

Research Article

“Knowledge and Apprehension of Patient Regarding Dental Treatment amid Covid-19 Outbreak – A Quick Online Cross-Sectional Questionnaire Survey”

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Abstract: Background: The coronavirus disease 2019 (COVID-19) pandemic with its origin in Wuhan, China, has become one of the most deadly pandemics in the history of mankind. It has posed major public health challenge not just for China but almost every country around the globe. The World Health Organization (WHO) announced the unprecedented pandemic of the novel coronavirus as a major public health emergency of international concern with attempts at preparing the corona vaccine by top biotechnology and pharma companies of the world. **Objective:** This study aimed to assess the level of knowledge and apprehension towards dental treatment during the COVID-19 pandemic among Indian subjects. Dentists too participated in the study. **Method:** The study population consisted of Indian subjects with a minimum qualification of high school. An online questionnaire was sent to a sample of 650 subjects both male and female in March 2020. The questionnaire was comprised of a series of questions about subjects' demographic characteristics; their awareness of the COVID-19 and their perception towards dental treatment. **Results:** This study included a total of 650 aged 20-70 years (mean 36.9 years with a standard deviation of 10.5 years) participants. A total of 446 subjects responded to questionnaire. A total of 29.1% subjects had completed their masters, 52.2% had received knowledge of corona virus from news, and 30.5% had read about COVID-19 from official websites. A total of 71.3% participants showed reluctance in undertaking dental treatment during pandemic. The majority of participants (60.5%) believed that dental setups could be a potential source of infection of COVID-19 and thus avoided visiting dentists. Most of them (69.7%) adhered to medicines rather than getting dental treatment done. Most of them (96.6%) agreed not to hide any symptoms of COVID-19 from the dentist. 54.7% agreed to undergo a screening test for the virus. 93.7% participants refrained from cosmetic and esthetic procedures during pandemic and 54.7% believed that these unprecedented times would impact cost of dental procedures. **Conclusions:** Subjects were aware of COVID-19 symptoms, mode of transmission of the virus, screening test and in-home precautions/measures to be taken. However, subjects had limited comprehension of the extra precautionary measures that protect them during dental procedures. Most of them refrained from visiting dentists and avoided esthetic procedures.

Keywords: COVID-19, pandemic, corona virus.

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INTRODUCTION

The coronavirus disease (COVID-19) is a newly found viral infection that originated in Wuhan, China and caused the outbreak of pandemic in the rest of the world. It has been witnessed that the rapidly

spreading corona virus is more contagious than severe acute respiratory syndrome coronavirus and Middle East respiratory syndrome coronavirus [1].

The exact mode of transmission has been speculated by researchers worldwide. A suggested

mode of transfer or route of human-to-human transmission is via airborne droplets, touching or coming into contact with an infected person or a contaminated surface. Moreover, other routes such as blood or saliva have yet to be explored but are possible because of the documented transmission of blood-borne infectious diseases such as HIV/AIDS, hepatitis C virus, and hepatitis B virus through blood or saliva. These routes of transmission increase the concern about a similar route of transmission for COVID-19 in the dental setting [2].

There are practical guidelines recommended for dentists and dental staff by the Centres for Disease Control and Prevention (CDC), the American Dental Association (ADA), and the World Health Organization to control the spread of COVID-19 [3].

Like with other contagious infections, these recommendations include personal protective equipment, hand washing, detailed patient evaluation, rubber dam isolation, anti-retraction handpiece, mouth rinsing before dental procedures, and disinfection of the clinic. In addition, some guidelines and reports have provided useful information about the signs and symptoms of the disease, ways of transmission, and referral mechanisms to increase dentists' knowledge and prevention practices, so they could contribute, at a population level, in disease control and prevention [3-8].

MATERIALS & METHOD

The study is a survey based study. A total of 446 subjects between the age group of 20-70 years who were willing to participate and comply by the inclusion criteria were included in the survey.

Inclusion criteria

1. Subjects between age group 20-70 years.
2. Subjects must be Indian.
3. All the subjects who have access to internet through mobile phones or computers to undertake the online survey
4. Subjects with minimum qualification of high school.
5. Subjects who volunteered themselves and were not urged/compelled to take the questionnaire.
6. Dentists (Graduates and Post-graduates) too were included.

