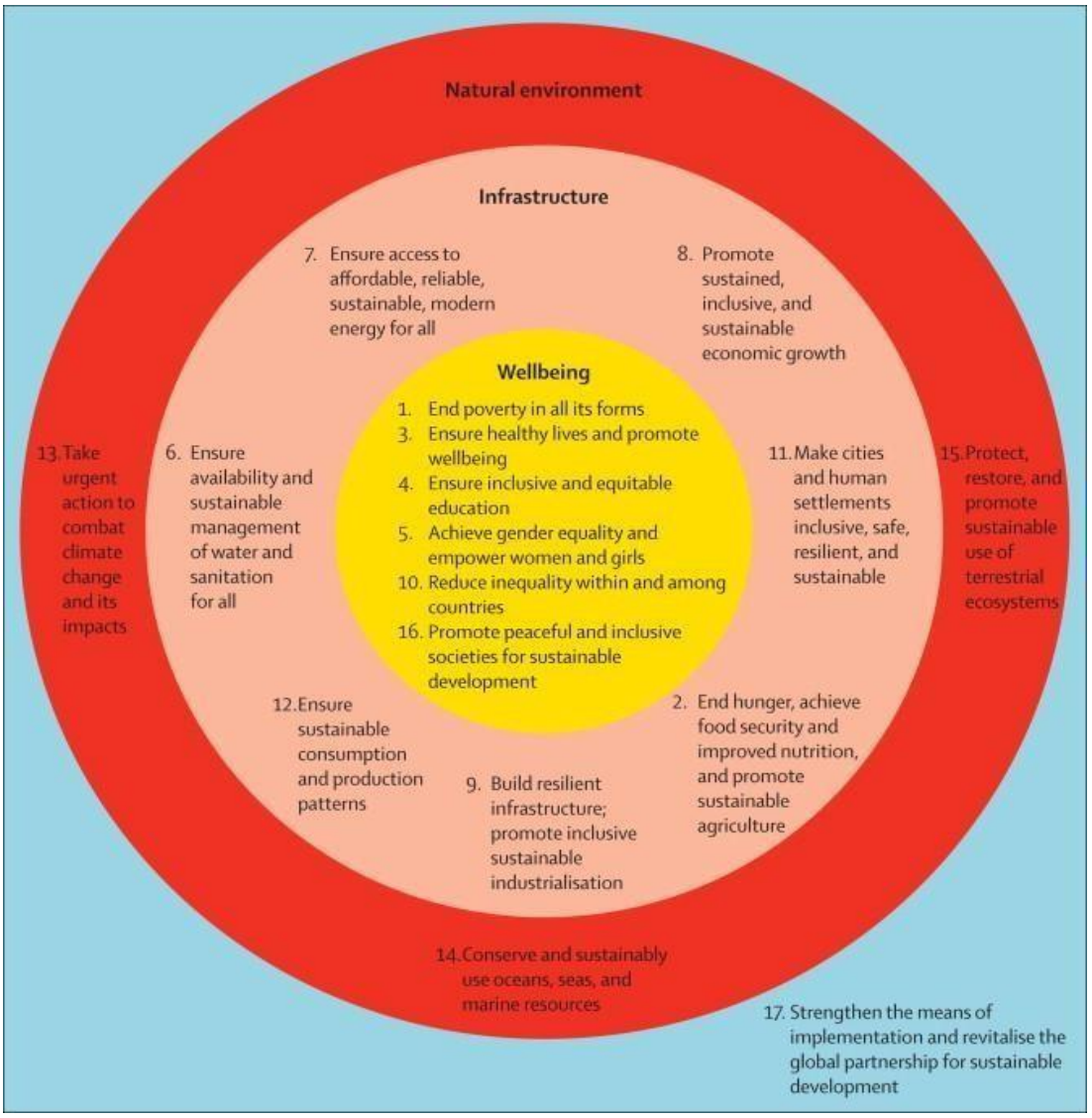
Inherent in the UN final report *Transforming our world: the 2030 Agenda for Sustainable Development* (6) are fundamental principles and values that inter alia include

- adopting an overarching approach that fully integrates the social, economic and environmental dimensions of sustainable development;
- committing to the intent of „leaving no one behind" and reflecting universality through all goals;
- placing people and the planet at the centre at global, regional, national and local levels; and

- supporting development cooperation commitments and means of implementation (MOI) that consider Finance, Trade, Technology, Capacity-building, Policy and Institutional Coherence, Data and Monitoring and Multi Stakeholder Partnerships .

