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Implementation of COVID-19 Preventive Healthy Lifestyle (PHL) among Administration Staff and its Association with Health Consciousness and Occupational Factors: A Cross-Sectional Study in the Faculty of Medicine, University of Indonesia

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Abstract

Introduction: The COVID-19 pandemic has altered the human life pattern toward a new life order. To cope with the rapid spread of the outbreak, citizens should increase their health consciousness and adherence to health protocols. We therefore investigated the relationship between health consciousness and the ease of doing the COVID-19 Preventive Healthy Lifestyle (PHL) at the workplace, the relationship between the shift work system and its effects on the respondents' perception of the ease of doing the COVID-19 Preventive Healthy Lifestyle (PHL) at the workplace, and the ease of the COVID-19 handling policy implementation among the work pattern groups during the COVID-19 pandemic.
Methods: This behavioral-empirical study was conducted among administration staff of the faculty of medicine at the University of Indonesia. The primary data sources were obtained in October and November 2021. An explanation was carried out, followed by filling out the consent form to become a research subject, filling in personal data, and completing two questionnaires.
Results: The implementation of COVID-19 PHL was mainly good among the 259 respondents. The highest health consciousness score was personal responsibility, while the lowest was the psychological/inner state aspect. There was a positive correlation between the health consciousness dimensions and several items of the COVID-19 PHL ($r > 0.3$). Several items of PHL were significantly easier to complete among shift workers compared to non-shift workers. Based on the work pattern groups (Work From Home (WFH) < 20 hours, WFH 20–40 hours, and WFH > 40 hours, alternate to Work From Office (WFO)), there was no significant difference in the ease of implementation of COVID-19 PHL.
Conclusion: Our results suggest we should ensure well-maintained health consciousness to manage the pandemic effectively, particularly aspects of health information and seeking usage, and psychological/inner state.
Keywords: health consciousness, COVID-19 preventive healthy lifestyle (PHL) at the workplace, shift work, work patterns during the pandemic

Abstrak

Pendahuluan: *Pandemi COVID-19 telah mengubah pola hidup manusia menuju tatanan kehidupan baru. Untuk mengatasi cepatnya penyebaran wabah ini, masyarakat harus meningkatkan kesadaran kesehatan dan kepatuhan terhadap protokol kesehatan. Oleh karena itu, kami menyelidiki hubungan antara kesadaran kesehatan dengan kemudahan melakukan PHBS Pencegahan COVID-19 di tempat kerja, hubungan antara sistem bekerja shift dan pengaruhnya terhadap persepsi responden terhadap kemudahan melakukan PHBS Pencegahan COVID-19 di tempat kerja, dan kemudahan penerapan kebijakan penanganan COVID-19 di kalangan kelompok pola kerja pada masa pandemi COVID-19.*
Metode: *Studi empiris perilaku ini dilakukan pada staf administrasi fakultas kedokteran Universitas Indonesia. Sumber data primer diperoleh pada bulan Oktober dan November 2021. Penjelasan dilakukan, dilanjutkan dengan pengisian formulir persetujuan menjadi subjek penelitian, pengisian data diri, dan pengisian dua kuesioner.*
Hasil: *Penerapan PHBS Pencegahan COVID-19 di tempat kerja sebagian besar baik pada 259 responden. Skor kesadaran kesehatan yang tertinggi adalah tanggung jawab pribadi, sedangkan skor terendah adalah aspek psikologis/keadaan batin. Terdapat korelasi positif antara dimensi kesadaran kesehatan dengan beberapa item PHBS Pencegahan COVID-19 di Tempat Kerja ($r > 0,3$). Beberapa item PHBS Pencegahan COVID-19 di tempat kerja secara signifikan lebih mudah dilakukan pada pekerja shift dibandingkan pekerja non-shift. Berdasarkan kelompok pola kerja (Work From Home (WFH) < 20 jam, WFH 20 - 40 jam dan WFH > 40 jam, bergantian Work From Office (WFO)), tidak terdapat perbedaan yang signifikan terhadap kemudahan penerapan PHBS Pencegahan COVID-19 di tempat kerja.*
Kesimpulan: *Hasil penelitian kami menunjukkan bahwa kita harus memastikan kesadaran kesehatan yang terpelihara dengan baik untuk mengelola pandemi secara efektif, khususnya aspek pencarian dan penggunaan informasi kesehatan, serta kondisi psikologis/batin.*
Kata kunci: *kesadaran kesehatan, PHBS pencegahan COVID-19 di tempat kerja, bekerja shift, pola kerja pada masa pandemi*