Exclusion criteria

1. Foreign nationals/NRIs
2. Subjects without any basic qualification
3. Subjects with no access to electronic media.
4. Subjects participating in any alternative dental survey related to COVID-19 pandemic simultaneously.

METHODOLOGY

This was an online survey conducted using Google Forms. A total of 446 participants participated in the study. The participants were sent the link of the survey via a newly generated email id signed up only for the survey purpose.

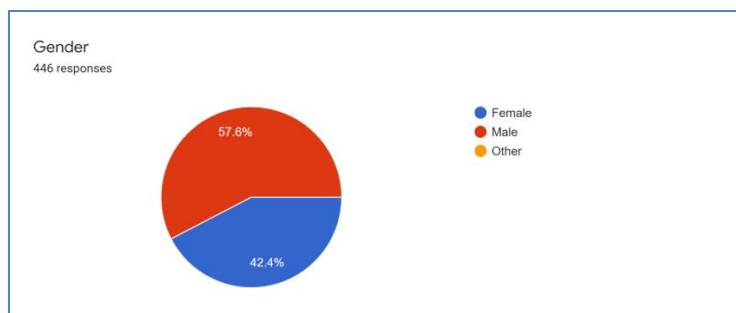
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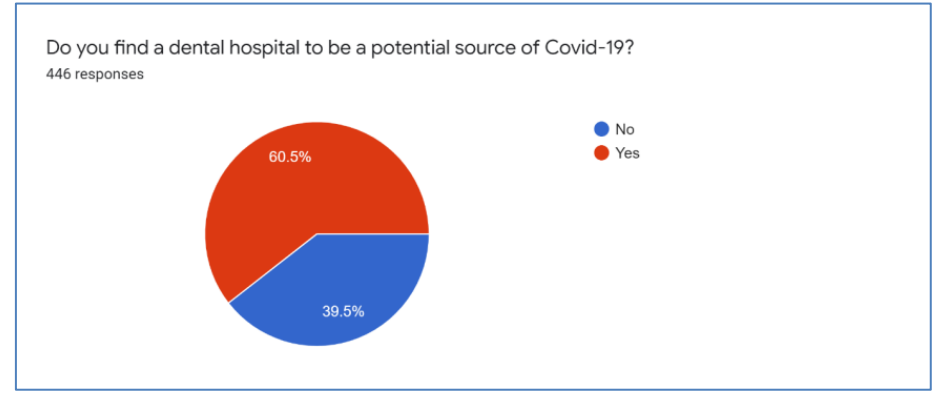
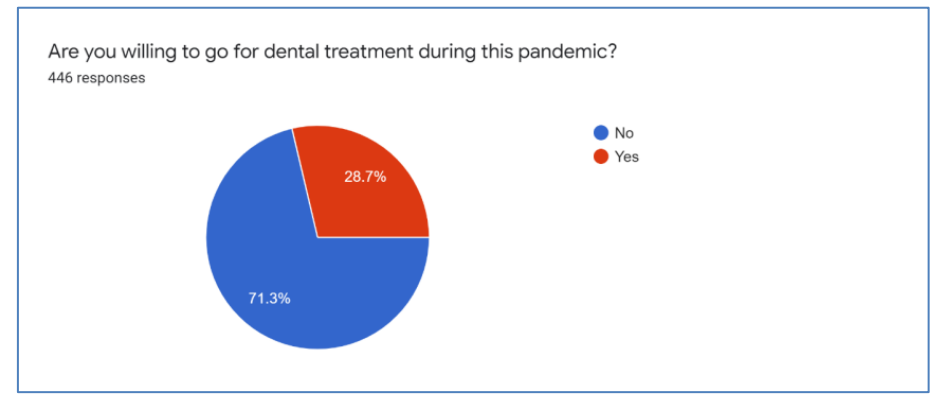
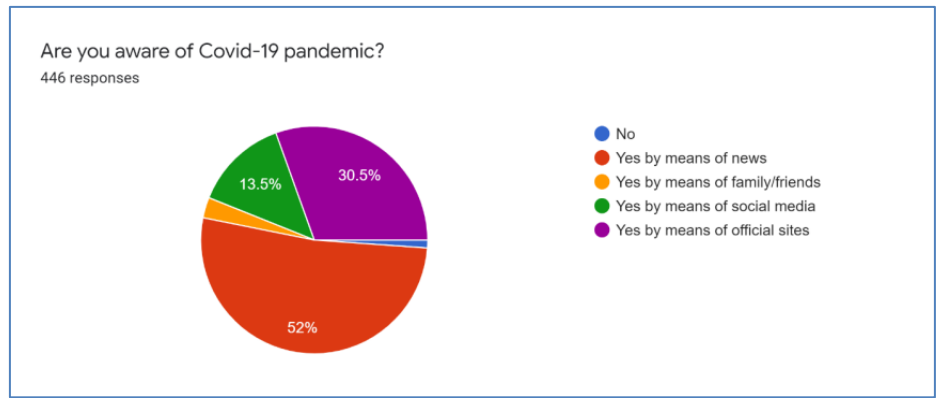
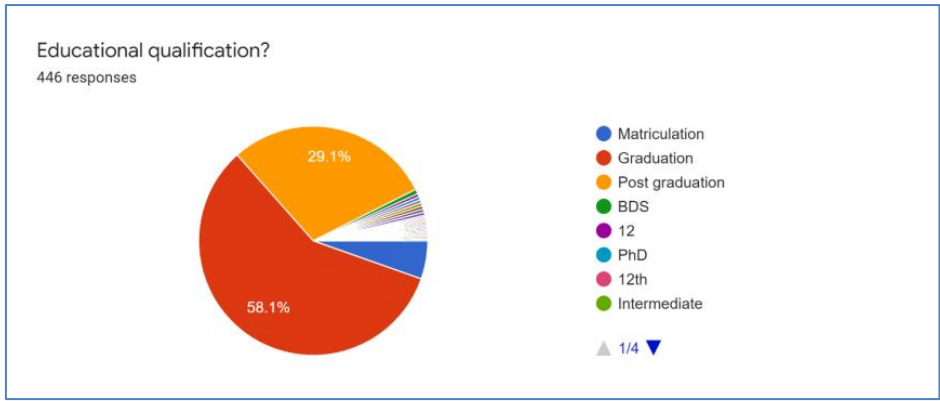
Questionnaire

