ORIGINAL ARTICLE

Coping with life during COVID-19: Modification in Mode of existence among health care workers of tertiary care hospital of Central Uttar Pradesh

Sushil Kumar Shukla[1], Prashant Kumar Bajpai[2], Amit Kaushik[3], Sandip Kumar[4], Mudit Chauhan[5], Shailza Verma[6], Pooja Pathak[7]

[1,4]Department of Community Medicine, Uttar Pradesh University of Medical Sciences, Saifai, Etawah, Uttar Pradesh
[2]Department of Community Medicine, King George's Medical University,Lucknow, Uttar Pradesh
[3]Department of Community Medicine, Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow, Uttar Pradesh
[5,7]Department of Community Medicine, Uma Nath Singh Autonomous State Medical College, Jaunpur, Uttar Pradesh
[6]Department of Civil Engineering, Jabalpur Engineering College, Jabalpur, Madya Pradesh

CORRESPONDING AUTHOR
Dr. Pooja Pathak, Assistant Professor, Department of Community Medicine, Uma Nath Singh Autonomous State Medical College, Jaunpur, Uttar Pradesh 222001
Email: dr.poojapathak673@gmail.com

CITATION
Shukla SK, Bajpai PK, Kaushik A, Kumar S, Chauhan M, Verma S, Pathak P. Coping with life during COVID-19: Modification in Mode of existence among health care workers of tertiary care hospital of Central Uttar Pradesh. Indian J Comm Health. 2025;37(2):282-287. https://doi.org/10.47203/IJCH.2025.v37i02.017

ARTICLE CYCLE
Received: 20/09/2024; Accepted: 25/03/2025; Published: 30/04/2025

ABSTRACT

Introduction: As an emerging crisis, COVID-19 has impacted the lives of healthcare workers (HCWs) to a greater extent. As HCWs are carrying the heavy burden of treating patients, controlling the spread, and directly facing all the consequences, their lives have been jeopardized due to long shifts, fear of getting hands-on COVID-19 infection, and lack of time on one's own to keep their individuality. **Aim and objective:** This study aimed to assess the impact of changes in the mode of existence on healthcare workers employed at a tertiary care rural facility in Central Uttar Pradesh, India, during the COVID-19 pandemic. **Methodology:** A cross-sectional study was conducted within one month of duration. The study included all the medical professionals in a tertiary care hospital of mid-Uttar Pradesh. **Results:** Most HCWs indulged in physical activities 90(86.5%) compared to during the COVID-19 pandemic 71(68.3%). Of the participants, 50(48.1%) felt anxious during the COVID-19 pandemic, while before the pandemic, it was only among 20(19.2%0) HCWs. Before the COVID-19 outbreak, most healthcare workers (HCWs) did not utilize face masks, with just 3.8% adhering to this practice. However, in light of the pandemic, the percentage of HCWs wearing face masks significantly rose to 64.4%. Before the Covid-19 pandemic, only a few HCWs were using the method of personal hygiene, 16(15.4%), 04(3.8%), 26(25.0%), and 12(11.5%), frequent handwashing, use of alcohol-based hand rub, frequent cleaning of places, and all methods of personal hygiene, respectively. **Conclusion:** From decreasing physical activities, increasing addictive behaviors and anxiety, and acclimatization in the new work environment to a daily lifestyle, collectively, the COVID-19 pandemic has affected HCW's existence considerably.

KEYWORDS

COVID-19; Health Care Workers; Mode of Existence

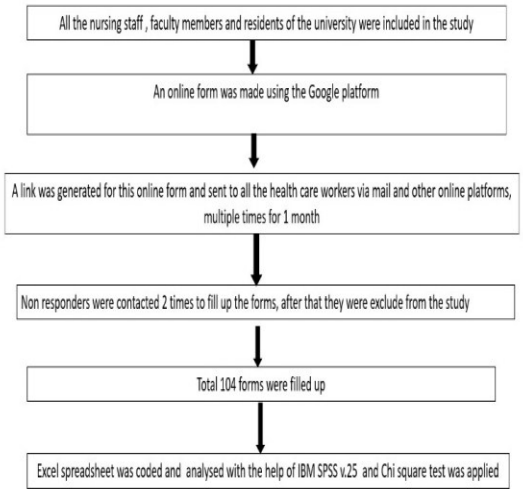
INTRODUCTION

On 11 March 2020, the World Health Organization (WHO) officially declared a worldwide pandemic of COVID-19. The COVID-19 pandemic has overburdened the healthcare system globally due to its high infectivity and unknown quintessence.(1) Being the 2nd most populous country, India was swamped with the number of cases.(2) Healthcare workers (HCWs) are the mainsail of the healthcare system in treating patients, controlling the spread of the virus, putting together new strategies, and confronting the aftermath. The lives of HCWs have