Introduction

COVID-19 arrived in Indonesia in March 2020 with two initial cases. Since May 29, 2021, COVID-19 cases in Indonesia have spread to all provinces, with data on confirmed cases of COVID-19 reaching 1,809,926 cases with 50,262 deaths and 66% of cases in Java.[1]

During the pandemic, governments have implemented a range of measures to tackle it before vaccine discovery, generally focused on reducing transmission of the virus through: isolating those with diagnosed or suspected COVID-19; increasing 'social distancing' (e.g., working from home; restricting non-essential travel; and limiting groups gathering in public venues); and enhancing hygiene procedures (such as the wearing of face masks).[2] To manage the pandemic effectively, it is vital that we understand the health consciousness that may drive compliance and also those factors that could be modifiable, such as shift work and work patterns during the pandemic.

When the risk is higher, then a person feels that there is an intention, this intention tends to increase. In other words, the person needs to raise consciousness to care enough about the status quo and to consider new behaviors in managing risk.[3] The consciousness needed during the COVID-19 pandemic are health consciousness and COVID-19 Preventive Healthy Lifestyle at the workplace.

Health consciousness is a preventive effort against the occurrence of a disease after knowing information about one's own health. It is argued that people who have health consciousness think more about living a better and healthier life, exercising or doing enough physical activity, maintaining their health, and taking preventive action against exposure to infectious diseases, which ultimately builds psychological wellness.[4,5] Hong develops the dimensions of health consciousness into five, namely: [1] integration of health behavior; [2] attention to one's health or psychological/inner state; [3] health information seeking and usage; [4] personal health responsibility; and [5] health motivation.[5]

During a period of approximately eleven months, social restrictions, the implementation of health protocols, and the application of a COVID-19 Preventive Healthy Lifestyle (PHL) became the main strategies. It could even be said to be the only strategy to deal with the threat of transmission and COVID-19 spreading. This is because, as a new disease, there is no vaccine for COVID-19 until the end of 2020. Furthermore, in January 2021, the COVID-19 vaccination began to be provided in Indonesia.

COVID-19 Preventive Healthy Lifestyle (PHL) at the workplace was an effort to empower workers to understand, be willing, and be able to practice PHL and take an active role in creating a healthy workplace. The implementation of COVID-19 Preventive Healthy Lifestyle (PHL) at the workplace was urged during the new normal period.[6]

The government has focused on social distancing, self-isolation, and increased hygiene procedures to reduce the transmission of SARS-CoV-2 (COVID-19), as stated in HK.01.07/MENKES/328/2020.[4] With regard to confidence in institutions, trust and confidence in government can increase motivation to comply by assuring citizens that guidelines are necessary and effective. Compliance with these measures requires voluntary cooperation from the respondents and also from citizens.

During the pandemic, higher education institutions were currently conducting online and offline education systems. Ensuring everyone has sufficient health consciousness to underlie a good COVID-19 Preventive Healthy Lifestyle (PHL) at the workplace is needed. This study aims to determine whether or not there's a relationship between the health consciousness of respondents and adherence to the appeal for keeping on with the minister's guidelines in the faculty of medicine, University of Indonesia, to prevent the COVID-19 outbreak from spreading. During the COVID-19 pandemic, this study aims to analyze the relationship between the work shift system and its effects on the respondents' perception of the ease of doing the COVID-19 Preventive Healthy Lifestyle (PHL) at the workplace and to observe the ease of the COVID-19 handling policy implementation among the work pattern groups during the COVID-19 pandemic.

