



THE ROLE OF EUROPEAN SCHOOLS AND UNIVERSITY DEPARTMENTS OF PUBLIC HEALTH IN THE 2020 COVID-19 RESPONSE

AN ASPHER SURVEY

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PREFACE

This survey is the first to look at the crucial work of schools of public health in addressing the pandemic of COVID-19. The pandemic has had a catastrophic impact across the world and continues to do so. The vital need for public health expertise has been brought front and centre, in stark relief. There is huge interest from all our citizens, in what public health professionals do, and what terms like ‘epidemiology’ mean. The health of the public should be everybody’s business. It has always required the involvement of many different disciplines, from sanitary engineers to climatologists. It has often been driven by health professionals, but also by lawyers, politicians, industrialists. It has always required the active involvement and consent of the public themselves. But it also requires the expertise of the public health profession- the people who seek to understand how health and disease are caused in whole populations, who test the best ways to treat disease, from individual illnesses to pandemics, and who implement and monitor the results of our interventions. Public health expertise has never been more necessary, and never has it had to operate under more difficult and demanding circumstances. This report highlights the extraordinary work of ASPHER’s members in addressing the needs of their people during the first part of the pandemic. Our members have been at the forefront of the pandemic response in many countries – in teaching, research and in practical on-the-ground interventions like outbreak response and contact tracing. They have advocated for the health of minorities and people in high-risk occupations. They have critically analysed the value of proposed medicines. They have advised governments on policy formulation and action. They have acted frequently with distinction, selflessness and courage. Over a third of our schools have direct input to national policy advice. But it must also be said that they have frequently been crying in the wilderness, faced with hostile or indifferent political leadership and trying to mount a pandemic response with services which have been run down over many years of political neglect. We must also ask ourselves, why only one-third of schools report their expertise as influencing national decision making? In ASPHER’s companion work, we are charting the erosion of public health services and expertise over many years before the pandemic. This current report celebrates the actions of our members. It is clear that we must advocate for more investment and commitment, and more understanding of the imperative for better public health training, capacity and services. There is no health without public health. And no one nation can make its separate peace with COVID-19. Until we are all free across the globe, we will none of us be free. We call for global solidarity. Let us plan for an outbreak of health.

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EXECUTIVE SUMMARY

Background

The present COVID-19 pandemic presents a catastrophic challenge to the health of communities across the globe. It also presents a challenge to public health systems and professionals. Over many years, the membership of the Association of Schools of Public Health in the European Region (ASPHER) has developed an accumulated body of public health knowledge and skills necessary to protect and improve the health of the public. The major responsibilities of schools lie within public health education, training and research. Schools are not necessarily directly involved in the realm of concrete service responses to the pandemic, but many are. We examined how public health schools have responded concretely to the challenge of the COVID-19 pandemic through 2020.

Methods

A cross-sectional survey was performed based on an online questionnaire concerning the anti-COVID-19 activities of ASPHER affiliated Schools and University Departments of Public Health, including 117 full members. The survey covered the period from 1st March to 31st October 2020. Within each of the four main themes related to the anti-COVID-19 combat - teaching, health communication to the public, research, and consultancy/advice - respondents were asked about the same 33 sub-themes.

Results

Fifty-nine (50%) completed the questionnaire. Seventy-nine per cent of participants were involved in COVID-19 related education or training activities; 76% of the institutions communicated to the public on COVID-19 issues; 80% were involved in research related to the COVID-19 pandemic; 81% had advised public authorities within public health, health administration, university education or politics. Eight out of ten participants had been involved in all of the four main themes.

Conclusion

Schools and University Departments of Public Health demonstrated that they delivered crucial knowledge and skills during the present pandemic in 2020, not exclusively for academic purposes but also implemented in the form of practical public health analysis, planning, service intervention and effect evaluation.

This study is a milestone in the development of the practical implementation of public health services by Schools and University Departments of Public Health in the WHO Europe Region and demonstrates an outstanding potential of our schools to support the governance and the public health systems necessary to combat COVID-19.

INTRODUCTION

The development of the present COVID-19 pandemic places the public health discipline at the centre of public attention. The pandemic is showing repeated waves of infection and a high death toll in countries all over the world. It threatens the health of individual citizens, higher-risk population groups and society as a whole. It threatens the national and global economy.

It is a crucial and ethical requirement to activate all the available resources of public health knowledge and skills, nationally as well as internationally in response to the pandemic. Universities, Schools and Departments of Public Health (SPH) have relatively scarce, but important resources in terms of competences, which must be effectively deployed. Research, continued education and training of professionals are key foundations for the implementation of a relevant, effective, ethically and economically acceptable intervention. Communications between schools are also necessary at various levels, for inspiration, peer support and developing consensus in policy and service responses.

The ASPHER membership is a substantial resource of public health knowledge, skills and expertise. ASPHER represents a diverse group of public health schools and research institutions, most of them being part of universities and often but not always of sections of medical schools and departments. They are of various sizes and act at various operational levels – national, regional and local. The number of centres of public health knowledge, skills and expertise has increased substantially over the last few decades: in 2006 ASPHER had 69 institutional members from 34 European countries, whereas, in 2020, membership had increased to 117 full members from 42 countries plus 10 associate members from other parts of the World (1)(2).

Continued education, training and research are central roles in public health, in services as well as academia (3). There is an accumulated body of knowledge of competencies developed by the membership of the Association of Schools of Public Health in the European Region (ASPHER) over many years. Public health competencies are built on the Essential Public Health Operations (EPHOs) (3):

1. Surveillance of population health and wellbeing.
2. Monitoring and response to health hazards and emergencies.
3. Health protection including environmental and occupational health, food safety and others.
4. Health promotion, including action to address social determinants and health inequity.
5. Disease prevention including early detection of illness.
6. Assuring governance for health and wellbeing.
7. Assuring a sufficient and competent public health workforce.

8. Assuring organizational structures and financing.
9. Advocacy, communication and social mobilization for health.
10. Advancing public health research to inform policy and practice.

In order that public health professionals will hold the competency profile necessary to deliver the EPHOs, ASPHER, partly together with the World Health Organization (WHO), has developed competency systems and lists for the public health workforce (4) as well as for the academic knowledge and skills foundation of public health (5). These competencies apply to individual public health professionals as well as to public health institutions and systems (6). Professional communication and sharing of experiences and activities conducted by each ASPHER member institution is a means of gaining knowledge and experience for concrete action. A pilot survey among Schools of Public Health in four European countries showed that the schools generally covered the main components of competences and EPHOs, however with some variation (7). Fulfilling the competency pattern, SPH can become local public health centres (8) with regional, national and international potentials. As also evident in the present pandemic, the range of skills and expertise needed to combat modern global health concerns has expanded, requiring partnerships with a still widening range of disciplines, in natural and social sciences as well as humanities (9). Thus, to increase their ability to act within the large public health spectrum at the highest quality level, the formation of coherent networks of SPH has for long been a natural matter of consideration (10).

ASPHER believes that SPHs are playing a critical role now but also will do so in the aftermath of the acute phase of the COVID-19 pandemic (11). Lessons will need to be learned. There will be a need to synthesize and understand the vast amount of data currently being generated from various sources. There will be a need to train the current and next generation of public health professionals on how to respond to the next disease outbreak. There will be a need to contribute to a more health literate public and to advising political and administrative decision-makers.

ASPHER performed this survey based on its affiliated institutions in order to throw light on the role of its members in the pandemic. The survey is one of an extensive range of activities by its COVID-19 Task Force (12) ASPHER's institutional members' anti-COVID-19 activity range from specific training to reinforcing health communication to the public, producing and disseminating evidence and providing advice to political and administrative bodies. Mapping ideas and best practices may stimulate and help design the role of SPH beyond the present COVID-19 situation as well as help effectively combat the present as well as future pandemics. This study is intended to map the activities of SPH. It should be a source of inspiration and mutual support for them in their work. It is also intended to make the voices of ASPHER member schools heard. Most crucially, it is intended to show the importance of high-quality Public Health education and training and the role of genuine Public Health perspectives in the centre of the combat of epidemics.

GOAL AND OBJECTIVES

Goal

The goal of this survey was to contribute to the understanding of the role of Schools and University Departments of Public Health (SPH) in the response to the COVID-19 pandemic from 1st of March to 31st of October 2020.

