

Original Research Article

A prospective study to assess the social stigma, perceived stress and psychological distress among security guards during COVID-19 pandemic in All India Institute of Medical Sciences, New Delhi

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ABSTRACT

Background: People working in the health sector were being labelled, stereotyped, discriminated against, stigmatized, and treated indifferently in the early phase of coronavirus disease 2019 (COVID-19) pandemic. To assess social stigma, perceived stress, and psychological distress among hospital security guards during the COVID-19 pandemic.

Methods: A prospective study was conducted among security guards, working in a tertiary care health facility, during the early part of the COVID-19 pandemic. The data were collected using an online Google form. The stigma, perceived stress, and psychological distress were assessed using standardized tools.

Results: The mean age of 280 (males: 219, 78.2%) guards enrolled in the study was 37.13±9.1 years. The mean stigma, stress, and psychological distress scores among security guards were 28.76±11.9, 17.64±6.4, and 4.35±2.8, respectively. A significant correlation was found between perceived stigma and psychological distress ($r=0.197$, $p=0.009$) and perceived stress and psychological distress ($r=0.302$, $p=0.001$). The predictor of perceived stress among the security guards were gender, [$\beta=1.88$; (1.13, 2.63), $p=0.001$] and loss of job by the family member during pandemic [$\beta=2.8$ (4.56, 1.03), $p=0.001$], similarly the predictors of psychological distress were gender and COVID positive status [$\beta=0.06$ (0.10, 0.33), $p=0.001$].

Conclusions: The majority of the security guards had moderate to high perceived social stigma, and moderate level stress during the COVID-19 Pandemic and a few being psychologically distressed requiring referral to experts.

Keywords: COVID-19 pandemic, Stigma, Perceived stress, Psychological distress, Security guards

INTRODUCTION

Human civilization has been passing through the serious crossroads of this millennium while its survival is being challenged by the evolution of a new coronavirus severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), trespassing numerous countries in the entire world like wildfire.¹ The economic slowdown caused by COVID-19 all across the globe has resulted in the loss of jobs on one hand and increased working time, fewer wages, and

overqualified employees and part-time jobs on the other hand.²

The COVID-19 is likely to occur more among the higher-risk groups, such as health care providers and frontline workers, working in various positions in places having public interaction, such as hospitals, banks, police force, armed forces, etc. The security guards, like health care workers posted in various patient care areas, have a high risk of contracting the disease, and stress and distress.³

COVID infection places the health care workers at higher risk of infection.⁴ Similar to health care workers security guards because of their close proximity with health care providers and patients, might be equally vulnerable to acquire the infection. During the COVID-19 pandemic, several studies have reported about health care workers being labelled, stereotyped, discriminated and treated indifferently.⁵ The hospital staff during the COVID-19 pandemic continues to face many troubles in their day-to-day life. The international and national media reported about the physician and other hospital staff facing continuous social ostracism. In some reported instances, the hospital staff were asked to vacate the rented homes and were even attacked.⁶ The security guards, because of their proximity with patients in the hospital might be treated similarly. Security guards are the contractual workers posted outside wards, intensive care units (ICU), COVID units, residential areas, and office block areas for traffic control, round the clock in shift duties. They have long-standing duty hours, where they come in contact with a large number of people, without being aware of the COVID status of the general public.

Some studies reported a high level of perceived stress associated with COVID-19 among hospital staff and recommended addressing the psychological issues related to pandemics.^{6,7} A study conducted in India showed that dialysis staff perceived a significant level of stigma associated with their job in the hospital and many of them experienced significant stress.⁸

During informal interaction, a significant number of security guards were found to be infected with Coronavirus infection, which could be making their other colleague security guards feel insecure during their duty hours causing stress and distress among them. Further, the increased risk of corona infection transmission through direct contact and droplet route had forced them to avoid group interaction with colleagues, thereby affecting their socialization with their colleagues. This group of workers in the hospital is relatively neglected. The probability of having stress and distress in security guards may be due to their unmet emotional and social needs. Therefore, we planned the present study to explore the self-perceived stigmatization, stress, and psychological distress among security guards.