Methods

The research design used was the cross-sectional method. Total sampling was carried out on 259 administration staff members of the Faculty of Medicine, University of Indonesia who met the inclusion criteria. The research was conducted in October–November 2021.

Data collection was carried out by filling in informed consent, personal data, and the Health

Consciousness Scale (HCS) and COVID-19 Preventive Healthy Lifestyle at the workplace questionnaires. The drop-out criteria in this study were subjects who were not administrative staff and did not fill out the questionnaires shared until completion.

Ethical fulfillment was conducted through an explanation on the first page of the respondent's willingness to participate in the study. Approval to perform the studies was obtained by the ethical committees of the Faculty of Medicine, University of Indonesia (No. KET-996/UN2.F1/ETIK/PPM.00.02/2021). The research was self-funded using private sources.

The data collection was conducted online using questionnaires distributed via Google Forms. Participants completed data collection at their homes. The data analysis used univariate and bivariate techniques. The bivariate analysis used was correlation data analysis (p value <0.05). All of the data obtained from this study was tabulated and analyzed using the Statistical Program for Social Science 20 for Windows (SPSS).

The data were analyzed univariably by describing the frequency distribution and proportion of each variable. Bivariate analysis used Spearman correlation with a 95% confidence interval (CI=0.05) to determine the correlation between health consciousness and COVID-19 PHL at the workplace. A non-parametric analysis using the Mann-Whitney test was conducted to find out whether there was a significant difference between shift and non-shift workers related to COVID-19 Preventive Healthy Lifestyle at the workplace. A non-parametric analysis using the Kruskal-Wallis test was conducted to find out whether there were significant differences between workers with WFH and WFO regulations regarding COVID-19 Preventive Healthy Lifestyle (PHL) at the workplace.

The first questionnaire to measure the health consciousness level has been adapted by Pritha from the health consciousness scale (Hong). HCS Hong questionnaire with five (5) dimensions of health consciousness, namely integration of health behaviors, psychological/inner state, health information seeking and usage, personal responsibility, and health motivation. The HCS Hong questionnaire used has a Cronbach alpha reliability degree of 0.89, item reliability of 0.98, and person reliability of 0.91.

The other questionnaire was the COVID-19 Preventive Healthy Lifestyle at the Workplace, which was obtained from HK.01.07/MENKES/328/2020 concerning Guidelines for the Prevention and Control of COVID-19 in the Office and Industrial Workplace in Supporting Business Continuity for Pandemic Situations. A drafted questionnaire should always be ready to establish validity. Validity is the amount of systematic or built-in error in a questionnaire.[7]

The result can be seen from the correlation between form values. If r counts > r table, then it is reliable if r > 0.3. On the other hand, if counts exceed the table, the instrument is said to be unreliable. A reliability coefficient (alpha) of 0.70 or higher is considered acceptable reliability in SPSS.[7]

In an empirical approach and as a rule of thumb, if the score of the item-to-total correlations is greater than 0.50 and the inter-item correlation exceeds 0.30, the construct validity is satisfied. Items loaded above 0.40, which is the minimum recommended value in research, are considered for further analysis.[8] All items of the COVID-19 Preventive Healthy Lifestyle at the Workplace have good construction validation, with an item-total correlation between 0.468 and 0.756. Overall, the reliability of internal consistency is very good (α cronbach = 0.911). These instrument items are valid.