Objectives

- To gain an overall understanding of the contribution to the response to the COVID-19 pandemic by ASPHER associated SPH.
- To identify the concrete activities conducted by ASPHER members in the public health response to the COVID-19 pandemic, within public health education and training; health communication to the public; research, and counselling and advice

METHODOLOGY

We performed a cross-sectional survey of the anti-COVID-19 activities of ASPHER's member SPH. The survey covered the period from 1st March to 31st October 2020. The target population of the study was all ASPHER affiliated SPH, including 117 full members and 10 associate members, in total 127 institutions. Full members are defined as "Schools/teaching institutions, scientific/research institutes, and other structures with a role in education and/or training in public health, established within the European Region as defined by the World Health Organization(13)(14)". Associate members are "Institutions, which do not meet the criteria for admission as full members, with a legitimate interest in public health education and/or training, and willing to support ASPHER in its mission of strengthening the role of public health by improving education and training of public health professionals for both practice and research (13)." Effectively, the associate members are schools of public health situated outside of the European Region.

Firstly, we piloted the survey to gain information to improve the efficiency of the main survey and to test the questionnaire(15). The pilot was conducted during August 2020 and included the members of the ASPHER COVID-19 Taskforce and ASPHER's Executive Board, in total 25 schools and departments. Resulting adjustments were implemented in the main survey.

The data collection of the survey was performed during week 48, 2020, to week 2, 2021. Each institution received one token coded link. We used an online questionnaire, LimeSurvey®, a free and open-source statistical survey web app, which may be used with different web browsers and equipment (computers,

tablets and cell phones). Data were stored in ASPHER's Administration as well as in the Andalusian School of Public Health. Respondents could move forward and backwards in the online questionnaire. As an extra tool for completing the web-based questionnaire, a paper version was offered to non-respondents, who complained of challenges to identify the existence of all questionnaire components in their institution.

Most of the questions were closed with a few open text questions. Participants were able to select multiple responses or to skip a list if they did not have any of the required information. To achieve relatively high sensitivity of the questionnaire tool, i.e., to miss as little as possible, we developed relatively detailed items in the repeated list. Respondents were asked about the same 33 sub-themes in all of the four main themes, supplied with special main theme questions. Accordingly, the list represented all components of the EPHOs but phrased differently and in several variations, to increase sensitivity.

The survey was set up in these four main sections:

- Teaching,
- Health communication to the public,
- Research, and
- Consultancy/advice

The aim of this descriptive report is solely to present the overall picture of the individual components of ASPHER member schools' and departments' anti-COVID-19 activities during 2020. Conversely, the present aim was not to identify more complicated or coherent patterns of activity. We did not, in this context, present any specific hypotheses regarding, e.g., the association between activities and types and size of institution, and we did not perform any statistical analysis. The report simply presents all answers to the full questionnaire and expresses findings in total counts and percentages. The basis for each table is all respondents (n=59). Percentages have been rounded, so that percentages also for that reason may not add to 100%.

RESULTS

1. PARTICIPATION

Fifty-nine (50%) out of 117 full member SPH responded to the survey and 4 out of the 10 associate members. The 59 full member participants are representing 32 countries (Figure 1).

Figure 1. The home countries of the survey full member participants marked in blue.



Source: Philarcher.org

Results concerning full members are presented in the main report, whereas associate members' results are summarized in Appendix 1.

The presentation of survey results is grouped into the four main sections of the questionnaire - teaching, health communication to the public, research, and consultancy/advice.

2. TEACHING

Answer	Count	Gross %
No	11	17
Yes	50	79
No answer	2	3
Not completed or Not displayed	0	0

Answer	Count	Gross %
Surveillance	25	42
Epidemiologic indicators for the management of the pandemic	29	49
Epidemiologic literacy	16	27
Applied / field epidemiology	14	24
Outbreak investigation	20	34
Contact tracing	15	25
Prediction of epidemic development, mathematical modelling, patterns, comorbidities	18	31
Anti-epidemic strategy development, implementation and monitoring	16	27
Prevention and infection control, confinement: methods, effects, ethics	25	42
Infection high-risk environments, e.g. nursing homes, schools, supermarkets, ballrooms, sports facilities, cultural facilities, other	14	24
Infection prevention and control and preparedness for COVID-19 in healthcare settings and nursing homes, Personal Protective Equipment (PPE)	21	36
Health services organisation and management	24	41
Capacity of health services, the health workforce	15	25
Occupational health	17	29
Environment (climate, pollution)	10	17
Social determinants: infection or fatality high risk (vulnerable) population groups, e.g. elderly, other	23	39
Health inequity	17	29

Table 2. During 1st March – 31st October 2020, did your school/department of public health offer any education or training programme to your public health students (bachelor, master, PhD), with one or more of the following themes related to COVID-19?			
	Answer	Count	Gross %
	Refugees and migrants	11	19
	Minorities and vulnerable groups	15	25
	Children's health	9	15
	Impact on people with chronic conditions	16	27
	Mental health	18	31
	Testing theory, strategy, practice, validity and accuracy of tests	10	17
	Vaccines (production, distribution, characteristics, equitable access) and	12	20
	Health communication, health literacy	20	34
	Social and individual behaviour, including interpersonal violence	14	24
	Peer to peer teaching, e.g. School of Patients	5	8
	Health economics of the pandemic, socio-economic impact, cost-effectiveness of interventions	14	24
	Data management and data analysis	16	27
	Voluntarism - motivation, contribution, management, impact	6	10
	Advocacy	6	10
	Other themes	3	5
	Not displayed	12	20

Fifty schools/departments (79% of participants) were involved in COVID-19 related education or training activities. The main COVID-19 themes taught to public health students (bachelor, master, PhD) were Epidemiologic indicators for the management of the pandemic (49%), followed by Surveillance and Prevention and infection control (42%). Health service organisation and Social determinants were not less important and taught at 41% and 39% respectively. [Table 2].

Other themes listed in free text were:

- Crisis management
- Risk communication
- Public Health law
- Social anxiety; social changes; risk behaviour; social solidarity; cultural differences in the interpretation of the origin of the disease, social stratification and health; “Aesthetics of the Covid-19 pandemic (values and their artistic expression): analysis of memes on social media”.

Themes taught to social workers, psychologists, nurses, midwives, carers, other health personnel, were dominated by Infection prevention and control (29%) and Infection prevention and control and preparedness for COVID-19 in healthcare settings and nursing homes (29%). With almost the same relevance: Epidemiologic literacy (27%), Epidemiologic indicators for the management of the pandemic and Surveillance (24%) [Table 3].

Other themes listed in free text were:

- Hygiene (disinfection) to Public Health Inspectors
- Public Health Emergency, Quality of Health Services
- Administration/registry/use of digital solutions for outbreak investigation

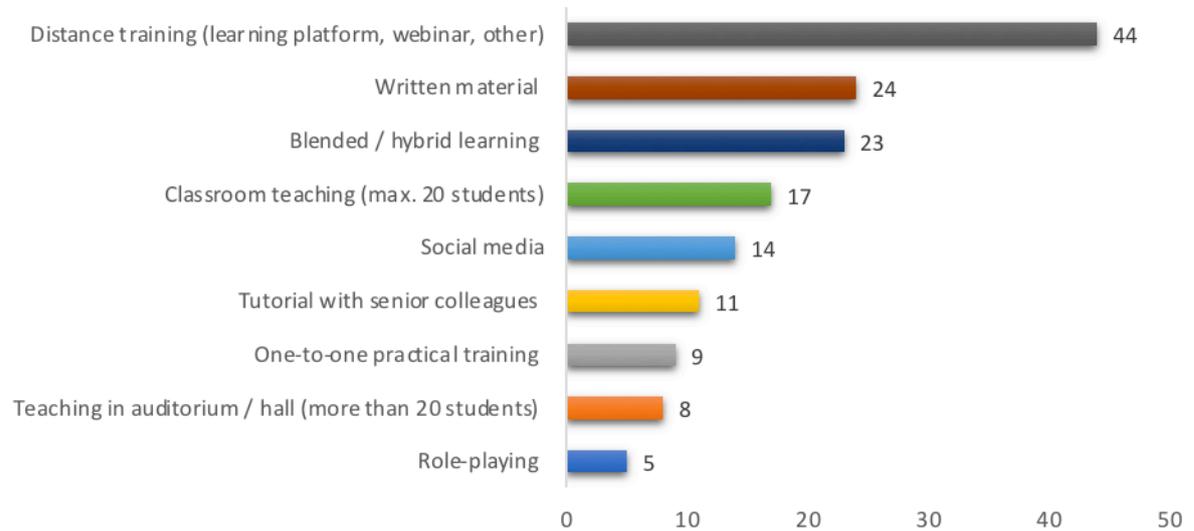
However, there was a bigger variety of themes provided to public health students with a total count of 506, compared to 259 counts for other professionals.