METHODS

In a cross-sectional study, 300 security guards posted in indoor and outdoor patient areas of the AIIMS were approached, out of which 280 were enrolled using the convenient sampling technique. The security guards using smart mobile phones and WhatsApp, and willing to participate and understand Hindi or English language were enrolled. The institutional Ethics Committee had approved the study. Strict anonymity and confidentiality of responses were assured to the participants through the information sheet and online informed consent was obtained from the subjects. The security guards filled an

online Google form, the link of which was shared through WhatsApp.

A sample size of 245 was calculated at a 95% confidence interval with an alpha error of 5% based on a published article, in which 20% of participants reported COVID-19 related stigma and perceived stress.⁹

Study tools and data collection

The online questionnaire was developed using Microsoft Google form in Hindi. The tool was back-translated in English to ensure the appropriateness of the tool. The link of the questionnaire was shared with the security guards through WhatsApp. Participants were encouraged to share the form with workmates. By clicking the link, an introductory page displayed the study rationale, aim, noting participation was voluntary. After obtaining the consent, participants were directed to complete the four sections of the questionnaire; the demographic profile, a standardized stigma scale (13 items, $\alpha=0.94$), and Perceived Stress Scale (PSS-10, $\alpha=0.75$), both were rated on 5-point Likert scale and a self-reporting questionnaire, a forced-choice type, "Yes or No" (WHO, 20 items). The scores on the stigma, and perceived stress scales, and SRQ-20 ranged from 36-52, 0-40, and 0-20 respectively. The perceived stigma scores were categorized as high (36-52), moderate (18-35), and low perceived stigma (0-17). Similarly, the perceived stress scores were categorized as high (27-40), moderate (14-26), and low (0-13). The scores of psychological distress were categorized as present (≥ 10) and absent (≤ 9).¹¹ All the tools were pretested and validated by experts before use.

Statistical analysis

Data from the Google form were coded and managed using Microsoft Excel 2019 spreadsheet. The data was analysed by using STATA 14. The frequency, percentage, mean, standard deviation (SD), median and interquartile range was computed. Pearson Coefficient Correlation was calculated for studying the correlation between social stigma, perceived stress, and psychological distress. As a part of inferential statistics, the Independent t-test, Kruskal Wallis, and Mann Whitney tests were used to find the association between social stigma, perceived stress and psychological distress and selected variables with the set level of significance, $p < 0.05$. Multiple logistic regression analysis was done to determine the strength of predictors of perceived stress and psychological distress among security guards during the COVID-19 pandemic.

RESULTS

Sample characteristics

A total of 280 security guards were enrolled in the study. Most of the security guards 136 (48.6%) were posted in ward block followed by posting in the campus 88 (31.4%). The majority of the security guards 219 (78.2%) were male and other demographic variables are discussed in Table 1.

Table 1: Demographic Data of Security guards (n=280).

S. no.	Demographic variable	Frequency (%) or Mean± SD
1	Area of posting	Ward
		136 (48.6)
		OPD
		56 (20)
		Campus
		88 (31.4)
2	Gender	Male
		219 (78.2)
		Female
		61 (21.7)
3	Age (years)	37.13 ±9.1*
4	Marital status	Married
		247 (88.2)
		Single
		27 (9.6)
		Divorced
		6 (2.1)
5	No. of dependents	<4
		184 (65.7)
		5-8
		92 (32.8)
		>8
		4 (1.42)
6	Duration of working as Guard in AIIMS (years)	6 (1-23) **
7	Monthly family income (Rs.)	22902.1±7993.5
8	Permanent residence	Delhi
		48 (17.14)
		Outside Delhi
		232 (82.8)
9	Residence on the basis of ownership	Own
		76 (27.1)
		Rented/ Relatives
		204(72.9)
10	Staying with family	Yes
		175 (62.5)
		No
		105 (37.5)
11	Any family member lost his job during COVID-19	Yes
		64 (22.8)
		No
		216 (77.1)
12	Tested positive for coronavirus infection	Yes
		25 (8.9)
		No
		255 (91.1)
13	Ever been quarantined/isolated	Yes
		56 (20)
		No
		224 (80)

*Mean±SD, **Median (IQR)

Table 2: Distribution of level of perceived stigma, perceived stress and psychological distress among security guards during COVID-19 pandemic (n=280).

