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# Knowledge, attitudes, and practices towards COVID-19 among residents of Bosnia and Herzegovina during the first stage of COVID-19 outbreak

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*Key words: COVID-19, KAP, Bosnia and Herzegovina, preventive measures, health care intervention*

*Parole chiave: COVID-19, Conoscenza atteggiamento comportamento, Bosnia Erzegovina, misure preventive, interventi sanitari*

**Abstract**

***Background.*** *In order to control the spread of COVID-19, prevent the crash of health care system and ensure well-being of its residents, Bosnia and Herzegovina has taken rigorous preventive epidemiological measures in the beginning of the pandemic. Currently the situation has dramatically changed. The aim of this study is to present knowledge, attitudes and practices at the beginning of the outbreak in Bosnia and Herzegovina when the spreading of COVID-19 was well controlled and provide useful information to policymakers at this challenging time.*

***Study design.*** *A cross-sectional study conducted by an online questionnaire-based survey.*

***Methods.*** *This study was conducted by an anonymous online questionnaire based on a Chinese study during the fifth week from the beginning of outbreak of COVID-19 in Bosnia and Herzegovina.*

***Results.*** *In total 1,201 respondents, predominantly female (943 or 78.5%), with a mean age 30.57±11.26, scored very high on the knowledge test with a mean score 9.13±1.90. Being male (β: -0.141, p<0.001) and aged >30 (β: -0.099, p=0.030) were associated with lower knowledge scores, while education level of bachelor's degree and above (β: 0.092, p=0.003), living in urban environment (β: 0.062, p=0.044) and being a student (β: 0.240, p<0.001) were associated with higher knowledge scores. Only 638 (53.1%) of the participants agreed that COVID-19 will be successfully controlled. The vast majority of the participants (1,092 or 90.9%) have not visited any crowded place and 1,043 (86.9%) wore masks when they were going out... Decreased exposure to crowded places [(OR=0.427, p<0.001);(OR=0.805, p<0.001)] and an increase of wearing a mask while leaving home [(OR=1.564, p=0.022);(OR=1.219, p<0.001)] were associated with female sex and higher knowledge scores, respectively. Age group 18-29 (OR=0.616, p=0.007) and living in rural environment (OR=0.600, p<0.025) were associated with not wearing a mask outside the home.*

***Conclusions.*** *Our study suggests that residents of Bosnia and Herzegovina have had good knowledge, a relatively optimistic attitudes and appropriate practices towards COVID-19 during the first period of outbreak.*

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Coronavirus disease 2019 (COVID-19) is an infectious disease caused by the newly discovered β-coronavirus named Sars-CoV2 (1) which was firstly detected in Wuhan, China in December 2019 (2). This highly infectious disease, spread primarily through respiratory droplets when an infected person coughs or sneezes (3), presents with fever, dry cough, fatigue, myalgia and dyspnea (4). The first symptoms of COVID-19 usually appear after the incubation period of 6.4 days even though the incubation period can be in a range from 2.1 days to 11.1 days (5). Severe cases of this disease can develop acute respiratory disease syndrome (ARDS), sepsis, shock, multiorgan failure or even death (6).

After the discovery of first COVID-19 case in Bosnia and Herzegovina on March 5th 2020 (7), rigorous epidemiological measures such as banning social gatherings, limiting population movement inside and outside of the country, curfew from 8 pm to 6 am, suspension of public transportation, mandatory 14-day quarantine for people entering the country and self isolation for people who have been in contact with positive cases and limiting working hours for various services, supermarkets, cafes etc., were undertaken to minimize the transmission and death toll of COVID-19 in the country (8, 9). Lockdown was successful in terms of controlling the spread of disease but it blocked the economy and affected mental wellbeing of the residents. Since the epidemiological situation seemed to be plausible, the lockdown was removed. As a consequence we have a continuous increase in the number of infected people, to a great part caused by irresponsible behavior of the citizens, particularly younger age groups. The battle versus COVID-19 is still continuing in Bosnia and Herzegovina. To assure the final success, people's adherence to control measures such as social distancing, wearing face masks and regular washing of hands are essential, which is largely affected by their knowledge, attitudes and practices (KAP) towards COVID-19. KAP studies among general public are helpful in providing necessary information needed to intervene and to change any misconceptions regarding COVID-19 and thus help with disease containment, development of preventive programs and strategies and improving poor knowledge among the general population (10, 11).