Jeff Waage and Christopher Yap (editors) of *Thinking Beyond Sectors for Sustainable Development* (Figure 2) (8) grouped the SDGs into three main concentric circles and categories: Natural Environment, Infrastructure and Well- Being , underpinned by SDG 17 which cuts across all SDGs (6). Each SDG has specific targets with performance indicators, which are currently under development and are „expected to be adopted by the UN Economic and Social Council (ECOSOC) and the UN General Assembly (UNGA), „preferably in June 2016" (9).

Figure 2: Framework for examining interactions between sustainable development goals. (Goal 17 is excluded from this framework because it is an overarching goal.)



Environmental-social sustainability and prospects for individual 'well-being'

The central concerns of the 2030 Agenda lie with ensuring sustainability of the natural environment, infrastructure while globally meeting basic human needs in order to safeguard and promote societal and individual well-being. The authors of „A Vision for Human Well-being: transition to social sustainability" (10) emphasise the value of "living in ways that can be sustained because they are healthy and satisfying for people and communities." In short, they posit that "While environmental sustainability examines living within the limits of the natural world", social sustainability requires providing for material, social and emotional needs, avoiding behaviours that result in poor health, emotional distress and conflict, and ensuring that we do not destroy the social structures (such as families and communities), cultural values, knowledge systems and human diversity that contribute to a vibrant and thriving human community.

As the authors make clear, „Key components of human well-being are dependent on well-functioning ecosystems and the biosphere" and "conversely, maintaining a healthy environment and making the transition to environmental sustainability requires human societies that function well."

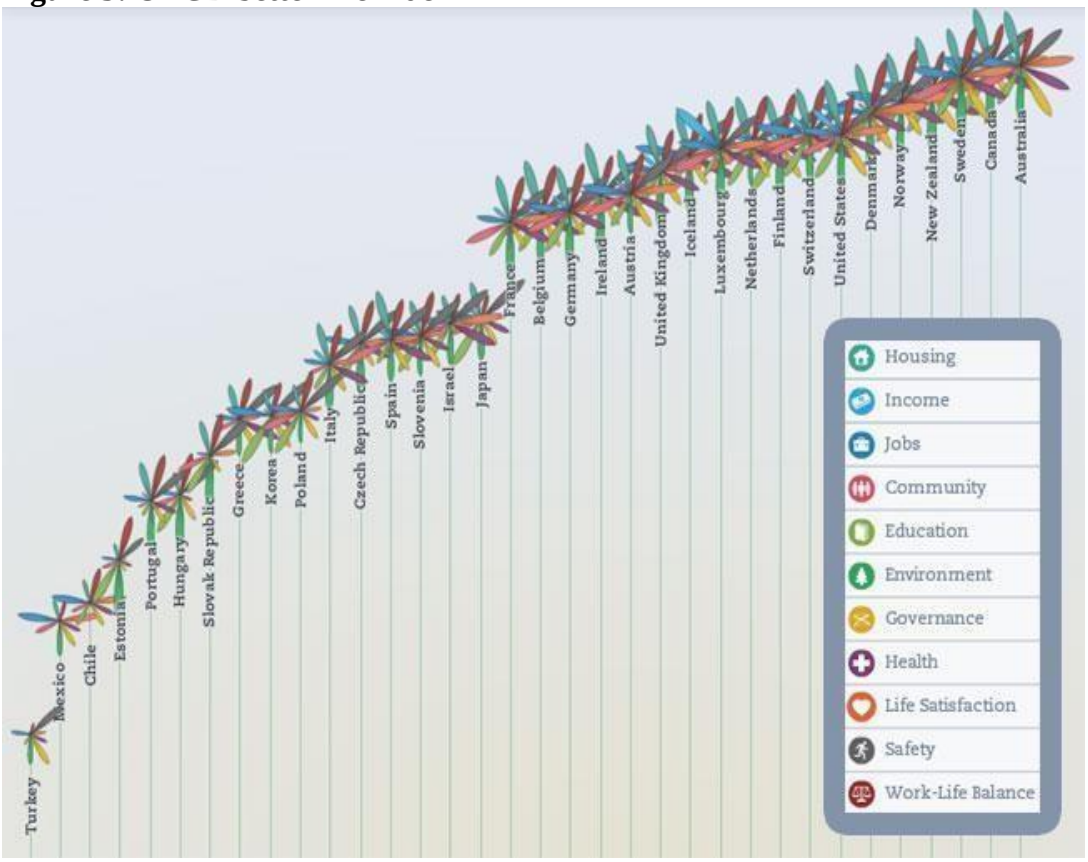
Another important working hypothesis put forth is that „Healthy, happy individuals with a strong sense of place, identity and hope for the future are more likely to make protection of their environment a priority". In this regard, a useful definition of "well-being" comes from the UK Department of Health which in the report Confident Communities, Brighter Futures. A Framework for Developing Well-Being" (11) defined „well-being" as „a positive state of mind and body, feeling safe and able to cope, with a sense of connection with people, communities, and the wider environment". According to the report, promoting mental health and well-being can be enhanced by a number of strategies or initiatives especially those that