Variable	Frequency
Perceived stigma Mean score: 28.76±11.9	High
	100 (35.7)
	Moderate
	107 (38.2)
	Low
	73 (26.07)
Perceived stress Mean score: 17.64± 6.4	High
	15 (5.35)
	Moderate
	202 (72.14)
	Low
	63 (22.5)
Psychological distress Mean score: 4.35±2.8	Present
	13 (4.6%)
	Absent
	267 (95.36)

COVID-19 related stigma, perceived stress, and psychological distress

The majority of security guards (73.9%) had moderate to severe perceived stigma with a mean stigma score of 28.76±11.9. Similarly, the majority of security guards (77.5%) had moderate to severe perceived stress with a mean stress score of 17.64±6.4. A significant number of security guards 13 (4.64%) had psychological distress due to COVID-19 as reported by them. (Table 2). A

statistically significant positive correlation ($r=0.197$, $p=0.009$) was found between perceived stigma and psychological distress among the security guards.

However, no significant correlation was found between COVID-19 related perceived stigma and perceived stress ($p<0.05$) (Table 3). The perceived stress among the security guard was found to be significantly associated with the loss of job of any of the family members during the COVID-19 pandemic ($p=0.0002$). The psychological

distress was found to be significantly associated with gender ($p=0.001$), number of dependents on a security guard ($p=0.017$), loss of job in the family ($p=0.0003$), and with corona positive status ($p=0.0156$) (Table 4). The factors associated with perceived stress among the security guards were gender, [$\beta=1.88$ (1.13, 2.63), $p=0.001$] and loss of job by the family member during pandemic [$\beta=-2.8$ (-4.56, -1.03), $p=0.001$], similarly the predictors of psychological distress were the gender and the COVID positive status [$\beta=-0.06$ (-0.10, -0.33), $p=0.001$] (Table 5).

Table 3: Correlation between perceived stigma, perceived stress and psychological distress among security guards during CVOID-19 pandemic (n=280).

Variable	Perceived stigma	Perceived stress	Psychological distress
Perceived stigma		$r=0.064$ $p=0.0287$	$r=0.19$ $p=0.0009^*$
Perceived stress			$r=0.302$ $p=0.001^*$

Table 4: Association between social stigma, perceived stress and psychological distress and selected variables among security guards during COVID-19 pandemic (n=280).

Variables	Perceived stigma		Perceived stress		Psychological distress	
	Mean Score \pm SD	p-value	Mean Score \pm SD	p-value	Median (IQR)	p-value
Gender						
Male	28.2 \pm 12.1	0.150	16.9 \pm 6.7	0.0003*	3 (2-5)	0.001*
Female	30.7 \pm 10.8		20.2 \pm 4.4		6 (4-7)	
No. of dependants						
<4	32 (17-38)	0.997	19 (13-22)	0.211	4 (2-7)	0.017*
4-8	31 (16-39)		19 (16.5-22)		4 (2-5)	
>8	31.5 (18.5-39)		15 (9.5-18.5)		2 (1.5-2)	
From Delhi/outside						
Delhi	29.6 \pm 12.0	0.581	18.25 \pm 5.3	0.476	5 (4-7)	0.106
Outside	28.58 \pm 11.9		17.5 \pm 6.6		4 (2-6)	
Residence						
Own	28.97 \pm 10.66	0.855	18.25 \pm 5.5	0.338	5 (2-6.5)	0.119
Rent/relative	28.68 \pm 12.37		17.4 \pm 6.7		4 (2-6)	
Staying with family						
Yes	29.66 \pm 11.5	0.102	18.05 \pm 5.8	0.174	4 (3-6)	0.056
No	27.25 \pm 12.3		16.97 \pm 5.8		4 (2-5)	
Job lost by a family member						
Yes	28.4 \pm 11.5	0.805	20 (18-22.5)	0.0002*	5 (3.5-7)	0.0003*
No	28.7 \pm 12.0		18 (13-22)		4 (2-6)	
Tested corona positive						
Yes	30.8 \pm 14.8	0.371	19 (17-22)	0.283	6 (3-8)	0.0156*
No	28.5 \pm 11.6		19 (14-22)		4 (2-6)	

Independent t-test, Kruskal Wallis, Mann Whitney Test, *statistically significant ($p < 0.05$).