The aim of this paper is to present KAP during the fifth week from the beginning of the outbreak in Bosnia and Herzegovina when the spreading of COVID-19 was well controlled. The COVID-19 pandemic is still present and currently the situation is not showing signs of improvement. However, we hope that by improving adequate knowledge, attitudes and appropriate behaviors, the situation can be again controlled and people could get back to their previous lifestyle. The findings of this study are expected to provide useful information to policymakers at these challenging times.

## Methods

*Participants*

This cross-sectional study was conducted in the period between April 7th and 12th 2020, fifth week from the beginning of COVID-19 outbreak in Bosnia and Herzegovina, among the general population of Bosnia and Herzegovina. Exclusion criteria were (i) not being a citizen of Bosnia and Herzegovina, (ii) being younger than 18 years and (iii) being infected with COVID-19. Subjects completed an online questionnaire based on a Chinese study regarding KAP in Hubei Province (12). The questionnaire was tailored to local characteristics, translated to Bosnian/Croatian/Serbian language and distributed to subjects via online Facebook groups using the Google forms survey administration app. The respondents completed the questionnaire on an anonymous basis and were informed about the objectives of the study, their

voluntary participation, including online informed consent and details on how to fill up the questionnaire.

*Measures*

The questionnaire, illustrated in Table 1, contained two parts of questions, (i) demographic characteristics and (ii) questions regarding KAP towards COVID-19. Demographic characteristics of the respondents included gender, age, marital status, education level, occupation and place of current residence.

The second part of the questionnaire had 12 questions regarding knowledge, 2 questions regarding attitudes and 2 behavior statements regarding practices towards COVID-19.

Table 1 - *Knowledge, attitudes and practices questionnaire structure*

| | N | Questions | Answers |
|---|---|---|---|
| Knowledge test | 1. | The main COVID-19 symptoms are fever, fatigue, dry cough and muscle pain. | True, False, I don't know |
| | 2. | Compared to common cold, stuffy nose, runny nose and sneezing are less common among COVID-19 infected. | True, False, I don't know |
| | 3. | Currently, there is no effective cure for COVID-19, but early symptomatic and supportive treatment can help most of the infected to recover. | True, False, I don't know |
| | 4. | Not all COVID-19 infected will develop severe forms of the disease. Elderly, those with chronic conditions and obese persons are at higher risk for severe forms. | True, False, I don't know |
| | 5. | Being in contact or eating wild animals can lead to COVID-19 infection. | True, False, I don't know |
| | 6. | COVID-19 infected cannot spread the disease when fever is not present. | True, False, I don't know |
| | 7. | COVID-19 is spread via respiratory droplets from the infected individual. | True, False, I don't know |
| | 8. | Common people can prevent COVID-19 infection by wearing a mask. | True, False, I don't know |
| | 9. | Children, adolescents and young people don't need to take preventive measures towards COVID-19. | True, False, I don't know |
| | 10. | In order to prevent spreading of COVID-19, individuals should avoid visiting crowded places and places of social gatherings, taking public transportation etc. | True, False, I don't know |
| | 11. | Isolation and treatment of the infected individuals are effective measures to prevent further spreading of COVID-19. | True, False, I don't know |
| | 12. | Those who were in contact with COVID-19 infected, should be isolated immediately for the period of 14 days. | True, False, I don't know |
| Attitudes | 1. | Do you agree that COVID-19 will be finally contained? | Agree, Disagree, I don't know |
| | 2. | Do you think that Bosnia and Herzegovina will successfully manage COVID-19? | Yes, No |
| Practices | 1. | In recent days, have you visited crowded places or were in contact with a lot of people? | Yes, No |
| | 2. | In recent days, have you worn a mask while leaving your home? | Yes, No |

Total knowledge score ranged from 0 to 12 with a higher score indicating better knowledge of COVID-19 and was divided into three sections: (K1-K4) regarding clinical presentations, (K5-K7) regarding transmission routes and (K8-K12) regarding prevention and control of COVID-19. Participants had to answer questions on a true/false basis with an additional "I don't know" option. A correct answer was assigned 1 point and an incorrect/unknown answer was assigned 0 points. Questions regarding attitudes towards COVID-19 (A1-A2), were about the agreement on the final control of COVID-19 and the confidence in winning the battle against COVID-19. The 2 behaviors for practices towards COVID-19 (P1-P2) were: going or not to a crowded place and wearing or not a mask when going out in recent days.