Health Consciousness

The Health Consciousness Scale (HCS) was measured on a seven-point Likert scale from "strongly disagree" to "strongly agree", including 1 = strongly disagree, 2 = disagree, 3 = slightly agree, 4 = neutral, 5 = slightly agree, 6 = agree, and 7 = strongly agree. This measuring instrument consists of 23 favorable statement items. Respondents choose one of the seven options provided.

COVID-19 Preventive Healthy Lifestyle (PHL) at the Workplace

The PHL Questionnaire was designed using 7 answer choices on a Likert scale, namely: 1 = Very Difficult; 2 = Very Difficult; 3 = Difficult; 4 = Neutral; 5 = Easy; 6 = Very Easy; and 7 = Very Easy. This measuring instrument consists of 10 favorite statement items. Respondents choose one of the seven options provided.

The shift work variable was discrete data obtained from the respondents' initial data with two answer choices, namely yes or no. Also obtained from the respondents' initial data, the work pattern during the

Table 1. The results of the questionnaire validity test for COVID-19 preventive healthy lifestyle at the workplace

Items of COVID-19 Preventive healthy lifestyle at the workplace	Corrected item-total correlation	Cronbach's Alpha if item deleted
1. Washing hands frequently by using soap and running water or hand sanitizer	0,756	0,905
2. Always wear face masks	0,727	0,906
3. Avoid touching the surfaces that are often touched/shared, if you have to use a tissue	0,669	0,909
4. Keep on physical distancing, avoiding crowds	0,764	0,903
5. Do not crowd and keep your distance in narrow spaces such as elevators, with their backs to each other	0,746	0,904
6. Keeping on the work area cleanliness by regularly disinfecting it	0,712	0,906
7. Avoid touching the eyes, nose and mouth before washing hands	0,720	0,906
8. Ensuring that the workplace has a good ventilation and airflow	0,699	0,907
9. If you are sick, work from home	0,724	0,906
10. Stop smoking, because smoking increases the risk of infection and will exacerbate the complications due to COVID-19	0,468	0,923

pandemic variable was categorical data with three answer choices: working from home with less than 20 hours per week in the office, working 20–40 hours per week in the office, or working 40 hours per week in the office. Once it was established that all the measures in this study had reliability and validity values following the cut-offs usually adopted in research, descriptive statistics and correlations among the major study variables were calculated.

Results

In this study, the total number of research subjects was 259 people. Participants were mostly female (n = 61.0%). Of these, 215 did not work shifts (only worked between 08:00 and 17:00), and 44 worked shifts within the last year. Most respondents (n = 45,17%) were aged 26 to 45 years. The major education degrees of the respondents included bachelor's degrees (n = 51,0%), master's degrees, and doctoral degrees (n = 9,3%). The majority of participants (n = 74%) reported being residents from outside Jakarta. The vast majority reported they were married (n = 74.1%). The majority of the sample had no primary doctor; they had visited at least once in the last 12 months (n = 87.3%). The majority of participants (61.8%) reported working from home (WFH) for less than 20 hours a week with the obligation to work in the office several days a week, while the others have fewer working hours in the office (WFO). It was described that the other respondents work from home (WFH), as many as 61 people, and there were also those who continue to work in the office with a duration of 40 working hours per week (38 people).

The highest PHL scores were in the use of masks, washing hands, working from home when you got sick, and keeping the work area clean, as described in Table 2 below. While the lowest PHL scores included avoiding touching the eyes, nose, and mouth; keeping on doing physical distancing; and confirming that the workplace was well ventilated.

The majority of participants (n = 95.4%) reported maintaining hand washing and always wearing face masks (n = 95.8%). Participants were mostly keeping their distance from the crowd habitually (n = 79.2%). Health protocol implementation has been attempted by respondents, but it has not been maximized as a whole.