Table 5: Multiple regression for stigma, perceived stress, psychological distress and selected variables, showing coefficient (β) with confidence interval (CI). (n=280).

Perceived stress				
Gender				
Male				
Female	3.36 (1.57, 5.57)	0.001*	3.15 (1.31, 4.99)	0.001*
Job lost by family member				
Yes				
No	-3.33 (-509, -1.57)	0.002*	-2.8 (-4.56, -1.03)	0.001*
Psychological distress				
Variable	Univariate Regression (95% CI)		Adjusted Regression	
P value				
Age	-0.069 (-0.10, -0.03)		-0.06 (-0.10, -0.33)	
	0.001*		0.001*	

Continued.

Perceived stress				
Gender				
Male	2.02 (1.25,2.79)	0.001*	1.88 (1.13,2.63)	0.001*
Female				
No. of dependents in family				
<4				
5-8				
>8	-2.83 (-5.6, -0.05)	0.046*		
Job lost by family member				
Yes				
No	-1.22 (-2.00, -0.45)	0.002*		
Tested positive				
Yes				
No	-1.37 (-2.52, -0.22)	0.020*	-1.2 (-2.32, -0.16)	0.001*

*Statistically significant ($p < 0.05$)

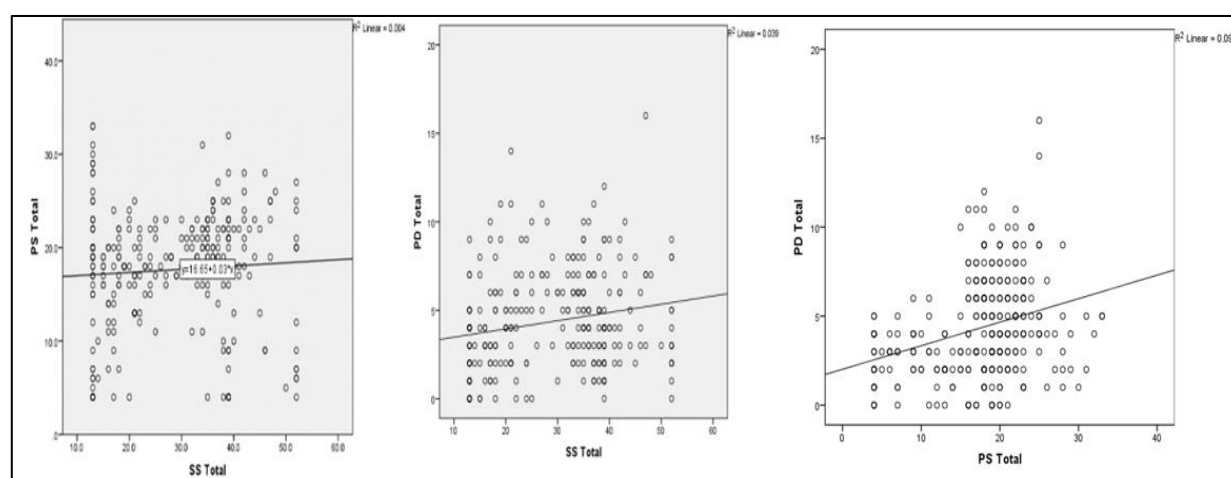


Figure 1: Correlation between stigma, perceived stress and psychological distress among security guards during COVID-19 pandemic.

DISCUSSION

The major findings of the present study reveal that the majority of security guards 207 (73.9%) had moderate to high perceived stigma and 217 (77.5%) had moderate to high perceived stress and 13 (4.64%) were psychologically distressed during the corona pandemic. The identified predictors for perceived stress among the security guards were gender, and loss of job by the family member during pandemic, and predictors for psychological distress were the gender and the COVID positive status.

COVID-19 is a new evolving disease affecting a large number of people globally.¹² Due to its evolving nature, the general public and health care workers harbored several myths and beliefs related to the disease, which manifested with varied presentations from mild to moderate to severe type.¹³ Due to its highly infectious nature, the directives were issued by the international and national health agencies for maintaining social distancing and the use of masks.¹⁴ In the present study, the majority of security guards had considerable stigma related to the COVID-19 pandemic. These findings are consistent with the findings

of Uvais et al done on dialysis staff in which the staff had reportedly high perceived stigma.⁸ However, there were no studies available, exploring the stigma, stress, and psychological distress among security guards. So, the findings of the present study have been compared with the studies done on healthcare professionals.