been jeopardized because of swarming cases, everlasting shifts, fear of entrapping the infection, and lack of self-assurance.(3) HCWs must continue to carry through the task of treating patients and personal engagements. The COVID-19 pandemic has affected HCWs in numerous ways, including physical, mental, daily routine, and the incorporation of addictive behaviors. HCWs are crowded with impactful emotions and fear, which may cause medical errors, a lack of tenderness, and a lower yield of work.(4) On the verge of the pandemic, HCWs have to acclimate to the new environment, which has many remolding in work areas with lots of stumbling blocks. Before the pandemic, HCWs were beforehand hassled with various factors like lack of human resources, patient dissatisfaction, and harmonizing personal and work balance. Dissertations have been published regarding the various effects on the life of the public, but limited studies have been done on HCWs and the ramifications of the COVID-19 pandemic on their work and state of affairs.(5,6,7) The current study will lead to the magnitude of the effect of the pandemic on HCWs to intermeddle further alternatives. This study aimed to study the effect of modifications in mode of existence during COVID-19 among healthcare workers with objectives to study the changes in physical activity, personal hygiene, dietary behavior, and changes in day-to-day activities of the healthcare workers during the pandemic.

Material & Methods

This research was conducted as a hospital-based cross-sectional study at a tertiary care facility in central Uttar Pradesh. The census method of sampling was used during the recruitment of the participants. This study included all the faculty members, all the postgraduate Junior residents, and nursing staff who consented to participate in the research and excluded those who did not respond after two reminders. For this study, due to the ongoing COVID-19 pandemic, a form was made on the online platform, and its link was shared with the participants. It included the following sections: section 1. Sociodemographic profile, section 2. Habits before COVID-19(March 2020) Section 3. Habits during COVID-19, sections 2 and 3 included questions related to physical activities, personal hygiene, sleeping patterns, food and addiction habits, and expenses. The online questionnaire was pre-tested and structured. Double-sided blinding was done to reduce the information bias, and reminders and follow-ups were done to reduce the non-response bias. A total of 104 responses were recorded in the online Google form, and the Google spreadsheet was downloaded and analyzed using IBM SPSS v.25. Data were coded and analyzed using IBM SPSS v.25. Two groups were formed to display the data, Before COVID-19 and after COVID-19, and a comparison was made between these groups. The chi-square test was applied to test the hypothesis, and the p-value <0.05 was considered significant at the 95% confidence interval. Data were displayed in the form of frequency and proportions. The institute's ethical committee gave Ethical approval before the study started (Ref no: 1868/UPUMS/Dean(M)/Ethical/2020-21, Ethical clearance No.136/2020-21).



Results

The study's main aim was to study the effect of modifications in the lifestyle of frontline healthcare workers after the COVID-19 pandemic. Most of the HCWs, who participated in the study were male 76(73.1%) and the rest were female 28(26.9%). Most of the HCWs 68(65.4%) had work experience of 1-5 years. Most of the HCWs who responded were from a paraclinical/nonclinical background, 84(80.4%), but only (19.2%) were from a Clinical background. Most of the respondents, 80(76.9%), were from the age of 20 to 40 years. Before the COVID-19 pandemic in India, most of the HCWs indulged in physical activities 90(86.5%) in comparison to during the COVID-19 pandemic 71(68.3%). Most of the people indulged in walking activity before COVID-19 65(62.5%), which reduced to nil outdoor physical activity 00(0.00%), and started doing home exercises during the COVID-19 pandemic 57(54.8%) than earlier 46(44.2%) and some of them stopped doing any exercises during this period 31(29.8%). Most of the HCWs reduced their frequency of physical activities during the pandemic, 19(18.3%), 33(31.7%), 19(18.3%) as earlier it was 16(15.3%), 46(44.2%), and 28(27.0%), 1-2 times per week, 3-4 times per week, and daily respectively (Table 1). There was a significant