*Statistical analysis*

Data were analyzed using Statistical Package for Social Sciences (SPSS) IBM Statistics v26.0 and presented as cross tabulations and simple frequencies of correct knowledge answers and various attitudes and practices towards COVID-19. SPSS was used to analyze participant's demographics, knowledge of causes and symptoms of COVID-19, attitudes and practice towards COVID-19. Knowledge scores, attitudes and practices of different persons according to demographic characteristics were compared with independent-samples t test, one-way analysis of variance (ANOVA), or Chi-square test as appropriate. Multivariable linear regression analysis was used to identify factors associated with knowledge and binary logistic regression analyses were used to identify factors associated with attitudes and practices. To quantify the associations between variables and KAP we used the unstandardized regression coefficients (β) and odds ratios (ORs) and their 95% confidence intervals (CIs). The statistical significance level was set at $p < 0.05$ (two-sided).

## Results

In total, 1,213 participants completed the survey questionnaire. After excluding 12 respondents because of exclusion criteria, the final sample consisted of 1,201 participants. Participants were mainly female (943 or 78.5%), held a bachelor's degree or above (680 or 56.6%) and were engaged in mental labor (452 or 37.5%). Mean age of participants was 30.57± 11.26 with a range 18-78 years. All demographic characteristics are displayed in Table 2.

*COVID-19 knowledge test results*

The correct answer rates on questions on the COVID-19 knowledge test were between 53.4% and 95.2% with a mean score 9.13±1.90. None of the participants scored the maximum points (12 points) on the questionnaire. The Cronbach's alpha coefficient of the knowledge test questionnaire was 0.612 in our sample, indicating relatively acceptable internal consistency. Knowledge test scores differed across gender, various age groups, marital status categories, levels of education and place of residence. ($p<0.05$), which is presented in Table 2. Multiple linear regression model showed that being male (β: -0.141, $p<0.001$) and aged >30 (β: -0.099, $p=0.030$) were associated with lower knowledge scores, while education level of bachelor's degree and above (β: 0.092, $p=0.003$), living in urban environment (β: 0.062, $p=0.044$) and being a student (β: 0.240, $p<0.001$) were associated with higher knowledge scores (Table 3).

*Attitudes towards COVID-19*

Only 638 (53.1%) of the participants agreed that COVID-19 will be successfully controlled, while 898 (74.7%) agreed that Bosnia and Herzegovina shall win the battle against COVID-19. Binary logistic regression model showed that being a female (OR=0.547, $p<0.001$) was significantly less associated with agreeing,

Table 2 - Demographic characteristics of the sample in comparison with KAP score

| Characteristics | | Number of participants n (%) | KAP score | t/F | p value |
|---|---|---|---|---|---|
| Gender | Male | 258 (21.5%) | 8.62±2.29 | 23.765 | <0.001 |
| | Female | 943 (78.5%) | 9.27±1.76 | | |
| Age | 18-29 | 746 (62.1%) | 9.24±1.85 | 3.672 | 0.026 |
| | 30-49 | 357 (29.7%) | 8.93±2.02 | | |
| | +50 | 98 (8.2%) | 8.98±1.84 | | |
| Marital status | Single | 737 (61.4%) | 9.30±1.76 | 7.696 | <0.001 |
| | Married | 418 (34.8%) | 8.86±2.11 | | |
| | Divorced | 46 (3.8%) | 8.83±1.86 | | |
| Education | High school or lower | 521 (43.4%) | 8.91±2.14 | 6.306 | <0.001 |
| | Bachelor's degree | 358 (29.8%) | 9.16±1.73 | | |
| | Master's degree | 259 (21.6%) | 9.35±1.65 | | |
| | PhD degree | 63 (5.2%) | 9.83±1.46 | | |
| Occupation | Unemployed | 169 (14.1%) | 8.46±2.22 | 20.087 | <0.001 |
| | Student | 526 (43.7%) | 9.51±1.52 | | |
| | Physical labor | 57 (4.7%) | 8.16±2.72 | | |
| | Mental labor | 449 (37.5%) | 9.06±1.93 | | |
| Place of residence | Rural environment | 172 (14.3%) | 8.78±2.08 | 6.747 | 0.010 |
| | Urban environment | 1029 (85.7%) | 9.19±1.86 | | |