In the present study, a significant number of security guards (36%) had moderate to high perceived stress related to the COVID-19 pandemic. Probably the stress-causing factors like being quarantined/isolated due to exposure or positive test, fear of being forced to vacate the rented accommodation, job loss of a family member, staying away from their family, loss of income due to the contractual nature of their job led to the development of stress. Additionally, high infectivity of the disease, fear of getting stigmatized, and circulation of misinformation on social media might have exaggerated their apprehension leading to the development of stress amongst them.¹⁵ The present findings are in tune with findings of other studies indicating higher levels of stress among staff working in the dialysis unit.^{8,16}

Similar to past pandemics, many people the world over have been psychologically affected during the corona pandemic.¹⁷ In the present study, from a considerable number of stressed security guards 217, 13 (4.64%) had reported having psychological distress. Stress responses in security guards are the normal reactions to COVID-19 pandemic perturbations, which are adopted in nature, while distress is the result of prolonged severe stress among individuals affecting their mental wellbeing.¹⁸ In the present study around 5% of the security guards were distressed for which they required professional help. Some studies reported that the general population being psychologically distressed during the COVID-19 pandemic. Approximately 35% of respondents had the experience of psychological distress with female respondents showing significantly higher psychological distress as compared to male counterparts.¹⁹⁻²¹ However, in the present study males were found to be more distressed. The present findings are in contrast to the findings of another study in which gender didn't influence the psychological distress among the general public.²²

The outbreak of a novel coronavirus (COVID-19) pandemic has reportedly affected not only the physical and mental wellbeing of healthcare workers but also of the general public.²³ Higher perceived stress associated with more emotional distress among the general population and health care workers has been reported.^{23,24} Similar to this finding, the researcher has also reported a significant correlation between perceived stress and psychological distress and stigma and psychological distress.

Limitations of the study

A socially relevant researchable problem during the pandemic was studied with statistically calculated sample size. The standardized tools having good reliability and validity were used for assessing the perceived stigma, perceived stress, and psychological distress among the security guards. The present study has some limitations in terms of a single-centred study, convenience sampling technique used for enrolling the subjects. Coping skills of the security guards were not studied, which could have some influence on their perceived stress level. In addition, socially desirable responses might have been given by the participants.