change in the smoking behavior of the participants, as earlier, it was 15(14.4%), but during the pandemic, it was 17(16.3%). Overall alcohol consumption among HCWs before the pandemic was 36(34.6%), while during the pandemic, it was reduced to 33(31.7%). Participants who take alcohol 1-2 times a week decreased during the COVID-19 pandemic by 32(30.8%) as compared to before the pandemic, 34(32.7%) (Table 2). Most of the participants 50(48.1%) felt anxious during the COVID-19 pandemic, while before the pandemic it was only among 20(19.2%) HCWs. 37(35.6%) of participants felt sad during the pandemic while this number was less 19(18.3%) before the pandemic. HCWs who used to sleep <7 hours per night increased 54(51.9%) during the pandemic, in comparison with before the pandemic 44(42.3%). 28(26.9%) HCWs found difficulty in sleeping during the COVID-19 pandemic as earlier it was only 09(8.7%) of persons (Table 2). Most of the HCWs never used face masks before COVID-19, at 04 (3.8%), but the number increased to 100 (64.4%) during COVID-19. Before the Covid-19 pandemic, only a few HCWs were using the method of personal hygiene, 16(15.4%), 04(3.8%), 26(25.0%), and 21(11.5%), frequent handwashing, use of alcohol-based hand rub, frequent cleaning of places, and all methods of personal hygiene, respectively. During COVID-19, most of the HCWs started using various methods of personal hygiene,100(66.3%), 103(70.2%), 96(85.6%), and 96(73.1%), frequent hand washing, use of alcohol-based hand rub, frequent cleaning of places and all methods of personal hygiene, respectively [Table 3]. The pandemic added >2 hours per day to the screentime of HCWs, which increased significantly from 48 (46.2%) to 66 (63.4%) (Table 3).

Table 1 Distribution of participants according to changes in Physical activities (N=104)

Variables		Before COVID-19	During Covid-19	P-value*
Indulge in Physical Activities	1)Yes	90(86.5%)	71(68.3%)	0.33
	2) no	14(13.5%)	33(31.7%)	
Type of physical activities	1)yoga	25(24.0%)	20(19.2%)	0.00
	2) Swimming	7(6.7%)	0(0%)	0.82
	3) running	29(27.9%)	18(17.3%)	0.02
	4) walking	65(62.5%)	0(0%)	N/A
	5) home exercises	46(44.2%)	57(54.8%)	0.00
	6) Indoor Sports	29(27.9%)	15(14.4%)	0.01
	7)Outdoor sports	16(15.4%)	4(3.8%)	0.05
	8) None	9(8.7%)	31(29.8%)	0.07
Frequency of PA	1-2 times a week	16(15.3%)	19(18.3%)	0.008
	3-4 times a week	46(44.2%)	33(31.7%)	
	Daily	28(27.0%)	19(18.3%)	
	None	14 (13.5%)	33 (31.7%)	
Duration of PA	Up to 30 min per day	31 (29.8%)	38(36.5%)	<0.001
	30min- 1 Hour per day	41 (39.4%)	8(7.7%)	
	1-2 hours per day	15 (14.4%)	18(17.3%)	
	>2 hours per day	3 (2.9%)	7(6.7%)	
	None	14 (13.5%)	33 (31.7%)	

**Test of Significance= Chi-square test; p-value= <0.05 (significant); p value= <0.001(highly significant)*

Table 2 Distribution of participants according to addiction behaviour and sleeping pattern of the participants (N=104)

Addiction behaviour of the participants				
Variables		**Before COVID-19**	**During COVID-19**	**P-Value**
Smoking	yes	15(14.4%)	17(16.3%)	<0.001
	no	89(85.6%)	87(83.7%)	
Frequency of Smoking	<5 per day	7(6.7%)	10(9.6%)	0.88
	5-10 per day	5(4.8%)	4(3.9%)	
	> 10 per day	3(2.9%)	3(2.9%)	
	None	89 (85.6%)	87 (83.7%)	
Alcohol Consumption	yes	36(34.6%)	33(31.7%)	<0.001
	no	68(65.4%)	71(68.3%)	