Table 3. During 1st March – 31st October 2020, did your school/department of public health offer any education or training programme to social workers, psychologists, nurses, midwives, carers, other health personnel, with one or more of the following themes related to COVID-19?			
	Answer	Count	Gross %
	Surveillance	14	24
	Epidemiologic indicators for the management of the pandemic	14	24
	Epidemiologic literacy	16	27
	Applied / field epidemiology	8	14
	Outbreak investigation	5	8
	Contact tracing	8	14
	Prediction of epidemic development, mathematical modelling, patterns, comorbidities	6	10
	Anti-epidemic strategy development, implementation and monitoring	11	19
	Prevention and infection control, confinement: methods, effects, ethics	17	29
	Infection high-risk environments, e.g. nursing homes, schools, supermarkets, ballrooms, sports facilities, cultural facilities, other	10	17
	Infection prevention and control and preparedness for COVID-19 in healthcare settings and nursing homes, Personal Protective Equipment (PPE)	17	29
	Health services organisation and management	12	20
	Capacity of health services, the health workforce	9	15
	Occupational health	8	14

Table 3. During 1st March – 31st October 2020, did your school/department of public health offer any education or training programme to social workers, psychologists, nurses, midwives, carers, other health personnel, with one or more of the following themes related to COVID-19?

Answer	Count	Gross %
Environment (climate, pollution)	3	5
Social determinants: infection or fatality high risk (vulnerable) population groups, e.g. elderly, other	10	17
Health inequity	7	12
Refugees and migrants	2	3
Minorities and vulnerable groups	3	5
Children's health	2	3
Impact on people with chronic conditions	7	12
Mental health	6	10
Testing theory, strategy, practice, validity and accuracy of tests	5	8
Vaccines (production, distribution, characteristics, equitable access) and	9	15
Health communication, health literacy	11	19
Social and individual behaviour, including interpersonal violence	4	7
Peer to peer teaching, e.g. School of Patients	2	3
Health economics of the pandemic, socio-economic impact, cost-effectiveness of interventions	4	7
Data management and data analysis	7	12
Voluntarism - motivation, contribution, management, impact	4	7
Advocacy	3	5
Other themes	3	5
Not displayed	12	20

Figure 2. During 1st March – 31st October 2020, did your school/department of public health offer any COVID-19 related education or training programme to your public health students, based on one or more of the following technologies/strategies?

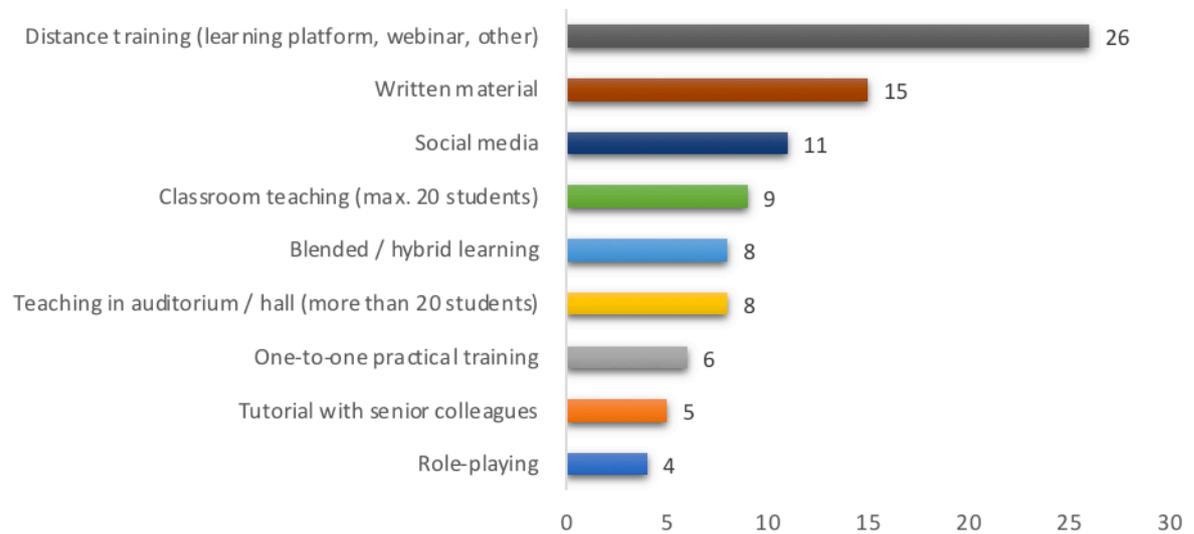


Forty-four institutions used Distance training strategies, 24 Written material and 23 Blended/hybrid learning for their public health students (Figure 2).

Other strategies listed in free text:

- Online assignments, an independent study of disease modelling from various sources
- In September third-year undergraduate students had an internship at the Centre for Disease Prevention and Control of Latvia. They were involved in infectious disease surveillance activities. For example, identifying contact persons, obtaining an epidemiological history, working in a call centre, collecting data, etc. The work took place under the supervision of senior colleagues
- Practical training for contact tracing, including role play as a caller.
- Data entry for contact tracing
- Online testing and Online examinations
- Serious games, Wooclap[®], film making, public health controversies

Figure 3. We are now referring to education or training programme activities addressed to other target groups than public health students: During 1st March – 31st October 2020, did your school/department of public health offer any COVID-19 related education or training programme to social workers, psychologists, nurses, midwives, carers, other health personnel, based on one or more of the following technologies/strategies?



For the group of other students, Distance learning was applied in twenty-six institutions, while 15 used Written material and 11 Social media. Classroom teaching (max. 20 students) was less used (9) in this target group, compared to 17 for public health students [Figure 3].

Other strategies listed in free text:

- Online testing, online examinations, including the final state exams in "Epidemiology, Medical Law and Social Medicine"

3. HEALTH COMMUNICATION TO THE PUBLIC

Table 4. During 1st March – 31st October 2020, was your school/department involved in any COVID-19 related health communication to the public?

Answer	Count	Gross %
No	13	22
Yes	45	76
No answer	1	2
Not displayed	0	0

Table 5. During 1st March – 31st October 2020, did your school/department of public health or members of the staff communicate one or more of the following themes related to COVID-19, to the public?

Answer	Count	Gross %
Surveillance	19	32
Epidemiologic indicators for the management of the pandemic	28	47
Epidemiologic literacy	20	34
Applied / field epidemiology	11	19
Outbreak investigation	11	19
Contact tracing	15	25
Prediction of epidemic development, mathematical modelling, patterns, comorbidities	17	29
Anti-epidemic strategy development, implementation and monitoring	20	34
Prevention and infection control, confinement: methods, effects, ethics	25	42
Infection high-risk environments, e.g. nursing homes, schools, supermarkets, ballrooms, sports facilities, cultural facilities, other	17	29
Infection prevention and control and preparedness for COVID-19 in healthcare settings and nursing homes, Personal Protective Equipment (PPE)	16	27
Health services organisation and management	13	22
Capacity of health services, the health workforce	7	12
Occupational health	13	22
Environment (climate, pollution)	4	7
Social determinants: infection or fatality high risk (vulnerable) population groups, e.g. elderly, other	15	25
Health inequity	10	17
Refugees and migrants	7	12

