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LETTER

Public Health Experts have the Highest Impact on Citizens' Compliance with COVID-19 Prevention Recommendations

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Abstract:

Introduction:

In this study, we investigated the sources of information that have had the highest impact on Kosovans' compliance with preventive measures against COVID-19.

Methods:

We recruited 744 participants, aged 18-35, to participate in this cross-sectional survey between 27th April and 5th May 2020, utilising an online questionnaire.

Results:

Our findings show that public health experts had the greatest influence in persuading citizens to obey the recommendations, with 63.2% (470) compliance, followed by family members, with 18% (134), and health workers, with 10.2% (76).

Conclusion:

Our study has shown that public health experts have had the greatest impact on Kosovo citizens, persuading them to follow recommendations designed to prevent the spread of COVID-19.

Keywords: COVID-19, Public health, Prevention, Epidemics, Kosovo, Young adult.

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1. INTRODUCTION

The COVID-19 pandemic has affected almost every country and territory around the world, and some have been affected much more than others. Governments have implemented different interventions to isolate and prevent the spread of the pandemic caused by the SARS-CoV-2 virus. Since herd immunity against the SARS-CoV-2 virus has yet to be achieved, a key element of efforts by health authorities to keep the situation under control and to avoid further spread is to increase health literacy and promote the safe behaviour of

citizens [1, 2].

The Ministry of Health (MoH) of Kosovo declared a public health emergency within two days of the first confirmed case. In addition, the MoH, based on the recommendation of the National Institute of Public Health of Kosovo (NIPH), closed all educational institutions before the first positive case of COVID-19 was registered [3]. In addition to its health education and promotion campaign, between 14 April and 4 May 2020, the MoH placed municipalities with high case numbers under quarantine, and limited the outdoor movement of people within municipalities to a total of 90 minutes a day for essential reasons, on a rota system based on personal identification numbers [4].

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Tailoring information and messages and selecting the right media channels to reach and engage specific populations, is a key element in any public health emergency campaign. Differences in language, media consumption, and healthcare provision between Kosovo's ethnic communities have been a major challenge to the dissemination of public health information, advice, and guidance during the COVID-19 emergency in Kosovo.

The first COVID-19 cases were confirmed on 13th March 2020, making Kosovo (along with Montenegro) one of the last countries in the region, and Europe as a whole, to be affected by the pandemic.

On 1st June 2020, the Government of Kosovo decided to revoke the quarantine measures which had entered into force in March 2020, resulting in a significant increase in cases and deaths. Between 13 March (when the first case was diagnosed) and the end of May 2020, the average number of COVID-19 deaths was 0.4 (30/80) and the average number of new cases was 13.5 (1083/80). By contrast, between June and August 2020, the average number of COVID-19 deaths was 5.4 (495/92) and the average number of new cases was 134.5 (12,371/92). The mortality rate increased from 2.8% during the March – May 2020 period, to 4.0% during the June – August 2020 period.

According to the 2011 Census in Kosovo, around 65% of the population was younger than 35 years [5]. People between the ages of 18 and 35 were the most economically active, accounting for roughly half of the labour force and statistically most likely to be the primary source of income for themselves and their households [6]. This segment of the population makes up 35% of the overall population in Kosovo [5]. For policymakers, the size and influence of this age group makes it not only a key potential partner in managing the spread of COVID-19, but also – because of its mobility and frequent interpersonal contact - a key risk element in the spread of COVID-19.

In this paper, we attempt to evaluate the sources of information that have had the greatest impact on Kosovans aged 18-35, as well as the most successful in encouraging mass participation in MoH and NIPH COVID-19 prevention measures.