Table 2. The profile of COVID-19 preventive healthy lifestyle at the workplace

	COVID-19 Preventive healthy lifestyle at the workplace (shorted)	Amount	Percentage
1	Always wear face masks	248	95,8
2	Washing hands frequently by using soap and running water or hand sanitizer	247	95,4
3	If you are sick, work from home	231	89,2
4	Keeping on the work area cleanliness by regularly disinfecting it	229	88,4
5	Do not crowd and keep your distance in narrow spaces such as elevators, with their backs to each other	221	85,3
6	Stop smoking, because smoking increases the risk of infection and will exacerbate the complications due to COVID-19	220	84,9
7	Ensuring that the workplace has a good ventilation and airflow	210	81,1
8	Keeping on physical distancing, avoiding crowds	205	79,2
9	Avoid touching the eyes, nose and mouth before washing hands	204	78,8
10	Avoid touching the surfaces that are often touched/shared, if you have to use a tissue	192	74,1
	Total	259	100

Implementing strict health protocols through intensive socialization and enforcement of health protocols is urged.

The highest health consciousness scores were for the personal responsibility aspect and health motivation, as described in Table 3 below. While the lowest of them were the psychological/inner state aspect and the health information and seeking usage.

We investigated whether HCS affected the association with COVID-19 PHL. The HCS dimensions were associated with some items of PHL (correlation coefficient > 0.3). Personal responsibility and health motivation were dimensions of health consciousness which were most positively correlated to PHL. The HCS dimensions that correlated to PHL items were: (1) washing hands frequently by using soap and running water or hand sanitizer; (2) keeping physical distance, avoiding crowds; (3) Do not crowd and keep your distance in narrow spaces such as elevators, with their backs to each other; (4) keeping the work area clean by regularly disinfecting it; (5) if you are sick, work from home, but the others didn't. Personal responsibility and

Table 3. The descriptive profile of HCS and the dimensions

Score	Mean	SD	Median	Minimum	Maximum
HCS	81,76	14,61	85,09	14,29	100,00
HM	85,16	17,69	85,71	14,29	100,00
PR	87,90	14,69	85,71	14,29	100,00
PIS	78,85	16,75	82,86	14,29	100,00
HISU	80,03	16,04	84,13	14,29	100,00
IHB	83,43	15,16	85,71	14,29	100,00

HCS=Health Consciousness Scale; HM=Health Motivation; PR=Personal Responsibility; HISU=Health Information Seeking and Usage; PI=Psychological/Inner State; IHB=Integration Health Behaviour

health motivation were aspects of health consciousness that were most positively correlated to a COVID-19-preventive healthy lifestyle.

Correlation coefficients do not communicate information about whether one variable moves in response to another. There is no attempt to establish one variable as dependent and the other as independent. Thus, relationships identified using correlation coefficients should be interpreted for what they are: associations, not causal relationships. A correlation coefficient of 0.2 is considered a negligible correlation, while a correlation coefficient of 0.3 is considered a low positive correlation. The results revealed that HCS and the dimension were significantly and positively related to the items of PHL, as stated in Table 4.

Although some items showed no correlation, a small number of non-compliance respondents felt uneasy doing the PHL. Administration staff had strong health consciousness that the implementation of strict health protocols greatly affects the prevention of COVID-19 transmission, but everything was returned to the attitude and belief of each individual for their willingness to follow the health protocols. Thus, this pandemic could not be overcome quickly if there was no consciousness in the entire society. This required intervention.

Compared with workers who engaged in no shift work ('none'), day shift workers and night shift workers reported significantly easier application of PHL ($p < 0.005$ Mann-Whitney test), namely: (1) avoid touching surfaces that are often touched or shared if you have to use a tissue; (2) avoid touching the eyes, nose, and mouth before washing hands; and (3) stop smoking because smoking increases the risk of infection and will exacerbate the complications due to COVID-19. The shift work and daily work groups did not correlate significantly to the other items of PHL. The work pattern groups during the pandemic (WFH < 20 hours, WFH 20–40 hours, and WFH > 40 hours, alternate to WFO) were found to be negatively associated with the ease of applying PHL ($p > 0.05$ Kruskall-Wallis test).