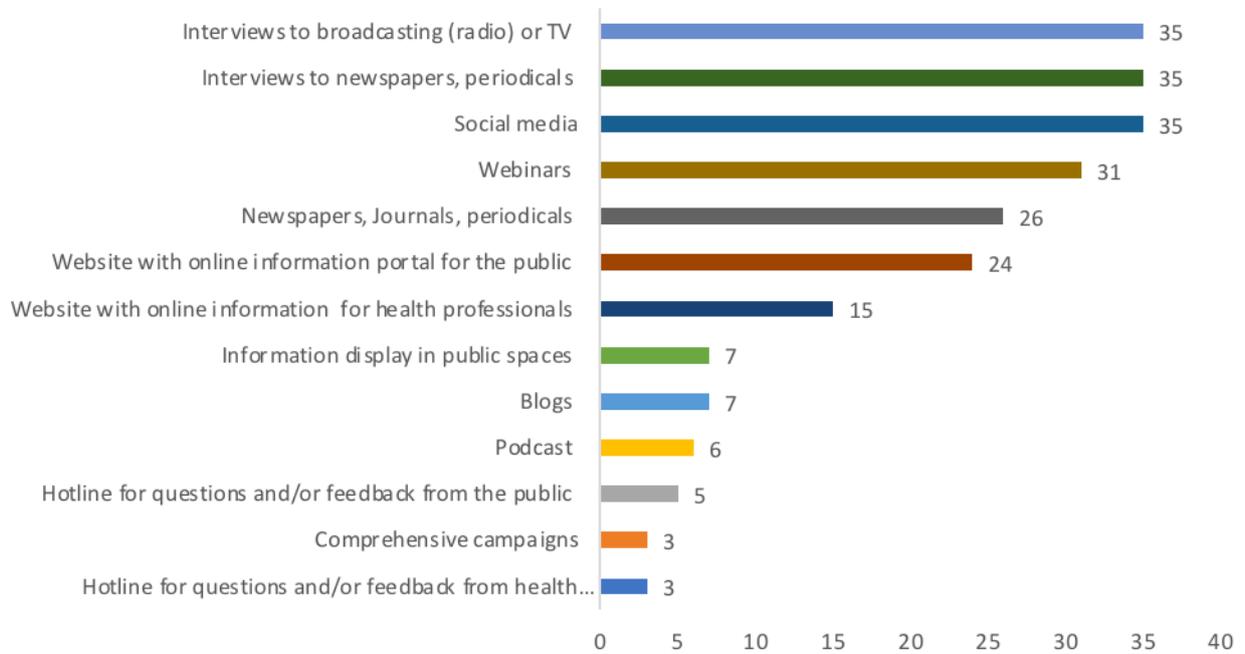
Table 5. During 1st March – 31st October 2020, did your school/department of public health or members of the staff communicate one or more of the following themes related to COVID-19, to the public?		
Answer	Count	Gross %
Minorities and vulnerable groups	8	14
Children's health	5	8
Impact on people with chronic conditions	8	14
Mental health	15	25
Testing theory, strategy, practice, validity and accuracy of tests	8	14
Vaccines (production, distribution, characteristics, equitable access) and	13	22
Health communication, health literacy	14	24
Social and individual behaviour, including interpersonal violence	6	10
Peer to peer teaching, e.g. School of Patients	1	2
Health economics of the pandemic, socio-economic impact, cost-effectiveness of interventions	5	8
Data management and data analysis	9	15
Voluntarism - motivation, contribution, management, impact	4	7
Advocacy	9	15
Other themes	3	5
Not displayed	14	24

Almost half (47%) of the institutions communicated to the public about Epidemiologic indicators for the management of the pandemic. Followed by Prevention and infection control, confinement: methods, effects, ethics (42%), Epidemiologic literacy and Anti-epidemic strategy development, implementation and monitoring (33%) The least communicated themes were Environment (7%), Voluntarism (7%) and Peer to peer teaching (2%) [Table 5].

Other communication themes listed in free text:

- Serological studies
- Ventilation, indoor air, surface cleaning, group gatherings and practices, risk estimation
- Breaking myths about 5G and COVID-19 relations, Lifestyle changes during the outbreak, Priests visits to patients with COVID-19

Data collection of the Figure 4. During 1st March – 31st October 2020, did your school/department of public health or members of the staff communicate one or more of the above themes related to COVID-19 to the public, based on one or more of the following media?



Thirty-five respondents used Interviews on radio and TV, Interviews in newspapers, periodicals and Social media to communicate COVID-19 themes to the public [Figure 4].

Other media listed in free text:

- University newspaper

4. RESEARCH

Table 6. During 1st March - 31st October 2020, was your school/department involved in any research related to COVID-19?		
Answer	Count	Gross %
No	12	20
Yes	47	80
No answer	0	0
Not displayed	12	20

Table 7. During 1st March – 31st October 2020, did your school/department of public health or members of the staff perform or start up any research with one or more of the following themes related to COVID-19?		
Answer	Count	Gross %
Surveillance	21	36
Epidemiologic indicators for the management of the pandemic	21	36
Epidemiologic literacy	11	19
Applied / field epidemiology	9	15
Outbreak investigation	10	17
Contact tracing	8	14
Prediction of epidemic development, mathematical modelling, patterns, comorbidities	18	31
Anti-epidemic strategy development, implementation and monitoring	15	25
Prevention and infection control, confinement: methods, effects, ethics	17	29
Infection high-risk environments, e.g. nursing homes, schools, supermarkets, ballrooms, sports facilities, cultural facilities, other	16	27
Infection prevention and control and preparedness for COVID-19 in healthcare settings and nursing homes, Personal Protective Equipment (PPE)	16	27
Health services organisation and management	19	32
Capacity of health services, the health workforce	14	24
Occupational health	8	14
Environment (climate, pollution)	7	12
Social determinants: infection or fatality high risk (vulnerable) population groups, e.g. elderly, other	15	25
Health inequity	14	24
Refugees and migrants	5	8

Table 7. During 1st March – 31st October 2020, did your school/department of public health or members of the staff perform or start up any research with one or more of the following themes related to COVID-19?		
Answer	Count	Gross %
Minorities and vulnerable groups	9	15
Children's health	7	12
Impact on people with chronic conditions	11	19
Mental health	23	39
Testing theory, strategy, practice, validity and accuracy of tests	9	15
Vaccines (production, distribution, characteristics, equitable access) and	5	8
Health communication, health literacy	11	19
Social and individual behaviour, including interpersonal violence	10	17
Peer to peer teaching, e.g. School of Patients	1	2
Health economics of the pandemic, socio-economic impact, cost-effectiveness of interventions	7	12
Data management and data analysis	11	19
Voluntarism - motivation, contribution, management, impact	3	5
Advocacy	3	5
Other themes	5	8
Not displayed	12	20

An amplified range of themes was covered in the schools' research and scientific publications. The most frequent themes covered are Mental health (39%), Surveillance and Epidemiologic indicators for the management of the pandemic (36%) [Table 7].

Other research themes listed in free text:

- Health behaviours and social distancing during lock-down
- Serological studies
- Seroprevalence studies in the general population
- Medical ethics
- Lifestyle changes during the outbreak, changes in Alcohol consumption during the COVID-19
- Drug research against COVID-19
- Digital health literacy

Table 8. During 1st March - 31st October 2020, did your school/department of public health or members of the staff publish research in the scientific press with one or more of the following themes related to COVID-19?

	Answer	Count	Gross %
	Surveillance	14	24
	Epidemiologic indicators for the management of the pandemic	16	27
	Epidemiologic literacy	7	12
	Applied / field epidemiology	5	8
	Outbreak investigation	7	12
	Contact tracing	4	7
	Prediction of epidemic development, mathematical modelling, patterns, comorbidities	10	17
	Anti-epidemic strategy development, implementation and monitoring	8	14
	Prevention and infection control, confinement: methods, effects, ethics	13	22
	Infection high-risk environments, e.g. nursing homes, schools, supermarkets, ballrooms, sports facilities, cultural facilities, other	8	14
	Infection prevention and control and preparedness for COVID-19 in healthcare settings and nursing homes, Personal Protective Equipment (PPE)	10	17
	Health services organisation and management	12	20
	Capacity of health services, the health workforce	9	15
	Occupational health	3	5
	Environment (climate, pollution)	3	5
	Social determinants: infection or fatality high risk (vulnerable) population groups, e.g. elderly, other	10	17
	Health inequity	9	15
	Refugees and migrants	2	3
	Minorities and vulnerable groups	4	7
	Children's health	6	10
	Impact on people with chronic conditions	7	12
	Mental health	12	20
	Testing theory, strategy, practice, validity and accuracy of tests	6	10
	Vaccines (production, distribution, characteristics, equitable access) and	3	5
	Health communication, health literacy	5	8
	Social and individual behaviour, including interpersonal violence	5	8