CONCLUSION

The majority of the security guards had moderate to high social stigma along with moderate perceived stress and a few were reported of being psychologically distressed requiring professional help during the corona pandemic.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- History_in_a_Crisis_Lessons_for_Covid-19.pdf. Available at: [http://www.acsep.org.au/content/Document/Coronavirus%20\(COVID-19\)/History_in_a_Crisis_Lessons_for_Covid-19.pdf](http://www.acsep.org.au/content/Document/Coronavirus%20(COVID-19)/History_in_a_Crisis_Lessons_for_Covid-19.pdf). Accessed on 27 November 2020.
- Kaur M, Goyal P, Goyal M. Individual, interpersonal and economic challenges of underemployment in the wake of COVID-19. *Work*. 2020;67(1):21-8.
- Wang H, Liu Y, Hu K, Zhang M, Du M, Huang H, et al. Healthcare workers' stress when caring for COVID-19 patients: An altruistic perspective. *Nurs Ethics*. 2020;27(7):1490-500.
- Baker TL, Greiner JV, Maxwell-Schmidt E, Lamothe PH, Vesonder M. Guidelines for Frontline Health Care Staff Safety for COVID-19. *J Prim Care Community Health*. 2020;11:20-4.
- Stigma during the COVID-19 pandemic - The Lancet Infectious Diseases. Available at: [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(20\)30498-9/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(20)30498-9/fulltext). Accessed on 4 February 2021.
- Bagcchi S. Stigma during the COVID-19 pandemic. *Lancet Infect Dis*. 2020;20(7):782.
- Uvais NA, Shihabudheen P, Hafi NAB. Perceived Stress and Stigma Among Doctors Working in COVID-19-Designated Hospitals in India. *Prim Care Companion CNS Disord*. 2020;22(4):30-3.
- Uvais NA, Aziz F, Hafeeq B. COVID-19-related stigma and perceived stress among dialysis staff. *J Nephrol*. 2020;33(6):1121-2.
- Pedrozo-Pupo JC, Pedrozo-Cortés MJ, Campo-Arias A. Perceived stress associated with COVID-19 epidemic in Colombia: an online survey. *Cad Saude Publica*. 2020;36(5):e00090520.
- Frontiers. Self-Perceived Stress During the Quarantine of COVID-19 Pandemic in Paraguay: An Exploratory Survey. *Psychiatry*. Available at: <https://www.frontiersin.org/articles/10.3389/fpsyt.2020.558691/full>. Accessed on 5 March 2021.
- SRQ Self-reporting questionnaire. InfoNTD. Available at: <https://www.infontd.org/toolkits/nmd-toolkit/srq-self-reporting-questionnaire>. Accessed on 19 February 2021.
- Coronavirus disease (COVID-19). Available at: <https://www.who.int/news-room/q-a-detail/coronavirus-disease-covid-19>. Accessed on 27 November 2020.
- 12 Myths About Coronavirus, From the World Health Organization. *Health.com*. Available at: <https://www.health.com/condition/infectious-diseases/coronavirus-myths>. Accessed on 9 February 2021.
- A guide to WHO's guidance on COVID-19. Available at: <https://www.who.int/news-room/feature-stories/detail/a-guide-to-who-s-guidance>. Accessed on 4 February 2021.
- COVID-19 and Social Stigma: Fear, Harassment, and Discrimination [Internet]. *Countercurrents*. 2020. Available at: <https://countercurrents.org/2020/>

- 06/covid-19-and-social-stigma-fear-harassment-and-discrimination/. Accessed on 9 February 2020.
16. Chekole YA, Yimer Minaye S, Mekonnen Abate S, Mekuriaw B. Perceived Stress and Its Associated Factors during COVID-19 among Healthcare Providers in Ethiopia: A Cross-Sectional Study. *Advances in Public Health*. Hindawi. 2020;2020:e5036861.
17. Psychological Distress and COVID19_McMahon and Minney_FINAL.pdf. Available at: https://groups.psychology.org.au/Assets/Files/Psychological%20Distress%20and%20COVID19_McMahon%20and%20Minney_FINAL.pdf. Accessed on 9 February 2021.
18. Read "Recognition and Alleviation of Distress in Laboratory Animals" at NAP.edu. Available at: <https://www.nap.edu/read/11931/chapter/4>. Accessed on 9 February 2021.
19. Qiu J, Shen B, Zhao M, Wang Z, Xie B, Xu Y. A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *Gen Psychiatr*. 2020;33(2):e100213.
20. Yang X, Xiong Z, Li Z, Li X, Xiang W, Yuan Y, et al. Perceived psychological stress and associated factors in the early stages of the coronavirus disease 2019 (COVID-19) epidemic: Evidence from the general Chinese population. *PLOS ONE*. 2020;15(12):e0243605.
21. Mazza C, Ricci E, Biondi S, Colasanti M, Ferracuti S, Napoli C, et al. A Nationwide Survey of Psychological Distress among Italian People during the COVID-19 Pandemic: Immediate Psychological Responses and Associated Factors. *Int J Environ Res Public Health*. 2020;02:17(9).
22. H W, Q X, Z X, Z L, W X, Y Y, et al. The psychological distress and coping styles in the early stages of the 2019 coronavirus disease (COVID-19) epidemic in the general mainland Chinese population: A web-based survey. *PLoS One*. 2020;15.
23. Yan L, Gan Y, Ding X, Wu J, Duan H. The relationship between perceived stress and emotional distress during the COVID-19 outbreak: Effects of boredom proneness and coping style. *J Anxiety Disord*. 2020;77:102328.
24. Man MA, Toma C, Motoc NS, Necrelescu OL, Bondor CI, Chis AF, et al. Disease Perception and Coping with Emotional Distress During COVID-19 Pandemic: A Survey Among Medical Staff. *Int J Environ Res Public Health*. 2020;17(13):4899.

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