Discussion

There were a small number of participants who felt uneasy applying for the PHL. Enabling and reinforcing factors were needed to influence COVID-19 PHL, especially to always use face masks. Prevention of COVID-19 transmission requires the persistent enactment of a diverse range of behaviors to reduce the health risk.

Hand rub facilities at the Faculty of Medicine, University of Indonesia campus, were available on every floor of the building. These were sufficient enabling factors. Handwash was available in every toilet. The ease of implementing hand washing like PHL should then be easier because of these facilities as enabling factors.

Reinforcing factors strengthen preventive actions

Table 4. Scoring correlation between HCS scores and COVID-19 PHL dimension

The correlation between HCS scores and the dimensions and COVID-19 PHL scores		HCS Score	HM	PR	HISU	PI	IHB
1. Washing hands frequently by using soap and running water or hand sanitizer	r	0,230*	0,348**	0,354**	0,189*	0,185*	0,184*
4. Keep on physical distancing, avoiding crowds	r	0,336**	0,314**	0,331**	0,304**	0,310**	0,276*
5. Do not crowd and keep your distance in narrow spaces such as elevators, with their backs to each other	r	0,328**	0,324**	0,336**	0,265*	0,335**	0,280*
6. Keeping on the work area cleanliness by regularly disinfecting it	r	0,330**	0,289*	0,333**	0,317**	0,283*	0,280*
9. If you are sick, work from home	r	0,276*	0,340**	0,300**	0,185*	0,277*	0,245*

Notes :

- The test was conducted using Spearman correlation. Numbers marked with a double star (**) stated that there was a significant correlation and the strength of the relationship was definitely weak.
- The number marked with one star (*) indicates a significant correlation, but it's a very weak relationship strength.

to do better. Educational materials provided to education personnel should include the introduction of COVID-19 and its symptoms, how to wash hands properly and correctly, how to apply cough etiquette, physical distancing, and how to implement COVID-19 Preventive Healthy Lifestyle (PHL) as well.

Because shiftwork can present increased vulnerability to infectious diseases and the adaptive and innate immune systems display circadian rhythms, disruption of immune responsiveness is likely to enhance susceptibility to infection. Shiftworkers, who typically are sleep deprived, report a higher incidence and severity of respiratory infections, and these observations suggest they, in contrast to nonshiftworkers, may be more susceptible to COVID-19.[10]

Given the likelihood of increased COVID-19 in shift workers commensurate with known COVID-19 risk factors, it is recommended that shift work be treated as a modifiable risk factor for COVID-19. Reasonable workplace precautions for shift workers should include increased training and after-hours supervision on safety protocols, increased cleaning schedules, a reduced number of workers on one shift, the provision of personal protective equipment for shift workers, and targeting them for COVID-19 vaccination programs.[11] Hand hygiene was urged, in addition to physical distancing and the use of face masks and eye protection.[12]

There was no significant difference between the perceptions of one working group and the others in correlation to the COVID-19 PHL at the workplace. The negative impact of implementing WFH (work from home) was stated by Mustajab et al. The study result stated that the productivity of most employees who run WFH could decline due to a lack of technical support facilities such as computers, internet networks and some disturbances such as boredom from being in the same environment for a long period of time because of social gathering activities due to physical distancing rules. In addition, the married female employees who had children felt that working at home had an impact on their dual roles. Thus, the female employees become overloaded and stressed. In addition, social disruption of the employee's family and the work mindset still exist. Conventional technology has made employees lose their focus on having to work and spending family time.[13]

We have addressed respondents' health risk behavior by measuring COVID-19 PHL at the workplace. It is especially important to assess the factors leading to this behavior, including the reasons for a possible lower adherence to contact and physical distancing guidelines. "Health information seeking and usage (HISU)" and "psychological/inner state" were considered to be such factors.