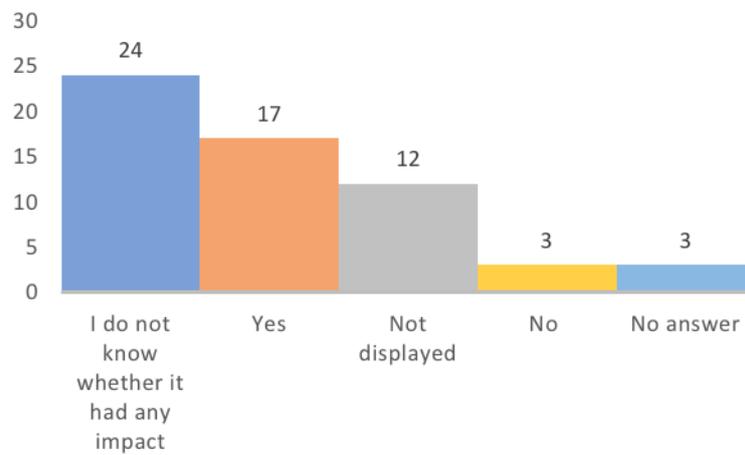
Table 8. During 1st March - 31st October 2020, did your school/department of public health or members of the staff publish research in the scientific press with one or more of the following themes related to COVID-19?		
Answer	Count	Gross %
Peer to peer teaching, e.g. School of Patients	0	0
Health economics of the pandemic, socio-economic impact, cost-effectiveness of interventions	6	10
Data management and data analysis	3	5
Voluntarism - motivation, contribution, management, impact	1	2
Advocacy	3	5
Other themes	6	10
Not displayed	12	20

Similar tendencies can be observed in the already published research. A quarter of respondent published about Epidemiologic indicators for the management of the pandemic (27%) and Surveillance (24%), followed by Prevention and infection control, confinement: methods, effects, ethics (22%) and Health services organisation and management (20%) [Table 8].

Other published themes listed in free text:

- Nutrition
- Community health: young and adolescent and COVID-19
- Ethics, Gender inequalities, national geographical distribution of the epidemic
- Serological results
- Lifestyle changes during the outbreak, changes in health behaviours and body weight during the COVID-19 quarantine in Lithuania

Figure 5. Was there any impact on political decisions of your research?



Seventeen out of fifty-nine participants reported that their COVID-19 related research had an impact on political decisions (Figure 5).

If reported as “yes”, below the impact described in free text by the respondent:

- *Defining national guidelines in COVID-19 infection control and prevention.*
- *The surveillance reports produced by members of the department directly fed into the anti-epidemic strategy of the country. Besides, an investigation into networks of disease transmission was used to inform stakeholders of the levels of community spread of COVID-19.*
- *Governor of the state and high-level health officials made decisions about state health policy based on evidence produced by our school. Our data and conclusions also impacted policy decisions in other states.*
- *Our research team developed a prediction model for the number of individuals diagnosed with COVID-19 and the corresponding burden on the health care system, which was used to support decision making by authorities (restrictions in the society etc)*
- *Permanent support for Armed Forces action on the field. Meetings with the National Civil Protection Commander, Information requests from National Authorities regarding the use of masks. Requests for clarification from several health delegates.*
- *Data collected during the investigation of nursing homes to contribute to improved practices in nursing homes.*
- *Mathematical modelling results fed directly into government policy papers.*
- *Testing theory, strategy, practice, validity and accuracy of tests.*
- *There has been impact of the work done across the university in a variety of areas such as testing and students, ventilator development, winter planning contributions, front line public health services and*

quick reviews of the evidence base e.g. care homes, school closures for policymakers at national and local levels.

5. CONSULTANCY/ADVICE

Table 9. During 1st March - 31st October 2020, did your school/department of public health or members of the staff give any advice to public authorities within public health, health administration, university education or politics, on one or more themes related to COVID-19?		
Answer	Count	Gross %
No (A1)	11	19
Yes (A2)	48	81
No answer	0	0
Not displayed	0	0

Table 10. During 1st March – 31st October 2020, did your school/department of public health or members of the staff give any advice to public authorities within public health, health administration, university education or politics, concerning one or more of the following themes related to COVID-19?		
Answer	Count	Gross %
Surveillance	26	44
Epidemiologic indicators for the management of the pandemic	29	49
Epidemiologic literacy	16	27
Applied / field epidemiology	11	19
Outbreak investigation	12	20
Contact tracing	18	31
Prediction of epidemic development, mathematical modelling, patterns, comorbidities	15	25
Anti-epidemic strategy development, implementation and monitoring	22	37
Prevention and infection control, confinement: methods, effects, ethics	30	51
Infection high-risk environments, e.g. nursing homes, schools, supermarkets, ballrooms, sports facilities, cultural facilities, other	17	29
Infection prevention and control and preparedness for COVID-19 in healthcare settings and nursing homes, Personal Protective Equipment (PPE)	16	27
Health services organisation and management	17	29
Capacity of health services, the health workforce	12	20
Occupational health	12	20
Environment (climate, pollution)	4	7

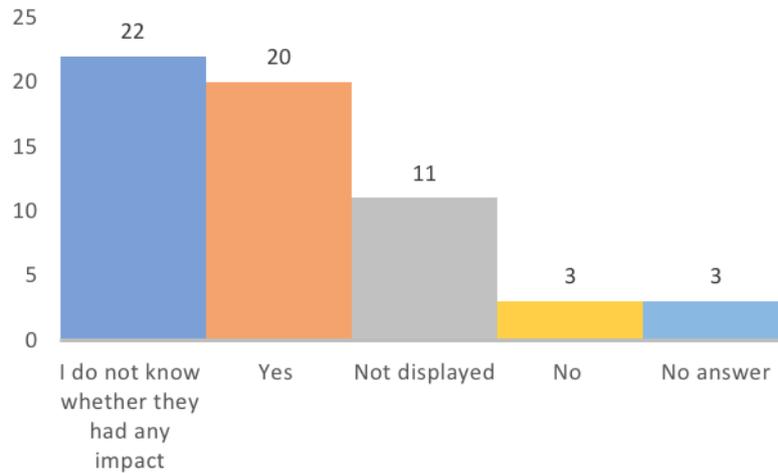
Table 10. During 1st March – 31st October 2020, did your school/department of public health or members of the staff give any advice to public authorities within public health, health administration, university education or politics, concerning one or more of the following themes related to COVID-19?		
Answer	Count	Gross %
Social determinants: infection or fatality high risk (vulnerable) population groups, e.g. elderly, other	14	24
Health inequity	7	12
Refugees and migrants	2	3
Minorities and vulnerable groups	7	12
Children's health	5	8
Impact on people with chronic conditions	9	15
Mental health	11	19
Testing theory, strategy, practice, validity and accuracy of tests	11	19
Vaccines (production, distribution, characteristics, equitable access) and	12	20
Health communication, health literacy	11	19
Social and individual behaviour, including interpersonal violence	6	10
Peer to peer teaching, e.g. School of Patients	1	2
Health economics of the pandemic, socio-economic impact, cost-effectiveness of interventions	7	12
Data management and data analysis	7	12
Voluntarism - motivation, contribution, management, impact	4	7%
Advocacy	2	3
Other themes	3	5
Not displayed	11	19

A wide range of themes of advice was given to public health authorities. More than half of the institutions advised about Prevention and infection control, confinement: methods, effects, ethics (51%), Epidemiologic indicators for the management of the pandemic (49%) and Surveillance (44%) [Table 10].

Other advice themes of listed in free text:

- *Some of our faculty belong to the National Task Force which advises the government; they produce policy briefs (open to the public) on several topics*
- *Information was provided to University administration who was coordinating test results/quarantine to local County health department*
- *International travel, tourism, health passport. Opening and Closure of universities.*

Figure 6. Was there any impact on political decisions of your advice?