2. MATERIALS AND METHODS

We recruited 744 participants, aged 18-35, to participate in this cross-sectional survey, between 27 April and 5 May 2020, through a structured, anonymous, self-directed online questionnaire, using the Google Forms platform. Apart from socio-demographic questions such as gender, age, marital status, income, and living setting, questions were also asked about participants' concerns about the COVID-19 situation, the effectiveness of the MoH and NIPH promotion campaign, and how far they followed recommendations to stay at home, to keep a distance of at least twometres from other people when

outside their homes, to wash hands with running water and soap for at least 20 seconds. Participants were also asked who had the most influence in convincing them to follow the COVID-19 prevention recommendations. Responses were organised according to the Likert scale, within the following ranges: not at all to very little (1-3), mild (4-7), and mostly to complete (8-10). The study protocol was approved by the ethical commission of Heimerer College (No:0110/20). All participants provided informed consent electronically prior to enrolment. Frequencies (n) and percentages (%) were used to summarise categorical variables and mean \pm Standard Deviation (SD) was used to summarise continuous variables. The chi-square (χ^2) test and contingency tables were used to compare the frequency of categorical variables. Statistical Package for the Social Sciences software (SPSS version 21.0) was used for data analysis, and a p-value of <0.05 was considered statistically significant.

3. RESULTS

The mean age of the study sample was 22.56 ± 4.65 years. 61.4% of participants were female and 38.6% male. The majority of participants (n=445) 59.8% were living in urban areas, and 40% were living in a rural setting. About two-thirds (64.1%) of participants had medium incomes, 33.3% had high incomes, and 2.6% had low levels of income. 82.9% of participants were married, 15.2% were single, 0.3% were divorced, and 1.6% were widowed.

Public health experts had the greatest influence in persuading citizens to obey the recommendations, with 63.2% compliance (n=470), followed by family members with 18.0% (n=134), and health workers with 10.2% (n=76). 629 (84.7%) participants said they mostly/completely followed the recommendation to stay at home, and 532 (71.5%) said they maintained social distancing of at least two metres. Those in the 25-35 age group indicated that they were less likely to comply with the recommendation to stay at home, and considered the MoH and NIPH promotion campaigns to prevent the spread of COVID-19 to be less effective, compared to the 18-19 and 20-24 age groups (Table 1). There was no statistically significant difference among age groups about concerns regarding the COVID-19 situation ($p>0.05$). A relatively high number of people were not concerned about COVID-19 in general.

4. DISCUSSION

In this study, we investigated the sources of information that have had the greatest impact on Kosovans' compliance with preventive measures against COVID-19.

Our main findings are consistent with the findings of Fetzter *et al.*, a study in which 78% of respondents said they stayed at home, 68% said they kept two metre social distancing, and 89% washed their hands more frequently than usual [7]. In addition, Harper *et al.* indicated in their study that the only predictor of positive behavioural change during the pandemic was fear of COVID-19 [8].

Table 1. The young Kosovar behaviors toward obeying to the recommendations of MoH and NIPH.

-	Age Group	Frequency (%)	Not at all to very less n (%)	Mild n (%)	Mostly to complete n (%)	-
Have concerns about situation with COVID-19	18-19	225(30.2)	56 (24.9)	139 (61.8)	30 (13.3)	X ² =5.479, P=0.242
	20-24	328 (44.1)	80 (24.4)	186 (56.7)	62 (18.9)	
	25-35	191 (25.7)	57 (29.8)	101 (52.9)	33 (17.3)	
Promotion Campaign of MoH and NIPH regarding preventing COVID-19 spread was effective	18-19	225(30.2)	10 (4.4)	73 (32.4)	142 (63.1)	X ² =12.874, P=0.012
	20-24	328 (44.1)	21 (6.4)	93 (28.4)	214 (65.2)	
	25-35	191 (25.7)	23 (12.0)	65 (34.0)	103 (53.9)	
Followed recommendations to stay at home	18-19	225(30.2)	3 (1.3)	17 (7.6)	205 (91.1)	X ² =32.472, P<0.0001
	20-24	328 (44.1)	9 (2.7)	33 (10.1)	286 (87.2)	
	25-35	191 (25.7)	14 (7.3)	39 (20.4)	138 (72.8)	
Followed the recommendation to hold distance at least 2 meters away when out	18-19	225(30.2)	11 (4.9)	49 (21.8)	165 (73.3)	X ² =6.221, P=0.183
	20-24	328 (44.1)	17 (5.2)	68 (20.7)	243 (74.1)	
	25-35	191 (25.7)	16 (8.4)	51 (26.7)	124 (64.9)	
Follow the recommendation to wash hands with running water and soap at least 20 seconds	18-19	225(30.2)	5 (2.2)	33 (14.7)	187 (83.1)	X ² =7.209, P=0.125
	20-24	328 (44.1)	5 (1.5)	44 (13.4)	146 (76.4)	
	25-35	191 (25.7)	8 (4.2)	37 (19.4)	146 (76.4)	

MoH- Ministry of Health of Kosovo, NIPH- National Institute of Public Health of Kosovo.