Frequency of Alcohol Consumption	1-2 times a week/ occasionally	34(32.7%)	32(30.8%)	<0.001
	>4 times a week	3(2.9%)	3(2.9%)	
Sleeping pattern of the participants				
Variables		**Before COVID-19**	**During COVID-19**	**P-Value**
Felt anxious in the last 30 days	1)yes	20(19.2%)	50(48.1%)	<0.001
	2) no	84(80%)	54(51.9%)	
Felt sad in the last 30 days	1)yes	19(18.3%)	37(35.6%)	<0.001
	2) no	85(81.7%)	67(64.4%)	
Sleeping pattern	< 7hrs per night	44(42.3%)	54(51.9%)	0.14
	7-9 hrs per night	58(55.8%)	45(43.3%)	
	>9 hrs per night	2(1.9%)	5(4.8%)	
Difficulty in sleeping	yes	9(8.7%)	28(26.9%)	<0.001
	no	95(91.3%)	76(73.1%)	
Taking pills to fall asleep	yes	6(5.8%)	9(8.7%)	0.42
	no	98(94.2%)	95(91.3%)	
**Test of Significance= Chi-square test; p-value= <0.05 (significant); p value= <0.001(highly significant)*				

Table 3: Distribution of participants according to their day-to-day activities and methods of personal hygiene (N=104)

Day-to-day activities of the participants				
Activities	**Practices**	**Before Covid-19**	**During Covid-19**	**P- Value**
Screen time	< 2hours per day	56(53.8%)	38(36.5%)	0.01
	>2 hours per day	48(46.2%)	66(63.4%)	
Expenses	<10k	38(36.5%)	35(33.7%)	0.22
	10-20k	19(18.3%)	18(17.3%)	
	20-30k	9(8.7%)	13(12.5%)	
	30-40k	10(9.6%)	13(12.5%)	
	40-50k	11(10.6%)	9(8.7%)	
	>60k	17(16.3%)	16(15.4%)	
Dietary Habits	Healthy food	89(85.6%)	90(86.5%)	0.92
	Fast food	11(10.6%)	11(10.6%)	
	Healthy & Fast food	4(3.8%)	3(2.9%)	
Heard about Immunity Boosters	Yes	79(76%)	85(81.7%)	0.31
	No	25(24%)	19(18.3%)	
Immunity booster in daily diet	Yes	37(35.6%)	36(34.6%)	0.88
	no	67(64.4%)	68(65.4%)	
Methods of personal hygiene of the Participants				
Methods of personal hygiene		**Before Covid-19**	**During Covid-19**	**P-value**
Wearing Mask		04 (3.8%)	100 (64.4%)	<0.001
Frequent Handwashing		16 (15.4%)	103 (66.3%)	
Frequent Use of alcohol-based hand rub		04 (3.8%)	95 (70.2%)	
Frequent cleaning of places		26 (25.0%)	96 (85.6%)	
All of the above		12 (11.5%)	96 (73.1%)	
**Test of Significance= Chi-square test; p-value= <0.05 (significant); p value= <0.001(highly significant)*				

DISCUSSION

The study aimed to find out the lifestyle changes that happened in the health care workers (HCWs) during the COVID-19 pandemic. In this study, the number of persons indulging in physical activity decreased by 28%. In the same line, a study by M Yamada et al(8) showed that the total PA time was reduced by one order in older adults by the COVID-19 epidemic. Another study, from K Tanaka et al(9), showed that there was a distinct drop in activity among the Health care workers because of the Covid-19 pandemic. On the other hand, more participants in a study conducted by J Ingram et al(10)had either kept up their activity or were "a little more" active than had been expected. Addictive behaviors in the HCWs significantly increased in the COVID-19 period ($p < 0.001$). A study done by E Higginson et al(11) stated similar results, the COVID-19 pandemic has affected the addictive behaviours of the population and 18% of