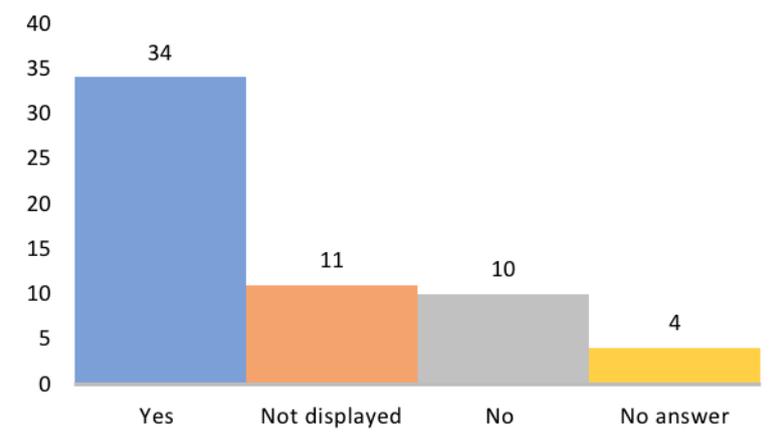
More than a third of respondents reported that their advice had an impact on political decisions (Figure 6).

Political decisions influenced by the advice given, listed in free text:

- *Defining national policies*
- *Members of the Medical School were involved in the governmental bodies that were making decisions regarding anti-epidemic strategy development, implementation and monitoring, infection control, testing strategy etc.*
- *Affected policy decisions concerning contact tracing, openings/closings of businesses, mask-wearing, and school openings/closings.*
- *Using predictive models of the pandemic. Contributing to the technical assessment of the activities and proposals of measures for improving the pandemic management from the Regional Health System.*
- *There is an impact on the COVID-19 pandemic management through the participation of members of our academic staff in:*
 - *The National COVID-19 Experts Advisory Committee which is the highest-level committee, which daily examines the data and gives advice to the Greek government regarding COVID-19 measures taken at a national level.*
 - *The National Public Health Council, an advisory body to the Hellenic Ministry of Health for public health issues*
 - *The Central Health Council, the advisory body to the Hellenic Ministry of Health for health services issues*
 - *The National Committee on Vaccinations, the advisory body to the Hellenic Ministry of Health on all vaccination programmes of the country*

- *Some of them were considered during the different steps of the lockdown; clearly for organizing contact-tracing, and for the technical assessment of the activities and proposals of measures for improving the pandemic management from the Regional Health System.*
- *Permanent support for Armed Forces action in the field. Meetings with the National Civil Protection Commander, Information requests from National Authorities regarding the use of masks. Requests for clarification from several health delegates.*
- *The Ministry of Health and the Prime Minister listen to the recommendations of experts and take them into account when making political decisions. The importance of expert opinion has increased in policy-making compared to the previous composition of the government. Public confidence in scientists and academic staff has also increased.*
- *Part of the strategy on Covid-19 responses is the result of SPHs advice.*
- *Direct effect on the timing of restrictions*
- *Population-based testing*
- *The government implemented legislation for quarantine and the closure of the country, City of Rennes, Ministry of Health, Regional health agency*
- *All the plan of COVID response in the University was designed by us and we are part of the surveillance and quality assessment teams*
- *Temporary COVID-19 hospital was built and organized with advice and assistance of our staff.*

Figure 7. During 1st March – 31st October 2020, was your school/department of public health or members of the staff directly involved with public authorities related to COVID-19?



Over half (34 out of 59) responded that they were directly involved with public authorities related to COVID-19 (Figure 7).

Listed levels of involvement in free text:

- *Ministry of Health*
- *Istituto Superiore di Sanità: educational initiatives, production of technical national documents*

- *Members of the Medical School were involved in the governmental bodies that were making decisions regarding anti-epidemic strategy development, implementation and monitoring, infection control, testing strategy etc. Moreover, members of the department were receiving data from the Ministry of Health to analyse them for surveillance, forecasting and monitoring, and this information directly fed into the decisions taken by the governmental bodies.*
- *Several professors have been invited as experts to the working groups and councils of the Ministry of Health, which make decisions on monitoring the epidemiological situation, mitigating the consequences and limiting the infection.*
- *Conselleria de Sanitat Universal i Salut Pública (i.e. Valencian Department of Universal Healthcare and Public Health)*
- *Faculty members are part of the task force for COVID management reporting directly to the Head of State*
- *National COVID-19 Experts Advisory Committee which is the highest-level committee which daily examines the data and gives advice to the Greek government regarding COVID-19 measures taken at a national level.*
 - *The National Public Health Council, an advisory body to the Hellenic Ministry of Health for public health issues*
 - *The Central Health Council, the advisory body to the Hellenic Ministry of Health for health services issues*
 - *The National Committee on Vaccinations, the advisory body to the Hellenic Ministry of Health on all vaccination programmes of the country*
- *As a member of the National Science Task Force: advice for the Swiss government through Corona Immunitas: ongoing information for Federal Office of Public Health*
- *Using predictive models of the pandemic. Contributing to the technical assessment of the activities and proposals of measures for improving the pandemic management from the Regional Health System.*
- *Regular meetings with public health authorities, such as the Directorate of Health and Chief Epidemiologist*
- *Permanent support for Armed Forces action on the field. Meetings with the National Civil Protection Commander, Information requests from National Authorities in particular regarding the use of masks. Requests for clarification from several health delegates.*
- *The Director of the School of Public Health is a member of the Regional Task Force for COVID-19 in Lombardy*
- *Local health department*
- *Regional hospital districts, regional and national task forces, National Institute for Health*
- *Faculty members are part of the task force for covid management reporting directly to the Head of State*
- *None of the staff was formally employed but was invited as experts*

- *Local authority and Public Health England (National)*
- *Director of SPNM is National Public Health Coordinator*
- *Testing and Contact tracing*
- *Sitting on government boards.*
- *Regional Public Health Authority, Ministry of Health*
- *Most of our staff works part-time at university, and their main job is in the Regional Department of public health and epidemiology*
- *Professors employed at our university were included in the advisory group of the prime minister of Poland.*
- *Ministry of health*
- *Local authorities, regional authorities NHS and PHE, national bodies in the UK*
- *Government, Parliament*
- *Health authority at the city level*
- *Both, at the local and national level*
- *Part of the surveillance and quality assessment teams*

Table 11. During 1st March – 31st October 2020, did your school/department of public health or members of its staff give advice to any of the authorities or institutions mentioned beneath?

	Answer	Count	Gross %
	Health authorities	35	59
	Public health authorities	33	56
	Administrative authorities	17	29
	University	29	49
	Research authorities	13	22
	Government, political authorities	26	44
	Local, municipality or regional political authorities or administration	21	36
	Schools	10	17
	Workplaces	12	20
	Sports organisations, youth organisations	3	5
	Nursing homes	5	8
	Hospitals	16	27
	General practitioners	3	5
	Patients associations	5	8

Table 11. During 1st March – 31st October 2020, did your school/department of public health or members of its staff give advice to any of the authorities or institutions mentioned beneath?			
	Answer	Count	Gross %
	International organisations	7	12
	Other public authorities or institutions	3	5
	Not displayed	11	19

Almost 60% of schools got involved in providing advice to health and public health authorities. A bit less to Universities (49%) and Government, political authorities (44%) [Table 11].

Other public authorities or institutions listed in free text:

- SIGHT – Swedish Institute for Global Health Transformation
- Training in contact tracing for Regional Authorities other than Andalusian ones and the private sector institutions
- Churches
- Ministry of Health, Crisis Management Council chaired by the Prime Minister
- Local NHS
- The school has just been established, operating for one year thus we are mostly focused on teaching and research for now.
- Working group at the Union chamber appointed by the Minister of Health for Nursing homes

Table 12. During 1st March – 31st October 2020, did your school/department of public health or members of the staff interact with the following structures/bodies or professional networks, focusing on the COVID-19 pandemic?			
	Answer	Count	Gross %
	National Government Committees / Panels	26	44
	The Ministry of Health	33	56
	The National Board of Health	9	15
	The National Institute of Health	16	27
	The Regional Board of Health	15	25
	The Local/Municipal Board of Health	12	20
	National Public Health	17	29
	National Public Health Association	10	17
	Public Health Professional Training Bodies, Faculty of Public Health	17	29

Table 12. During 1st March – 31st October 2020, did your school/department of public health or members of the staff interact with the following structures/bodies or professional networks, focusing on the COVID-19 pandemic?		
Answer	Count	Gross %
Clinical Professional and/or Organisations / Bodies	10	17
ASPHER (Association of Schools of Public Health in the European Region) activities	16	27
EUPHA (European Public Health Association) activities	9	15
EPHA (European Public Health Alliance) activities	2	3
EuroHealthNet activities	2	3
EHMA (European Health Management Association) activities	2	3
WFPHA (World Federation of Public Health Associations) activities	3	5
IANPHI (International Association of National Public Health Institutes) activities	3	5
ECDC (European Centre for Disease Prevention and Control) activities	10	17
WHO (World Health Organization Europe) activities	14	24
European Observatory of Health Systems and Policies	6	10
Networks of universities	14	24
Students and alumni associations	12	20
HIFA (Health Information for All) activities	1	2
Ministerial Network for Health Learning and Research e.g. Ibero-American Ministerial Network for Health Learning and Research (RIMAIS)	1	2
Other professional networks	5	8
Not displayed	11	19

More than half were involved with their Ministry of Health (56%) and a bit fewer with National Government Committees / Panels (44%). Almost one third reported being engaged with Public Health Professional Training Bodies, Faculty of Public Health, The National Institute of Health, National Public Health and ASPHER (Table 12).