Health information seeking and usage have been defined as the ways in which individuals obtain information, including information about their health, health promotion activities, risks to their health, and illness.[14] It assists individuals in finding health-related information in order to cope better with a health-threatening situation; this entails the type of information that is searched for, how much of it is obtained, the source it is obtained from, and when it is typically needed by the individual. This helps the individual cope better with a situation when they have more information about it.[15,16,17]

Psychological/inner state is health consciousness as a psychological or mental status, including health self-consciousness, health consciousness involvement, and health self-monitoring.[16] Healthcare managers in supervisory positions must acknowledge the challenge participants face and minimize the psychological risk inherent in dealing with psychological or inner states, and those in charge of resources must provide them with the opportunity to do the COVID-19 PHL at the workplace. Administration staff can be supported by reinforcing teams and providing regular contact to discuss decisions and check on wellbeing.[18]

Limitations

However, this study also had several limitations. First, we relied upon self-report measures, notably a single generic item of self-reported compliance with COVID-19 guidelines (HK.01.07/MENKES/328/2020). While the salience of the pandemic may enhance recall, the opportunities for non-compliance are many, and people may not remember specific instances of non-compliance (e.g., forgetting to sanitize hands at work). Further, if guidelines are seen as too weak, it is possible that low confidence in the government could have led participants to report low compliance even without changing behavior. Though, if they were exceeding guidelines, they should still report full compliance. Future studies are encouraged that look at more specific behaviors. Even though the study was anonymous and online, meaning participants could log self-reported

compliance without fear of researcher judgment, responses may be influenced by social desirability concerns. Less compliant individuals are also likely to be less knowledgeable about COVID-19 guidelines, particularly as they have been updated regularly, and so may be unable to accurately judge their own non-compliance (although this would not preclude the measure from capturing participants' beliefs about their own compliance). These factors are likely biased toward finding smaller associations. The measure of compliance may also contain a non-differential measurement error, which would again bias associations towards the null.

Another limitation of our study is the possibility of selection bias. We used data from a study set up explicitly to research COVID-19. Though we used weighting, the sample was not representative of the general population. It is likely that education personnel who participated and remained in the study had a higher interest in helping tackle the pandemic. This interest may manifest as a higher propensity to comply with guidelines. Another issue is that government guidelines became less stringent across the study period. Participants may have been more compliant than reported if they were unaware of current guidance. Moreover, confidence may be a "double-edged sword" if citizens feel that success is assured regardless of their own actions. Our study mainly used a cross-sectional approach, and no prospective analysis has been performed to date. Nonetheless, this study should be a trigger for a larger longitudinal exploration of predictors of compliance during the COVID-19 pandemic to date, with important implications for policymakers. In particular, the results highlight the central role of trust in determining adherence to guidelines, showing that the actions of policymakers are not just of political relevance during pandemics but are also of public health relevance as they could have had wider impacts on compliance.

Conclusion

All participants had a high or very high level of health consciousness, so the urgency to improve the dimensions of health consciousness should not have to be done immediately. Reasonable precautions in the workplace include increased training and after-hours supervision on health and safety protocols, increased room and surface cleaning schedules, sufficient room ventilation, stopping smoking, reducing the number of workers per shift, and providing personal protective equipment, especially face masks, for workers.

Our findings suggest that educational programs aiming to improve health behaviors among participants should include health consciousness and the willingness to promote health. Yet, there is a need for additional research to investigate these claims more rigorously. These results are particularly relevant for public health and policy strategies to mitigate the ongoing spread of COVID-19. Moreover, the COVID-19 pandemic provides a unique opportunity to enhance workers' responsibility for keeping society healthy and safe.

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Conflicts of Interest

None.

Author Contributions

All the authors were involved in designing the study protocol, developing the analytical approach, interpreting the data and critical review of the paper. All the authors helped with revising and improving the manuscript. All authors read and approve the final manuscript.

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