the responders were drinking more in terms of volume and frequency. Comparable results were obtained by J U Kim et al(12), who discovered that out of the 182 participants, 43 (24%) disclosed a rise in their alcohol consumption. The average weekly consumption amounted to 825 units (SD: 78), and the mean increase in the AUDIT score was 576. K Tanaka et al.(9) stated, in opposition to the results of the present study, that no significant effect of alcohol consumption on the General Health Questionnaire (GHQ-12) score was observed. The feeling of sadness and anxiety among HCWs during the pandemic increased significantly ($p<0.001$). A study conducted by M. Masoumi et al.(13) yielded similar findings, indicating that mood deteriorated by approximately 40% during the pandemic compared to the pre-pandemic period. M Pierce et al. (14) conducted a study in the United Kingdom which reported that the average GHQ-12 symptom score for the general population during the COVID-19 pandemic was 12·6 (95% CI 12·5–12·8). Among this group, 27·3% (26·4–28·2) scored above the threshold score, which signifies a clinically significant level of mental distress. A similar set of outcomes was discovered in a study conducted by Samantha et al.(15) In particular, predictive models revealed a significant and positive correlation between perceived stress and the accumulation of stressors caused by COVID-19. In contrast, according to Magnúsdóttir et al.(16), the prevalence of symptoms associated with depression (PR ±83 [95% CI ±75–0·91]) and anxiety (±77 [0·63–0·94]) was notably reduced among the individuals. The use of personal hygienic methods was significantly increased during the pandemic. Informational support strengthened the effect of self-efficacy for infection prevention on viral spread-prevention behaviors, according to similar findings by H. J. Yoo et al.(17). The provision of infection prevention products reduced both the purchasing of products intended for infection prevention and the adoption of behaviors that prevent the transmission of viruses. An investigation conducted by Altaher et al.(18) yielded comparable findings, with over 80.0% of the participants affirming the following: (a) they are enthusiastic about regularly cleaning and disinfecting surfaces; (b) they ensure frequent hand washing and refrain from touching their face; and (c) their concern for personal hygiene has grown in prominence amidst the pandemic. Overall, due to the COVID-19 pandemic Health Care workers were affected significantly. HCWs had done so many lifestyle changes from decreasing physical activities due to long duty hours, coping with sleep disturbances, feeling sad and anxious, and indulging themselves in addictive behaviors to creating a balance between work and personal problems. Surely, the Covid-19 pandemic made the HCWs the knight without shining armour.

CONCLUSION

COVID-19 has changed the lives of healthcare workers, affecting their physical routines, mental health, emotional well-being, and habits. This research found a significant decrease in physical activity, increased feelings of anxiety and sadness, disturbances in sleep patterns, and changes in personal hygiene and addiction behaviours among HCWs during the pandemic. These changes show the increased pressure frontline workers face in adapting to uncertain and high-risk environments. Despite the challenges faced by health care workers during this pandemic, many HCWs showed resilience by modifying their lifestyle and adhering to improved personal safety measures. The finding leads to the critical need for institutional support systems that address the physical and mental needs of health care personnel.

RECOMMENDATION

Based on the findings of the study, some recommendations are proposed to prevent the adverse effect of pandemics on frontline HCWs. The institution must consider the psychological support services to the HCWs. HCWs should develop the work life balance policies to reduce the stress and adequate time for the family. The Institution must have training and awareness through regular sessions to manage stress, addiction, lifestyle disruptions and to improve physical wellness. There should also be a monitoring and feedback system to improve the well-being of the HCWs.

LIMITATION OF THE STUDY

Although the idea of the study was very good, there are some limitations to this study. We could not reach many participants due to long duty hours, hectic shifts, and the online mode of responses. Non-responsiveness was the main hurdle in the study.

RELEVANCE OF THE STUDY

This research holds significant importance as it revealed the impact of CVOID-19 pandemic on the various areas of the life of HCWs (a group overlooked at various occasions, despite their important role). The findings of the research revealed that areas of concerns should be taken care of by the Institution. Various policies should be made to tackle the various hurdles and strategies to cope up with the hazards of health in the future pandemics.

Authors Contribution

All authors have contributed equally.

Financial Support and Sponsorship

Nil

Conflict of Interest

There are no conflicts of interest.

Acknowledgement

The authors of this research extend their sincere gratitude to all the HCWs who participated in this study, despite their hectic duties and responsibilities during pandemic. We acknowledge the support provide by the administration and Ethical Committee of the Institution for their support guidance and clearance.

Declaration of Generative AI and AI Assisted Technologies in the Writing Process

The authors haven't used any generative AI/AI assisted technologies in the writing process.