Other professional networks listed in free text:

- National Association of Medical Directors of Hospitals
- Accommodation, Cleaning and Disinfection Industry Associations
- SESPAS (Spanish Health Management Association) and other National Professional Bodies
- Global Parliamentarians Network to End Infectious Diseases - UNITE

UNESCO:

1. Chair of Global Health and Education

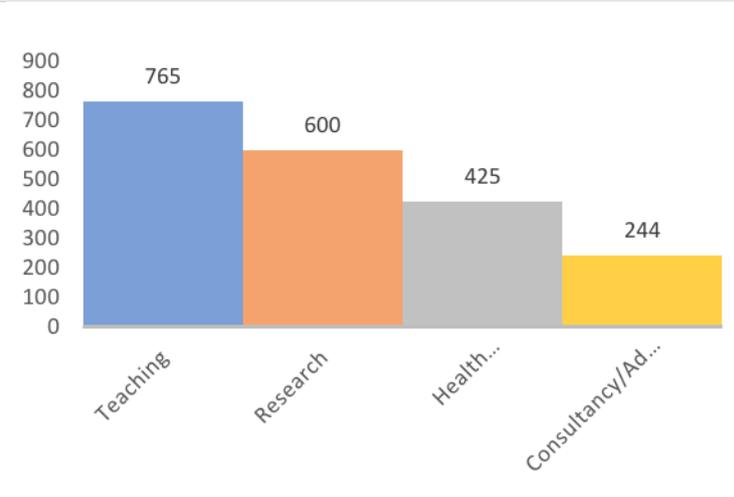
2. Global Network of Learning Cities

3. Education for Health and Well-being

- Worldwide Universities Network
- European Society of Cardiology (ESC), Institute for Healthcare Improvement (IHI)

6. OVERALL ENGAGEMENT

Figure 8. N° of total counts per section



Looking at the total number of activities reported in each of the main themes, teaching and research had most counts (Figure 8).

DISCUSSION

Our findings suggest, that there has been an impressive engagement of Schools and University Departments of Public Health in the COVID-19 pandemic, in teaching and research, advice to the public and involvement in central decision-making bodies.

About half of ASPHER member schools and departments participated in the survey. The findings must be considered with caution if taken as a full and valid representation of the anti-COVID-19 combat profile of the SPH. The findings, however, represent a minimum of overall anti-COVID-19 activity by SPH in the WHO European region. The findings appear sufficient to answer the main questions of this research, namely whether SPH have invested their knowledge and skills in the combatting the pandemic during 2020, and whether the invested competences represent very selected areas or a broad range of public health resources. The last has been shown here to be the case, so that eight out of ten schools demonstrated involvement in all four sections of the questionnaire: teaching, health communication, research and consultancy/advice. The whole spectrum of EPHOs were represented. This is in balance with the findings of Bjegovic-Mikanovic et al. (16) when they about ten years ago documented large numbers of public health components and aspects delivered by SPH in the European Region.

It is likely that the results presented are a minimum level of anti-COVID-19 activity. Some respondents reported difficulties gathering all the anti-COVID-19 activity in their institutions, leading to under-reporting. The survey explored COVID-19 related teaching, health communication to the public, research, and consultancy/advice, performed or planned during the March to October 2020 period. Such activities were specific activities often or mostly added to the standard on-going activities, which were also affected by the pandemic. The special activity patterns in these schools and departments indicate the effort and commitment to combatting the pandemic. We did not explore the ability and concrete planning to continue the reported activities or start other anti-COVID-19 activities. In addition to delivering anti-COVID-19 efforts of high quality, the schools struggled to adapt their regular activities to repeated demands to close and re-open (17).

The willingness to invest resources in the 2020 anti-COVID-19 combat was demonstrated already in teaching, where many opened up to a wider audience of students to answer the demand of nursing homes and primary health care. Flexibility was also seen in the offer of themes covering infection control, personal protection and health care management, besides more classical public health themes like surveillance and field epidemiology.

Given the confinement situation in most of the countries during the time period covered, teaching was mainly done through distance and blended/hybrid methods. However, some institutions did not limit

themselves to that and had introduced challenges like an internship at disease control centres, serious games, film making and role-play - to list some.

SPH showed a pro-active approach to health communication to the public through social media and interviews, mainly concerning epidemiologic indicators for the management of the pandemic, and prevention and infection control.

Eight out of ten participants had been involved in anti-COVID-19 research. The range of research themes covered was wide, dominated by surveillance, epidemiologic indicators, prevention and infection control, and mental health. The evidence produced informed national guidelines, national strategies, and political decision making.

Advice and consultancy were also strongly covered, mainly in prevention and infection control, epidemiologic indicators for the management of the pandemic, mathematical pandemic prediction models, and more general surveillance. Importantly, the engagement was at high decision levels. Some institutions took direct part in national task forces, while others advised their ministry of health at a national and also local levels. Advice was given to and through schools, universities, workplaces and churches. A range of professional networks represented other communication channels. The advice given defined national policies and strategies concerning, e.g., decisions on contact tracing, confinement, mask-wearing, and closing of schools.

The main impression from the survey is of the unveiling of existing anti-Covid-19 combat relevant resources. University cultures, with their basic principle of freedom of research, are only to some extent, considered possible parts of society's public health standard procedures or tools. Here we have seen them step up to the challenge and play a central and important role. The study sends a message of the availability of these resources in situations, which are catastrophic for the population's health like the present one. The study also demonstrates the need to enhance and grow public health expertise, investing in programmes of teaching and training to create the next generation of public health professionals.

In many European countries, a coherent organisation of comprehensive public health is to a large degree lacking. 'Health services' are 'disease services', and prevention of ill-health and health improvement lag behind the coherence of the organisation of medical curative systems (18). Years of austerity policies in many countries have taken an additional toll in terms of poor health including increased mortality in some nations and some population sectors. The pandemic has shown up grotesque inequalities in health, within and between countries (19). The impacts of the virus and the impacts of lockdowns haven fallen unequally

on minorities, those in high risk occupations and the poor, already living with vulnerability to ill health and premature death (20) (21).

The biomedical sides of public health have often been over-emphasised at the expense of indispensable social theories and action, necessary in, for instance, societal lockdowns and contact tracing in pandemics like the present one. The development of rationally goal-oriented, comprehensive, coherent public health systems - based on and including not only biomedical but to a similar extent social, social-psychological behavioural, and health economic components at high-quality levels takes time (22).

We have seen a poor state of preparedness in many countries in Europe, neglect of pandemic planning (23) and deliberate disinvestment in public health resources (24).

We have also seen the politicisation of public health science, to disastrous effect in many European countries (25). The next generation of public health professionals will need to be politically astute and alive to the potential of social media and digital technologies to improve or damage the health of the public (26). Our public health professionals will need to be strong on analytic competences and leadership, knowledgeable on the law and building their actions on a strong ethical framework. They will also need to be recognised for their expertise, professionalism and authority.

The present study has demonstrated that the necessary components do exist for creating a resilient, expert and comprehensive public health system, in many European countries. They are here, but they do not exist everywhere or at equal quality levels, in all countries or in all university environments and SPHs. There is a challenge and an imperative for countries to work together to enhance our public health systems and preparedness for the future (27)(28). In all this, education and training, interacting with practice and research, are central requirements. ASPHER members are ready to meet this challenge.

CONCLUSION

In this survey, we examined the role of Schools and University Departments of Public Health in combatting the COVID-19 pandemic. We surveyed the members of ASPHER about their teaching, health communication, research, and consultancy over the first period of the pandemic.