- use a life course approach to ensure a positive start in life and healthy adult and older years. With such an approach, people develop and share skills to continue learning and have positive social relationships throughout life.
- build strength, safety and resilience: address inequalities and ensure safety and security at individual, relationship, community and environmental levels.
- develop sustainable, connected communities: create socially inclusive communities that promote social networks and environmental engagement
- integrate physical and mental health: develop a holistic view of well-being that encompasses both physical and mental health, reduce health-risk behaviour and promote physical activity.

OECD's 'better life' index: an illusionary measure for the 21st century?

The comprehensive and informative global/national/regional OECD"s better life index (12,13) indicates that Australia is the „#1 place to live if all factors or criteria - housing, income, jobs, community, education, environment, governance, health, life satisfaction, safety and work-life balance - were treated with equalimportance."

Figure 3: OECD better life index



Source: OECD, 2014

However, while „the overall level of health and wellbeing of Australians is relatively high compared with other countries," (14) the graph and findings may be somewhat illusory and may fall short in terms of representing a true picture of individual well-being on national scales where „there are significant disparities in the health outcomes of different populations" impacting mostly on the poor, the marginalised, the disadvantaged and increasingly the desperate as the European migration crisis makes clear.

Many past and present reviews of well-being have been and continue to be based on Gross Domestic Product (GDP) per capita. While GDP as an average measure is "a good proxy for well-being," it „ignores the asymmetrical distribution of wealth in a country" (10) and continues to correlate wealth and well-being as complementary and generally benign measures. Research tells us that „happiness is not always closely associated with income or other objective indicators of well-being such as physical health." In fact, Amartya Sen, acclaimed philosopher and proponent of social justice has argued that what is most important is to provide „the freedoms and capabilities that allow each person to achieve what will contribute to his or her own well-being," (15) which may place less value on material wealth and shift from economic focus toward „equality in social relations, social trust in most other people, and degree of democracy; and safety of the area in which one lives" (10, 16).

Highlighting that „evidence about well-being comes from several different standpoints," Dr Piumatti from the University of Belgrade (17) reminds us that „economists

and psychologists are improving the measures of subjective well-being" (18) and that „questions about the influence of different determinants of psychological well-being are also being raised" (19). More specifically, he observes that

> *Researchers agree on the fact that individuals have different sources of well-being at different stages in their lives. For example, career and educational goals are highly relevant for people across the globe, particularly for young people who are transitioning into work. Failing to meet one's personal goals can result in disappointment and lower levels of well-being (20). Accordingly, in order to contribute moving the measurement of subjective well being from a primarily academic activity to the sphere of official statistic and to raise awareness on this topic, we need to build bridges across disciplines. Indeed, many new dimensions have already been absorbed by this field: nutritionists cooperate on defining the field of nutritional well-being (21), sociologists utilize the definition of community well-being (22), while other scientists analyze well-being in different age groups (23, 24). These works also represent a reflection of the complex and contested nature of well-being.*