Table 3 - Multiple linear regression model regarding association of knowledge scores and demographic characteristics

| Variable | Coefficient | Standard error | t | p-value |
|---|---|---|---|---|
| Sex (male vs female) | -0.141 | 0.134 | -4.576 | <0.001 |
| Age (18-29 vs +30 years) | -0.099 | 0.174 | -2.170 | 0.030 |
| Education (Bachelor's degree and above vs other) | 0.092 | 0.116 | 2.939 | 0.003 |
| Living environment (urban vs rural) | 0.062 | 0.168 | 2.015 | 0.044 |
| Employment (student vs other) | 0.240 | 0.169 | 5.195 | <0.001 |

while higher knowledge scores (OR=1.121, p<0.001) was associated with agreeing that Bosnia and Herzegovina shall conquer the COVID-19 battle. On the other side, being a student (OR=0.704, p=0.020) and having a bachelor's degree (OR=0.706, p=0.021) or above significantly reduced agreeing with the statement that COVID-19 will be controlled (Table 4).

*Practices towards COVID-19*

The vast majority of the participants (1,092 or 90.9%) have not visited any crowded place and wore masks (1,043 or 86.9%) when they were going out in recent days. There was still a small portion of the participants who had visited crowded places (109 or 9.1%) and had not worn masks when leaving home (157 or 13.1%). The rates of these two practices significantly differed across demographic characteristics (p<0.05). Table 5. Multiple logistic regression models showed that being a female (OR=0.427, p<0.001) and having a higher knowledge score (OR=0.805, p<0.001) were significantly associated with decreased exposure to crowded places. On

Table 4 - Binary logistic regression model in association with attitudes and practices of participants in Bosnia and Herzegovina with COVID-19

| Independent predictor | Odds ratio | 95% CI | p-value |
|---|---|---|---|
| **A1: Independent predictors for agreeing that Bosnia and Herzegovina will win the fight versus COVID-19** | | | |
| Female | 0.547 | 0.408-0.732 | <0.001 |
| Knowledge score | 1.121 | 1.052-1.195 | <0.001 |
| Married vs. not married | 1.274 | 0.999-1.624 | 0.051 |
| *The model was not statistically significant $X^2$=5.015, p=0.658; it explained 3.6% (Nagelkerke R2) and correctly classified 58.5% of cases.* | | | |
| **A2: Independent predictors for agreeing that COVID-19 will be controlled** | | | |
| Student vs. others | 0.704 | 0.524-0.947 | 0.020 |
| Bachelor degree and above vs. others | 0.706 | 0.524-0.950 | 0.021 |
| *The model was not statistically significant $X^2$=0.490, p=0.783; it explained 1.3% (Nagelkerke R2) and correctly classified 75.8% of cases.* | | | |
| **P1: Independent predictors in association with visiting crowded places** | | | |
| Student | 1.543 | 0.978-2.434 | 0.062 |
| Female | 0.427 | 0.271-0.672 | <0.001 |
| Knowledge score | 0.805 | 0.733-0.884 | <0.001 |
| *The model was not statistically significant $X^2$=7.406, p=0.388; it explained 9.8% (Nagelkerke R2) and correctly classified 91.0% of cases.* | | | |
| **P2: Independent predictors in association with wearing a mask outside home** | | | |
| Female | 1.564 | 1.065-2.295 | 0.022 |
| Knowledge score | 1.219 | 1.130-1.315 | <0.001 |
| 18-29 vs +30 years | 0.616 | 0.434-0.876 | 0.007 |
| Rural environment | 0.600 | 0.384-0.937 | 0.025 |
| *The model was not statistically significant $X^2$=6.859 p=0.552; it explained 7.3% (Nagelkerke R2) and correctly classified 86.5% of cases.* | | | |

the other hand, being a female (OR=1.564, p=0.022) and having a higher knowledge score (OR=1.219, p<0.001) were associated with wearing a mask while being age group 18-29 (OR=0.616, p=0.007) and living in rural environment (OR=0.600, p<0.025) were associated with not wearing a mask outside the home (Table 4).

## Discussion and conclusion

To the researchers' knowledge, this is the first study to investigate COVID-19 KAP and associated sociodemographic characteristics among the residents of Bosnia and Herzegovina.