After examining the outcomes of 59 institutions in the WHO Europe region, our analysis concluded that the involvement and roles taken are important and demonstrated impact. The SPHs have demonstrated that they are able to deliver knowledge and skills, all together at a large scale and not exclusively for academic purposes but also for practical public health analysis, planning, service intervention and evaluation, and

without letting down their inborn free research obligation – as in the present pandemic. Activities included, on one end, very much down-to-earth procedures such as infection control and contact tracing, and at the other end, a wide range of governance and policy advice and research.

This study is a milestone in the general development of theoretical and practical inputs to European public health services by European Schools and University Departments of Public Health. Moreover, it demonstrates an outstanding potential to yield concrete here-and-now support to the governance systems and the public health systems responsible for combatting COVID-19.

We recommend that these results are disseminated widely in order to increase celebrate the role of SPHs in combatting the ongoing COVID-19 pandemic and to serve as inspirational knowledge exchange.

Governments and international bodies must learn from the pandemic, apply economic, social and health policies which, fairly and equally improve and protect health. They must build capacity for public health preparedness and response to epidemics- be they infectious or non-communicable. And they must acknowledge and recognise professionalism and expertise in public health. ASPHER members stand ready to support national governments and international agencies in meeting these aims. We must plan for an outbreak of health.

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APPENDICES

1. RESPONSES BY ASSOCIATE ASPHER MEMBERS

Ten schools of public health are associate ASPHER members situated outside the WHO Europe Region. Four of these responded positively to the invitation to participate in the survey, one from Lebanon, one from Moldova and two from the USA. In respect of anonymity, this small overview of main responses from the four associate members will not include information on the individual responder.

Table 13. Four ASPHER associate members' and 59 full members' participation in main theme anti-COVID-19 activities during 1st March – 31st October 2020.

Activity	Associate Members participated N°	Full Members participated %
COVID-19 related education or training ¹	3	79
COVID-19 related health communication to the public ²	4	78
Research related to COVID-19 ³	4	81
Advice to public authorities, related to COVID-19 ⁴	3	81

¹ Question: "During 1st March – 31st October 2020, was your school/department involved in any COVID-19 related education or training activities?"

² Question: "During 1st March – 31st October 2020, was your school/department involved in any COVID-19 related health communication to the public?"

³ Question: "During 1st March - 31st October 2020, was your school/department involved in any research related to COVID-19?"

⁴ Question: "During 1st March - 31st October 2020, did your school/department of public health or members of the staff give any advice to public authorities within public health, health administration, university education or politics, on one or more themes related to COVID-19?"

In balance with responses from the 59 full members, three of the four associate members reported activities within all four main activity categories – education/training, communication to the public, research, and advice to public authorities, whereas two associate members did not report education/training activities or advice to public authorities.

As concerns sub-themes within *education/training*, two, among other sub-themes, reported epidemiology, testing issues, contact tracing, and concern for vulnerable groups. One member covered most subthemes. Within *communication to the public*, the picture was nearly the same, apart from the fourth member reporting communication of prediction of the pandemic development. Within *research*, health inequality and mental health were covered by two members; one member reported research on surveillance and

health economics and health services; one member covered a multitude of sub-themes also within this main theme. As concerns *consultancy*, two reported the sub-theme of contact tracing and one a multitude of the sub-themes.

Summing up, the coarse main picture of responses from the four participating associate members was rather similar to the profile presented by the 59 full members.

2. LIST OF PARTICIPANTS

Full Members

Country	Institution
Austria	Center for Public Health, Medical University of Vienna, Vienna
Bulgaria	Faculty of Public Health, Medical University of Plovdiv, Plovdiv
Bulgaria	Faculty of Public Health, Medical University of Sofia, Sofia
Cyprus	Public Health Program, European University Cyprus, Engkomi
Cyprus	University of Nicosia Medical School, Nicosia
Czech Republic	Faculty of Medicine and Dentistry, Palacký University Olomouc, Olomouc
Denmark	Department of Public Health, University of Copenhagen, Copenhagen
Finland	Institute of Public Health and Clinical Nutrition, University of Eastern Finland, Kuopio
France	ISPED School of Public Health, University of Bordeaux, Bordeaux
France	EHESP School of Public Health, Rennes
Georgia	International School of Public Health, Tbilisi State Medical University, Tbilisi
Georgia	School of Public Health, University of Georgia, Tbilisi
Germany	Institute for Medical Sociology, Heinrich Heine University, Düsseldorf
Germany	Faculty of Life Sciences, University of Applied Sciences, Hamburg
Greece	School of Public Health, University of West Attica, Athens
Greece	Faculty of Public Health, University of Thessaly, Volos
Iceland	School of Public Health, University of Iceland, Reykjavík
Ireland	School of Public Health, Physiotherapy and Sports Science; University College Dublin, Dublin

Country	Institution
Israel	Braun School of Public Health and Community Medicine, Hebrew University Hadassah, Jerusalem
Italy	Centre for Training and Research in Public Health (CEFPAS), Caltanissetta - Sicily
Italy	University Vita-Salute San Raffaele, Milan
Italy	School of Public Health, University of Pavia, Pavia
Italy	School of Public Health, University of Pisa, Pisa
Italy	School of Public Health, Catholic University of the Sacred Heart, Rome
Kazakhstan	Kazakhstan School of Public Health, Almaty
Kazakhstan	Institute of Public Health and Professional Health of Karaganda Medical University, Karagandy
Latvia	Faculty of Public Health and Social Welfare, Riga Stradins University, Riga
Lithuania	Faculty of Public Health, Lithuanian University of Health Sciences, Kaunas
Macedonia	Centre for Public Health, Ss. Cyril and Methodius University, Skopje
Moldova	School of Public Health Management, State University of Medicine and Pharmacy "Nicolae Testemitanu", Chisinau
Netherlands	Netherlands School of Public and Occupational Health, Utrecht
Norway	Department of Community Medicine, UiT The Arctic University of Norway, Tromso
Palestine	Faculty of Public Health, Al-Quds University, East Jerusalem
Palestine	Public Health Department, Faculty of Medicine and Health Sciences; An-Najah National University, Nablus
Poland	Department of Public Health and Social Medicine, Medical University of Gdansk, Gdansk
Poland	Faculty of Public Health, Medical University of Silesia, Katowice

Country	Institution
Poland	Institute of Public Health, Jagiellonian University, Krakow
Poland	Faculty of Health Sciences, Poznan University of Medical Sciences, Poznan
Poland	NIPH Public Health Training Centre, Warsaw
Poland	Faculty of Health Sciences, Wroclaw Medical University, Wroclaw
Portugal	Institute of Health Sciences, Portuguese Catholic University, Lisbon
Portugal	National School of Public Health, New University of Lisbon, Lisbon
Portugal	Institute of Public Health, University of Porto, Porto
Romania	National School of Public Health, Management and Professional Development, Bucharest
Romania	Cluj School of Public Health, Babes-Bolyai University, Cluj-Napoca
Serbia	Centre - School of Public Health, University of Belgrade, Belgrade
Slovenia	Faculty of Health Sciences, University of Primorska, Izola
Slovenia	Angela Boškin Faculty of Health Care, Jesenice
Spain	Andalusian School of Public Health, Granada
Spain	ISCIII National School of Public Health, Madrid
Spain	Master in Public Health, Public University of Navarra, Pamplona
Spain	Valencian School of Health Studies, Valencia
Sweden	Red Cross University, Stockholm
Sweden	Department of Public Health and Community Medicine, University of Gothenburg, Gothenburg
Switzerland	Swiss School of Public Health, Zürich
Ukraine	School of Public Health, National University of Kyiv-Mohyla, Kiev

Country	Institution
United Kingdom	Cambridge Institute of Public Health, University of Cambridge, Cambridge
United Kingdom	Department of Health Sciences, University of York, York
United Kingdom	Department of Public Health and Wellbeing, University of Chester, Chester

Associate Members

Country	Institution
Lebanon	Faculty of Health Sciences, American University of Beirut, Beirut
Mongolia	School of Public Health, Mongolian National University of Medical Sciences, Ulaanbaatar
United States	Department of Public Health and Health Sciences, University of Michigan-Flint, Flint
United States	Richard M Fairbanks School of Public Health at IUPUI, Indiana University, Indianapolis