Moreover, it is noteworthy that while the meaning and application of „well-being" as a social construct may differ, viewed historically, „human" well-being has been largely defined in physical terms enabled through wealth creation and made possible - especially in the past century - through advancements in technology and science. In this respect well-being has become synonymous with a substantial rise in the standard of living for about a fifth of the world population totalling close to 7.4 billion at the moment. But economic growth has come at a steep price: first, it has promulgated a rather narrow – consumption –driven- concept of „well-being" that is human ego-centric (vs animal, environmental – eco-centric) affecting the potential prosperity of only about 20 per cent of the human population - coupled with huge losses in other species and biodiversity. And, secondly, it has created modern lifestyles that are arguably incongruous with our genetic evolution and are fast becoming a major societal dilemma affecting individuals from all groups regardless of background and increasingly all nations, high and low incomes (25, 26).

As one example, considering the limitations of Figure 3, obesity rates in Australia are climbing faster than anywhere else in the world with about 5 million Australians classified as obese (27) out of close to 24 million people. These trends are equally disturbing in the UK where, for example, a study predicts that „by 2035, 39 per cent of the population will be classed as obese, 33 per cent will be overweight and only 28 per cent will be of healthy weight or less, on current trends. (28). Even close to half the staff in the UK National Health Service, the largest employer in the UK, –about 700,000- are estimated to be overweight or obese (29).

China is also experiencing a similar crisis**.** According to a study by the University of Washington"s Institute for Health Metrics and Evaluation, „The country is now No. 2 for obesity, with its number of obese residents outstripped only by the U.S. Its obesity rate has skyrocketed over the last three decades, resulting in 46 million obese Chinese adults and 300 million who are overweight (30).

Similarly, obesity appears to spreading across India, where its „economic boom has been accompanied by a meteoric increase in the number of people with diabetes – and those at risk for the disease. Prevalence rates are up to 20% in some cities, and recent figures showed surprisingly increased rates in rural areas." There are now over "65.1 million people with the disease, compared to 50.8 million in 2010"(31).

A study by the University of Washington‟s Institute for Health Metrics and Evaluation focused on South Asians and is generalizable to all nations trying to find a way forward to unhealthy and often unhappy lifestyles. Perhaps unsurprisingly their report concluded that obesity „is primarily driven by nutrition, lifestyle and demographic transitions, increasingly faulty diets and physical inactivity, in the background of genetic predisposition‟ (32).

Another worrying trend likely intensified by modernism relates to mental health. Research in Australia found that „One in four young Australians currently has a mental health condition‟ and „A quarter of young Australians say they are unhappy with their lives‟ (14). These changes are also evidenced in levels of unhappiness in children in the UK, where a helpline study comparing reasons why children call Childline from 1986 to the present, found that one in eight calls are now primarily related to feelings of loneliness and low self-esteem rather than sexual abuse and pregnancy which was the case 30 years ago. Helpline concludes that „the pressures of modern life are „creating a generation of children plagued by low-level mental health problems,‟ causing stress attributable largely to „social media „and cyberbullying (33).

Exacerbating the difficulty of finding solutions in the UK and likely in other high and moderate income nations is the low priority that seems to be ascribed to mental health. As one example, the UK Medical Research Council „spent less than 3 per cent of its budget on mental health last year,‟ (34) and local councils „spend only 1 per cent of the annual budget on mental health‟ with some spending „nothing on preventing mental illness‟ (35). Nationally only £3.3 billion are allocated to public health out of a total NHS budget of about £116 billion, that is, around 3 per cent, considering that „annual cost from days at work lost and under-employment along with care and treatment is estimated at £105 billion‟ alone (34). Most health funds globally are spent on treatment of physical health, not prevention of mental illness and ensuring well-being, despite non-communicable diseases, including a dramatic rise in depression, anxiety disorders, self-harming –especially among adolescents - now accounting for c. 70 per cent of all mortalities and morbidities worldwide. Perhaps Dr Stan Kutcher from Dalhousie University in Nova Scotia, Canada, echoes the feelings of many distressed parents across the globe querying „why mental health services waited until young people reached crisis point before stepping in,‟ when „oncologists did not wait until a cancer was in stage 4 before treating it‟ (36). As a grieving father noted, giving young individuals who are mentally ill a „strip of pills‟ and „website names‟ is not the answer and more funded, collaborative and focused social research and system reform are urgently required (36).