The majority of the participants in our study were females, age group from 18 to 29 years, single, students and people who finished only high school or had a lower degree. Most of the respondents were knowledgeable about COVID-19 with an overall correct rate of 90% on knowledge test. Being male and age >30 were associated with lower knowledge scores while being a student, living in urban environment and having a bachelor's degree were associated with higher knowledge scores. Our participants held a much more optimistic attitude towards the COVID-19 pandemic with: 74.7% agreeing that Bosnia and Herzegovina is going to win the battle against COVID-19. Surprisingly, unlike the

Table 5 - Practices towards COVID-19 in association with various demographic characteristics

| Characteristics | | Practices | | | |
|---|---|---|---|---|---|
| | | P1: In recent days, have you gone to any crowded place? | | P2: In recent days, have you worn a mask when leaving home? | |
| | | Yes | No | Yes | No |
| Gender | Male | 44 (17.0%) | 214 (83.0%) | 209 (81.0%) | 49 (19.0%) |
| | Female | 67 (7.1%) | 876 (92.9%) *** | 835 (88.5%) ** | 108 (11.5%) |
| Age | 18-29 | 64 (8.5%) | 682 (91.5%) | 664 (89.0%) ** | 82 (11.0%) |
| | 30-49 | 39 (10.9%) | 318 (89.1%) | 306 (85.7%) | 51 (14.3%) |
| | +50 | 6 (6.1%) | 92 (93.9%) | 74 (75.5%) | 24 (24.5%) |
| Marital status | Single | 65 (4.7%) | 672 (95.3%) * | 656 (89.0%) ** | 81 (11.0%) |
| | Married | 59 (14.1%) | 359 (85.9%) | 344 (82.3%) | 74 (17.7%) |
| | Divorced | 6 (13.0%) | 40 (87.0%) | 38 (82.6%) | 8 (17.4%) |
| Education | High school and lower | 73 (14.0%) | 448 (86.0%) * | 437 (83.8%) | 84 (16.2%) |
| | Bachelor's degree | 30 (83.7%) | 328 (16.3%) | 316 (88.2%) | 42 (11.8%) |
| | Master's degree | 14 (5.4%) | 245 (94.6%) | 227 (87.6%) | 32 (12.4%) |
| | PhD degree | 6 (9.5%) | 57 (91.5%) | 57 (91.5%) | 6 (9.5%) |
| Occupation | Unemployed | 15 (88.7%) | 154 (11.3%) | 139 (82.2%) | 30 (17.8%) |
| | Student | 34 (6.5%) | 492 (93.5%) *** | 471 (90.0%) ** | 52 (10.0%) |
| | Physical labor | 16 (28.1%) | 41 (71.9%) | 42 (73.7%) | 15 (26.3%) |
| | Mental labor | 45 (9.9%) | 404 (90.1%) | 391 (86.5%) | 61 (13.5%) |
| Place of residence | Rural environment | 18 (10.4%) | 154 (89.6%) | 140 (81.4%) | 32 (18.6%) |
| | Urban environment | 93 (9.0%) | 936 (91.0%) | 899 (87.4%) * | 130 (12.6%) |

Pearson's chi-square test- $p<0.05$*, $p<0.01$**, $p<0.001$***

previous, only 53.1% believed that COVID-19 would finally be successfully put under control on the global level. Higher knowledge scores and being married was associated with agreeing that Bosnia and Herzegovina shall win the battle versus COVID-19 and being a student and having a bachelor's degree or above significantly reduced agreeing with that statement. The practices of Bosnia and Herzegovina residents were very cautious: the majority of participants in our study (90.9%) have avoided crowded places and wore masks when leaving the home (86.9%) in recent days during the rapid rise period of the COVID-19 outbreak.

Compared to the initial Chinese study, our study sample scored lower on the knowledge test but the overall score rate was still very high. This may be linked to governmental ads (8, 9) regarding the current rules and constant media pressure towards the population on various epidemiological measures. Even though the initial study explains a significant positive association between education level and COVID-19 knowledge score, our results explain that even lower education levels than in Chinese population (High school vs Associate's degree) were positively associated with COVID-19 knowledge scores. Attitudes towards COVID-19 also differed. Agreeing that the country shall win the battle against COVID-19 was also lower than in Chinese population. This may be linked to population knowledge regarding the situation with COVID-19 in more developed countries (13-15) and unpreparedness of their health care systems. The same things are the root for such a small percentage of agreeing that the COVID-19 will be finally controlled

globally. The practices towards COVID-19 were not that satisfying. Even though the government has decreed high fines (8, 9) for those who don't follow the epidemiological measures, still 9.1% of population visited crowded places and 13.1% did not wear masks outside their residences. The decrees were not enforced adequately. Previously mentioned is one of the crucial factors that is causing further spread of the virus (16, 17) and presents a potential risk for other individuals and the overall population.