References

1. Wozniak H, Benzakour L, Moullec G, Buetti N, Nguyen A, Corbaz S, Roos P, Vieux L, Suard JC, Weissbrodt R, Pugin J. Mental health outcomes of ICU and non-ICU healthcare workers during the COVID-19 outbreak: a cross-sectional study. Annals of Intensive Care. 2021;11(1):106.
2. Directorate of Medical & Health Services, Uttar Pradesh. Corona documents/guidelines:2021[Internet]. [cited 24 Apr 2025]. Available at http://dgmhup.gov.in/en/default
3. Stubbs JM, Achat HM, Schindeler S. Detrimental changes to the health and well-being of healthcare workers in an Australian COVID-19 hospital. BMC Health Services Research. 2021;21(1):1-2.
4. Tanaka K, Tahara M, Mashizume Y, Takahashi K. Effects of lifestyle changes on the mental health of healthcare workers with a different sense of coherence levels in the era of COVID-19 pandemic. International Journal of Environmental Research and Public Health. 2021;18(6):2801.
5. Greaney ML, Kunicki ZJ, Drohan MM, Ward-Ritacco CL, Riebe D, Cohen SA. Self-reported changes in physical activity, sedentary behavior, and screen time among informal caregivers during the COVID-19 pandemic. BMC Public Health. 2021;21(1):1-9.
6. Masoumi M, Shokraee K, Mohammadi S, Moradi S, Bagherzade M, Balasi J, Smiley A. Sleep Duration as the Main Indicator of Self-Rated Wellness and Health among Healthcare Workers Involved in the COVID-19 Pandemic. Int J Environ Res Public Health. 2021 Dec 23;19(1):136.
7. Kaufmann PG, Havens DS, Mensinger JL, Bradley PK, Brom HM, Copel LC, Costello A, D'Annunzio C, Durning JD, Maldonado L, McKenzie AB. The COVID-19 study of healthcare and support personnel (CHAMPS): Protocol for a longitudinal observational study. JMIR Research Protocols. 2021;10(10):e30757.
8. Yamada M, Kimura Y, Ishiyama D, Otobe Y, Suzuki M, Koyama S, Kikuchi T, Kusumi H, Arai H. Effect of the COVID-19 epidemic on physical activity in community-dwelling older adults in Japan: a cross-sectional online survey. The journal of nutrition, health & aging. 2020;24(9):948-50.
9. Tanaka K, Tahara M, Mashizume Y, Takahashi K. Effects of lifestyle changes on the mental health of healthcare workers with different sense of coherence levels in the era of COVID-19 pandemic. International Journal of Environmental Research and Public Health. 2021;18(6):2801.
10. Ingram J, Maciejewski G, Hand CJ. Changes in Diet, Sleep, and Physical Activity Are Associated With Differences in Negative Mood During COVID-19 Lockdown [published correction appears in Front Psychol. 2020 Oct 21;11:605118.
11. Grossman ER, Benjamin-Neelon SE, Sonnenschein S. Alcohol consumption during the COVID-19 pandemic: a cross-sectional survey of US adults. International journal of environmental research and public health. 2020;17(24):9189.
12. Kim JU, Majid A, Judge R, Crook P, Nathwani R, Selvapatt N, Lovendoski J, Manousou P, Thursz M, Dhar A, Lewis H. Effect of COVID-19 lockdown on alcohol consumption in patients with pre-existing alcohol use disorder. The Lancet Gastroenterology & Hepatology. 2020;5(10):886-7.
13. Masoumi M, Shokraee K, Mohammadi S, Moradi S, Bagherzade M, Balasi J, Smiley A. Sleep Duration as the Main Indicator of Self-Rated Wellness and Health among Healthcare Workers Involved in the COVID-19 Pandemic. International Journal of Environmental Research and Public Health. 2021;19(1):136.
14. Pierce M, Hope H, Ford T, Hatch S, Hotopf M, John A, Kontopantelis E, Webb R, Wessely S, McManus S, Abel KM. Mental health before and during the COVID-19 pandemic: a longitudinal probability sample survey of the UK population. The Lancet Psychiatry. 2020;7(10):883-92.
15. Brown SM, Doom JR, Lechuga-Peña S, Watamura SE, Koppels T. Stress and parenting during the global COVID-19 pandemic. Child abuse & neglect. 2020;110:104699.
16. Magnúsdóttir I, Lovik A, Unnarsdóttir AB, McCartney D, Ask H, Kõiv K, Christoffersen LAN, Johnson SU, Hauksdóttir A, Fawns-Ritchie C, Helenius D, González-Hijón J, Lu L, Ebrahimi OV, Hoffart A, Porteous DJ, Fang F, Jakobsdóttir J, Lehto K, Andreassen OA, Pedersen OBV, Aspelund T, Valdimarsdóttir UA; COVIDMENT Collaboration. Acute COVID-19 severity and mental health morbidity trajectories in patient populations of six nations: an observational study. Lancet Public Health. 2022;7(5):e406-e416.
17. Yoo HJ, Song E. Effects of Personal Hygiene Habits on Self-Efficacy for Preventing Infection, Infection-Preventing Hygiene Behaviors, and Product-Purchasing Behaviors. Sustainability. 2021;13(17):9483.
18. Altaher AM, Elottol AE, Jebril MA, Aliwaini SH. Assessment of awareness and hygiene practices regarding COVID-19 among adults in Gaza, Palestine. New Microbes and New Infections. 2021;41:100876.