At the extreme opposite end of the Figure 2 „well-being‟ spectrum are the non-OECD millions of children and young adults who are presently displaced or caught in conflict and war zones. Syria is a cruel example of „social breakdown‟ as intolerable as any in preceding wars, reflected starkly in the Unicef report, „Committing to Child Survival: A Promise Renewed Progress Report 2015‟ (37) and reminding us that „in „2015 an estimated 5.9 million children will have died before turning 5 – and children under 5 from the poorest households are twice as likely to die as those from the richest.‟ Further, the authors acknowledge „the cost of inaction - at moral, economic and societal levels - is too high,‟ and unquestionably must be viewed as one of the most important priorities for the United Nations Development Program (UNDP) and those responsible for implementing the SDGs globally (38).

Re-focusing on social and individual well-being in the 21st century

Rogers et al (10) conclude their article by highlighting that unlike the natural sciences where there is general consensus „on the urgent need to reduce carbon emissions," recently translated into a worldwide agreement at the Paris Climate conference, social science research still has a considerable distance to travel before nations agree to „replace the consumer culture with something more supportive of human and social and emotional needs…" In this regard, while tackling poverty, inequalities and „promoting peaceful, just and inclusive societies", our biggest challenge in this decade and beyond may be no longer defining "success and happiness" solely "in terms of material wealth" but accepting that "human happiness and well-being can continue to grow without exceeding sustainability limits and planetary boundaries"(10).

Writing in *The Times*, in a piece entitled, „The search for happiness is all Greek to me," science correspondent Oliver Moody laments that "Moral philosophy has all but vacated the public sphere over the last century, and, while we might blame practitioners for walling themselves up in a labyrinth of obscurities", the truth may be "that the rest of the world is too busy upgrading its iPhones and filling its tax returns to listen". The writer"s main point is that our seemingly „busy" lives make "all of us poorer" and "without a common idea of neither happiness nor "even the means to come up with one" (39).

His conclusion may be confirmed by on-going deliberations that involve the draft SDG indicators by hundreds of dedicated stakeholders. The SDG indicators are certainly pointing in the right direction (9), but, by and large, the emphasis is still primarily on „conventional growth, competitiveness and personal gain" not on „promoting sustainable social development and well-being for all" (10). In short, there is little evidence that the SDGs will lead to diminishing „inequalities within and between societies" along with developing „economic and political policies and institutions that serve human well-being in all its dimensions."

The UN decision to establish a ten-member group to support the Technology Facilitation Mechanism (TFM), as part of the Addis Ababa Action Agenda (AAAA) for the period 2016-2017 to promote „technology initiatives" is an important step (40). It is also telling. The decision does little to respond to „the imperatives of human rights and the values of humanity and solidarity" (40). As success of the UN 2030 Agenda for Sustainable Development (6) depends arguably more on human than technological systems and factors, as the 20th century and this century have already painfully demonstrated, would it not make sense to establish a parallel, authoritative „mechanism" for achieving humanitarian ends that value „consensus and common action, mutual respect, inclusiveness, transparency, accountability, legitimacy and responsiveness"? (4). Moody appears to be entirely justified in reminding us that it is really time „to tell us why we"re wrong"- and the urgency „to show us a better way"(39).

It is against this broad background that we have established the „*One Health* Global Think Tank for Sustainable Health and Well-Being – 2030" and agreed its overall rationales and guidelines.

The *one health* global think-tank for sustainable health & well-being -2030 (GHW-2030)

Purpose

To bring together global multi-sectoral and multi-disciplinary thought leaders to articulate and advocate for sustainable „planet and people" health and well-being.