A strong, credible central voice, providing reliable and timely information, is essential in public health emergencies, and in preventing a COVID-19 “infodemic” [11, 12].

CONCLUSION

Our study has shown that public health experts have had the greatest impact on Kosovo citizens, persuading them to follow recommendations designed to prevent the spread of COVID-19. The youth and young adults were found to be more committed to following the recommendations. Developing countries like Kosovo, which has a young population, can use these results to their advantage during the pandemic. Kosovo’s weak, fragile, and inefficient health and social systems, however, are key points of vulnerability in the COVID-19 pandemic. Prompt and consistent messages from health care professionals should be promoted above politically motivated messaging, which can have a damaging effect on the health of Kosovo’s population.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study protocol was approved by the ethical commission of Heimerer College, Kosovo (No:0110/20).

HUMAN AND ANIMAL RIGHTS

The procedures of this study complied fully with the provisions of the Helsinki Declaration regarding research on human participants.

CONSENT FOR PUBLICATION

All participants provided informed consent electronically prior to enrolment.

AVAILABILITY OF DATA AND MATERIALS

The data that support the findings of this study are available from the corresponding author [I.A.T] upon reasonable request.

FUNDING

None.

CONFLICT OF INTEREST

The authors declare there are no conflicts of interest financial or otherwise.

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REFERENCES

- [1] Abel T, McQueen D. Critical health literacy and the COVID-19 crisis. *Health Promot Int* 2020; 35(6): 1612-3. [http://dx.doi.org/10.1093/heapro/daaa040] [PMID: 32239213]
- [2] Paakkari L, Okan O. COVID-19: health literacy is an underestimated problem. *Lancet Public Health* 2020; 5(5): e249-50. [http://dx.doi.org/10.1016/S2468-2667(20)30086-4] [PMID: 32302535]
- [3] Government of Republic of Kosovo. Press Release on March 11. Prishtina Kosovo. 2020. Available from https://www.mit-ks.net/repository/docs/2020_03_12_122521_Vendimet_e_Mbledhjes_se_7-te_te_Qeverise_se_Republikes_se_Kosoves_2020.pdf
- [4] Ministry of Health of Kosovo. Press Release on April 15. Prishtina Kosovo. 2020. Available from <https://msh.rks-gov.net/sq/njoftimi-per-coronavirus/>
- [5] Kosovo Agency of Statistics. 2015.Population Structure <http://askdata.rks-gov.net/PXWeb/pxweb/en/askdata>
- [6] Kosovo Agency of Statistics. 2020.Labour Market Statistics <http://ask.rks-gov.net/en/kosovo-agency-of-statistics/social/labour-market>
- [7] Fetzer TR, Witte M, Hensel L, et al. Global Behaviors and Perceptions at the Onset of the COVID-19 Pandemic. *National Bureau of Economic Research* 2020 May 1;
- [8] Harper CA, Satchell LP, Fido D, Latzman RD. Functional fear predicts public health compliance in the COVID-19 pandemic. *Int J Ment Health Addict* 2020; 1-14. [http://dx.doi.org/10.1007/s11469-020-00281-5] [PMID: 32346359]
- [9] Nielsen RK, Fletcher R, Newman N, Brennen JS, Howard PN. Navigating the ‘infodemic’: How people in six countries access and

- rate news and information about coronavirus. Reuters Institute 2020 Apr 15;
- [10] Jurkowitz M, Mitchell A. Cable TV and COVID-19: How Americans Perceive the Outbreak and View Media Coverage Differ by Main News Source. Pew Research Center 2020.
- [11] Song P, Karako T. COVID-19: Real-time dissemination of scientific information to fight a public health emergency of international concern. *Biosci Trends* 2020; 14(1): 1-2. [http://dx.doi.org/10.5582/bst.2020.01056] [PMID: 32092748]
- [12] Zarocostas J. How to fight an infodemic. *Lancet* 2020; 395(10225): 676. [http://dx.doi.org/10.1016/S0140-6736(20)30461-X] [PMID: 32113495]

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