Our study has several limitations. The first one that we would like to point is the cross sectional study type which makes it difficult to infer causality. The second limitation is that our study was only limited to the ones who had internet access and specific accounts on social networks. Also older individuals usually lack advanced web abilities which were needed in order to be the part of this study and in general these limitations could lead to lower response rate from the most vulnerable population. Thirdly, in order to obtain a high level of anonymity, the Google Form administration app didn't need an active account, thus, opening an option for multiple responses from one individual and purposely giving false information. Lastly, we would like to point the questionable level of internal consistency on the knowledge test, which points that the questionnaire should be further developed in order to obtain higher level of consistency, although some researches explain that the range of 0.6-0.7 is still acceptable. (18) Future studies should be done over a longer period of time where all measured parameters could be seen over the timeline as the outbreak is on the rise while specifically assessing more data from the most vulnerable groups. They should also include study tools which could respect high level of anonymity while preventing multiple responses from the respondents.

In conclusion, our study suggests that residents of Bosnia and Herzegovina have had good knowledge, relatively optimistic attitudes and appropriate practices towards COVID-19 during the first period of outbreak. Currently the situation in this country has drastically changed due to decreasing epidemiological restrictions, risky behavior of the population and increasingly huge number of infected persons. More studies on KAP are needed to assess what has changed and what does contribute now towards the rise of the COVID-19 outbreak.

**Acknowledgment:** None to declare.

## Riassunto

***Conoscenze, atteggiamenti e comportamenti verso COVID-19 tra gli abitanti della Bosnia/Erzegovina durante la fase iniziale della pandemia***

**Premessa.** Al fine di controllare la diffusione del COVID-19, di prevenire il collasso del proprio sistema assistenziale e di assicurare il benessere dei propri cittadini, la Bosnia/Erzegovina ha preso misure epidemiologico-preventive rigorose fin dall'inizio della pandemia. La situazione si è però rapidamente deteriorata. Lo scopo del presente studio è di presentare conoscenze, atteggiamenti e comportamenti all'inizio dell'epidemia in Bosnia/Erzegovina, quando la diffusione del virus era ancora ben controllata, e fornire utili informazioni ai decisori in un periodo così sfidante.

**Disegno dello studio**. Questo studio è stato effettuato utilizzando un questionario cinese anonimo fatto compilare online durante la quinta settimana successiva all'inizio dell'epidemia nel Paese.

**Risultati**. I 1.201 rispondenti, in prevalenza donne (943 o 78,5%), con età media di 30.57±11.26 anni, mostravano risultati elevati al trast di conoscenza, con un punteggio medio di 9,13±1,90. L'essere maschi (β: -0,141, p<0,001) ed avere un'età >30 anni (β: -0,099, p=0,030) erano associati con livelli di conoscenza inferiori, mentre il possesso di una formazione di media superiore od oltre (β: 0,092, p=0,003), il vivere in città (β: 0,062, p=0,044) e l'essere studenti (β: 0,240, p<0,001) erano associati ad un livello di conoscenza più elevato. Solo 638 dei partecipanti (il 53,1%) convenivano sul fatto che il COVID-19 potesse essere combattuto con successo. La gran maggioranza dei partecipanti (1.092 o 90,9%) non ha mai frequentato alcun luogo affollato, ed ha indossato (1.043 o 86,9%) la mascherina ogni volta

che usciva di casa. Una ridotta esposizione ai luoghi affollati [(OR=0,427, p<0,001); (OR=0.805, p<0.001)] ed una maggior frequenza di indosso della mascherina uscendo all'aperto [(OR=1,564, p=0,022); (OR=1,219, p<0,001)] sono risultati associati con il sesso femminile e con più elevati livelli di conoscenza. Il gruppo d'età 18-29 anni e coloro che vivevano in ambito rurale erano associati con il mancato uso della mascherina (rispettivamente OR=0,616, p=0,007 ed OR=0,600, p<0,025).

**Conclusioni**. Il nostro studio suggerisce che i residenti in Bosnia/Erzegovina posseggono una buona conoscenza della COVID-19, assumono un atteggiamento relativamente ottimistico ed applicano comportamenti appropriati nei suoi confronti, o almeno così facevano durante il periodo iniziale della pandemia.

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