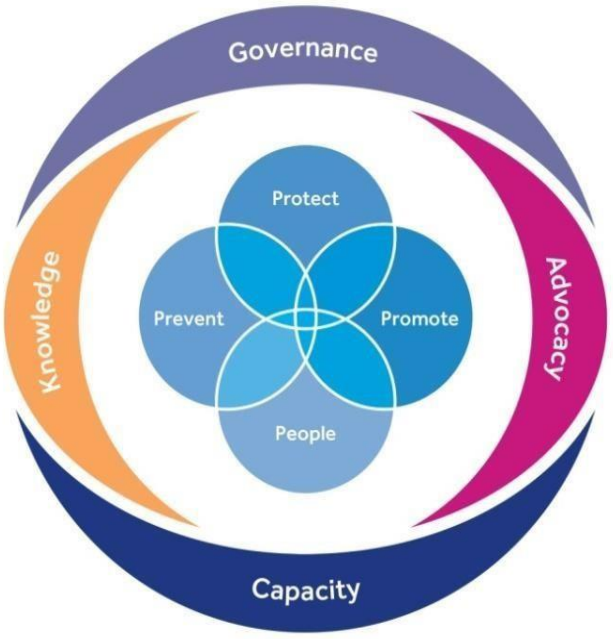
Mission and Method

The central mission of the GHW-2030 multi-sectoral think tank is to contribute to the implementation of the UN Sustainable Development Goals (SDGs) by working toward achieving the education and health goals in cooperation with the Commonwealth Secretariat using an international interdisciplinary/multidisciplinary/transdisciplinary "One Health" approach. A major focus of the think tank will be on the health and well-being – physical, emotional, aspirational – of children and young people particularly as these relate to their personal security, physical and emotional well-being, education and employment and the sustainability of life on the planet.

Referencing contemporary and future-oriented developments, the activities of think tank members include:

- analysing *root causes* with regard to *key issues in environmental, social, economic and geopolitical arenas,* particularly in relation to „well-being" goals, targets and indicators underpinning the UN 2030 Agenda for Sustainable Development;
- considering and assessing *future risks,* such as egocentrism, demographic shifts, environmental, and public *One Health* challenges generally – human, animal, plant, environmental – and identifying potential solutions at local, national, regional and global levels;
- exploring *creative and innovative approaches* for informing global and national policy directions, including a „Global Framework for Public Health Systems and Services" (Fig 4);
- publishing and disseminating *knowledge and evidence-based papers or articles** (possibly informed by recognised research tools (e.g., CDC-authored Community Guide) *or interviews* in a creative and sustained fashion;
- producing short summaries of *policy options* and *recommendations* for policy-makers and planners;
- stimulating public *online discussions* as well as potential *consortial activities,* including social media; and
- contributing to *decision-making and policy development* (government and non-governmental) to enhance sustainable „health and well-being" at local, national, regional and global levels, involving existing and potential mechanisms for transformative enabling action.

Figure 4: Public Health Systems and Services



Source: Commonwealth Secretariat, Health and Education Unit, 2015 (33)

Potential Journals (others to be added depending on theme or author preference)
American Journal of Preventive Medicine, American Journal of Public Health, Bulletin of the World Health Organisation, American Journal of Tropical Medicine and Hygiene, Ecology Letters, European Journal of Public Health, Global Journal of Interdisciplinary Social Sciences, Health Affairs, Infection Ecology and Epidemiology, International Journal of One Health, International Journal of Public Health, Journal of the American Medical Association, Journal of American Public Health, Journal of International Humanitarian Action, Journal of the Veterinary Medical Association, Journal of the United Nations, Lancet Global Health, One Health Journal (Sweden), Oxford Public Health Magazine, PLOS ONE, South Eastern European Journal of Public Health, Trends in Ecology and Evolution, Vector-Borne and Zoonotic Diseases, Veterinary Sciences (Switzerland), World Bank Research Observer….

In addition, along with others, think tank members will have the opportunity to engage in *high level on-line policy discussions* on the Commonwealth Secretariat‟s Health and Education Unit *Hubs* as well as contribute to a range of *policy briefs* which target policy makers and planners on key global health issues (4).
(Health:<healthhub@commonwealth.int>(Education:<eduhub@commonwealth.int>)

The „One World, One Health‟ concept refers to „a worldwide strategy for expanding interdisciplinary collaboration and communication in all aspects of health for humans, animals and the environment‟ (42). According to the One Health Initiative (OHI), „The synergism achieved will advance health care for the 21st century and beyond by accelerating biomedical research discoveries, enhancing public health efficacy, expeditiously expanding the scientific knowledge base, and improving public health education and health care.‟ The global One Health Commission (43) asserts that these aims can be greatly facilitated by:

- ***Connecting*** One Health Stakeholders
- ***Creating*** Strategic Networks / Partnerships
- ***Educating*** about One Health issues to support a paradigm shift in information sharing, active health interventions, collaborations, and demonstration projects.

It is anticipated that „When properly implemented, the One Health concept will help protect and save untold millions of lives in our present and future generations‟ (42). Public Health is the fundamental bridge or key coordinating mechanism to „improve health outcomes and well-being of humans, animals and plants and to promote environmental resilience…‟ (43).

Immediate Catalysts

The GHW-2030 think tank has developed based on the experience with the international group of advisors contributing to the final chapter of George Lueddeke‟s book, *Global Population Health and Well-Being in the 21st Century – Toward New Paradigms, Policy, and Practice* (25). The intention is to make use of this network of excellence and create a permanent structure inviting additional experts to work on topics of global health and well-being relevance. More particularly, the impetus for establishing the think tank is based on recommendations contained in the book‟s Epilogue, which highlights recommendations for global decision makers, including the need to consider *‘the creation of a collective Public or Population Health and Well-Being vision underpinned by Global Social Justice, formalized structures of regional health* and well-being‟; and transforming „*traditional health & and social care education and training through innovative practice, focusing on prevention and health promotion’* (44).

Supporting the latter, the Association of Schools of Public Health in the European Region (ASPHER) has already recently underlined this essential in its Global Charter (45) and in its Strategy 2020 (46). Similarly, the World Federation of Public Health Associations (WFPHA) has prepared "A Global Charter for the Public"s Health: The Public Health System: Role, Functions, Competencies and Education Requirements" (47) (in print), and the framework of a global strategic network for public health education and training has been outlined by Professor Vesna Bjegovic-Mikanovic, ASPHER president, et al (48).

Organisation

For the time being the group will function in association with the Commonwealth Secretariat Health and Education Unit (HEU), facilitated by its on-line health and education hubs. Links to other think tanks or working groups addressing similar concerns will be developed wherever possible.

Membership and Affiliations

Think tank members (two year renewable term) involve those who helped to draft the Epilogue „Global Health, Education and Governance," for the book, *Global Population Health and Well-Being in the 21st Century: Toward New Paradigm, Policy and Practice** (25) and others working in diverse capacities in such areas as education, politics, health, research, journalism, economics, civil service, business, law, to name several fields. Affiliations include leading organisations focusing on global / national health and well-being.

Additional Affiliations

A number of key organizations have joined the think-tank. Additional members are being sought representing *inter alia:*

> *American Public Health Association (APHA), Asia Pacific Academic Consortium for Public Health (APACPH), Earth Institute (TEI), European Public Health Association (EUPHA), Global Health Council (GHC), India Public Health Association (IPHA), International Association of Public Health Institutes (IANPH), Rockefeller Foundation (RF), United Nations – UNDP, UNESCO, UN FOUNDATION, World Bank Group (WBG), World Health Organisation (WHO), World Veterinary Association (WVA), World Medical Association (WMA).*

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COMMENTARY

Preparing society to create the world we need through 'One Health' education

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Abstract:

Growing concerns about a threatened environment, conflicts, inequities, poverty, ideological extremes, and consumerism are all indicative of a pressing need to reflect on the global status quo and to find constructive and long-term, sustainable strategies for planet and people. The need to give the younger generation "a better deal" for helping to shape a sustainable world has been embraced by the global One Health Commission (OHC) in association with the One Health Initiative (OHI). Envisioning a program that provides funding for national and global One Health-themed educational projects, One Health leaders - in collaboration with partners - call for collective action by legislators, public / private educators, and public health professionals to support the development and implementation of progressive and comprehensive global One Health learning opportunities. One Health (and well-being) projects led by teachers who *want to make a difference* could begin in primary/secondary schools and extend through graduate and professional education. The overall intent of the concept paper is to raise awareness about the urgent need for the development and to explore the concept further through a small *pre-project proposal conference* (possibly off and/or on-line) with a view to fleshing out a strong plan to fund the envisioned global learning program.

Keywords: **Global Health, Planetary Health, Health Education**

Conflicts of interest: none.

Human existence is deeply embedded in the natural world and the survival of all species, including our own, is wholly dependent on a healthy planet. But the health of our planet is in serious trouble. Attempts by scientists, technical professionals, and policymakers to understand and solve many of the problems being confronted today have been fragmented, short-sighted and outpaced by the rate at which the world changes and catastrophic events occur (1). Time is running short. As one example, data from the *Living Planet Index* should "make us stop and think" (2):

> *…in less than two human generations, population sizes of vertebrate species have dropped by half. These are the living forms that constitute the fabric of the ecosystems which sustain life on earth - and the barometer of what we are doing to our planet, our only home.*

Global inequities, conflicts and modernity impacting on the human dimension are equally and deeply worrying. In both low and high income nations growing concerns about poverty, ideological extremes, consumerism, and associated consequences are all indicative of a pressing need to reflect on the global status quo and to find constructive and long-term, sustainable strategies for both planet and people.[1] In this regard it is becoming increasingly clear that realigning our relationship with the planet and ourselves rests not with individuals or groups who follow their own narrow self-interests – corporate, political, ideological - but with people who value collaborative approaches to these challenges and who embrace a bolder, broader more hopeful scope of human existence *within* a sustainable world. The "tragedy of the commons" (3) must become the „promise of the commons." Recognizing that species" interdependencies are rooted in the sanctity of life, we are tasked to ensure that the health and well-being of the planet must become the norm, not the exception, worldwide.

In *Educating for a Sustainable Future: A Transdisciplinary Vision for Concerted Action* (4), UNESCO highlighted that "education is the most effective means that society possesses for confronting the challenges of the future." The significance of this resolve was also captured in the UN"s Earth Charter, which emphasized the importance of integrating into "education and life-long learning the knowledge, values, and skills needed for a sustainable way of life (Principle 9)" (5). More recently, the UN 2030-Sustainable Development Goals (SDGs) reinforce this principle, declaring that by 2030:

> *All learners acquire knowledge and skills needed to promote sustainable development, including among others through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development (SDG 4)* (6).

The need to give the younger generation „a better deal" for helping to shape a sustainable world has been embraced by the global *One Health Commission* (OHC) (7) [in association with the *One Health Initiative* (8)]. We believe the best opportunity to achieve meaningful societal change and prepare future leaders to create a healthier world must be seized early on in children"s lives as they form fundamental views of their places on the planet and carry those views forward into adulthood. The OHC [and partners] calls for collective action by legislators, public and private educators, and public health professionals to support the development and implementation of progressive and comprehensive global *One Health* learning opportunities beginning in primary/secondary schools and extending through graduate and professional education. We envision a program that provides funding for national and global *One Health*-themed educational initiatives that focus on the formation of:

- *basic values and responsibilities* with respect to "the community of life" (5);

- *knowledge* with respect to the interconnectedness of life on our planet;
- *real world application skills* underpinned by interdisciplinary teamwork, creativity and group problem-solving; and
- *a global network* of One Health education providers who are committed to supporting learners and teachers in their quest to realize a more sustainable world.

Addressing these aims on national and global scales and linking the SDGs (6) to the *One Health* concept/approach (9) is crucial. Today "73 million young people are looking for work and many more are trapped in exploitative jobs" and "more than two and a half million more children in affluent countries" have fallen "into poverty, bringing the total above 76 million" (10). Policymakers cannot ignore the connection between their plight and the world in which they live, that is, recognizing the interdependency of human, animal and environmental health and well-being. Our argument is unequivocal: *One Health* must extend to all living things implicit in the World Health Organization definition - "*good health is a state of complete physical, social and mental well-being*" (11). To this end, we energetically assert that our proposed *One Health* educational initiative is a fundamental step toward preparing the next generation of global citizens and visionary leaders to help shape the healthy, peaceful and sustainable world that we so vitally need (1,6)!

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