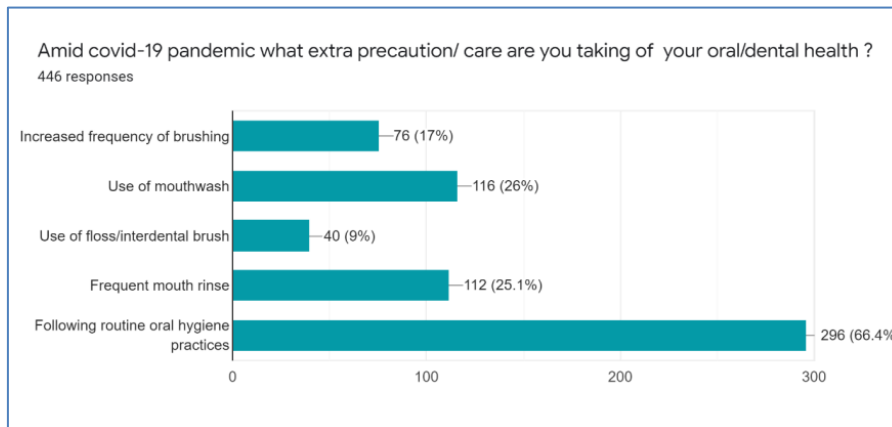
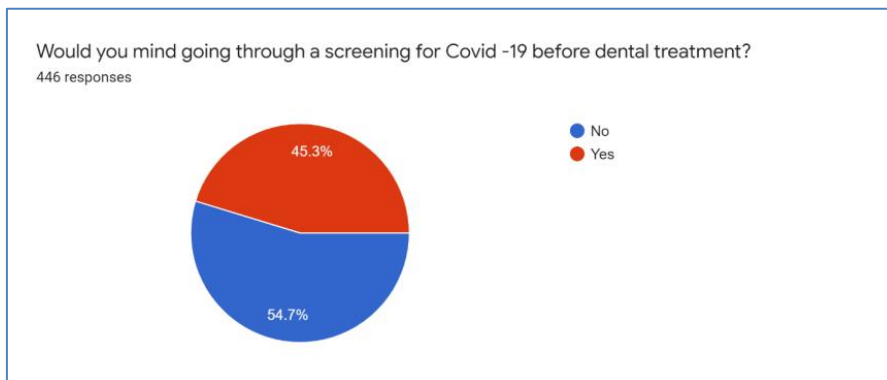
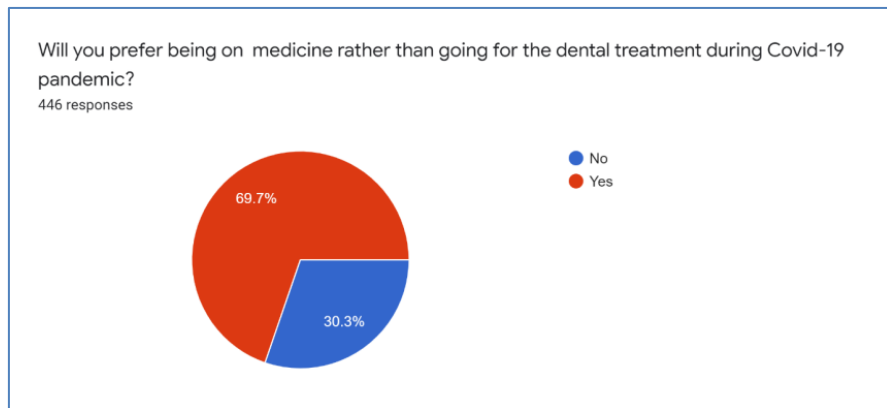
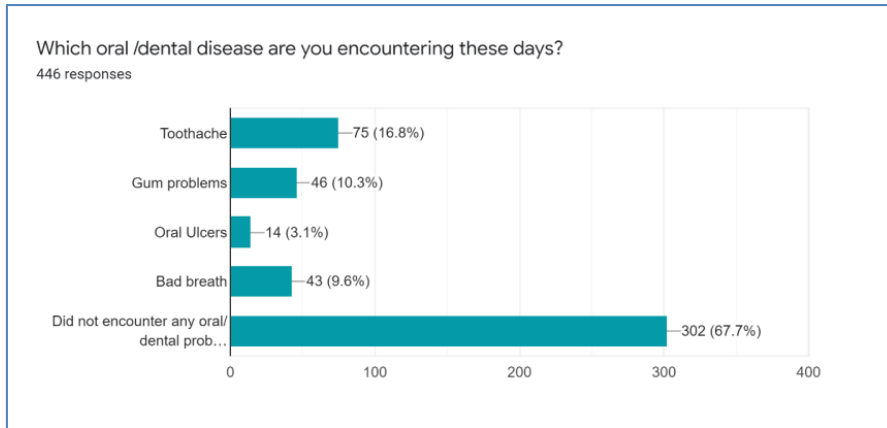
1. Gender (M/F)
2. Educational qualification
3. Are you aware of Covid-19 pandemic?
4. Are you willing to go for dental treatment during this pandemic?
5. Do you find a dental hospital to be a potential source of Covid-19?
6. Which oral/dental disease are you encountering these days?
7. Will you prefer being on medicine rather than going for the dental treatment during Covid-19 pandemic?
8. Would you mind going through a screening for Covid-19 before dental treatment?
9. Amid Covid-19 pandemic what extra precaution/care are you taking of your oral/dental health?
10. To get your dental treatment done will you hide any details from your dentist/doctor during Covid-19?
11. Do you think Covid-19 will affect the dental treatment modalities in future?
12. Will you prefer going for any cosmetic treatment during Covid-19 pandemic?
13. Will an increment in the cost of dental treatment bother you during pandemic situation?

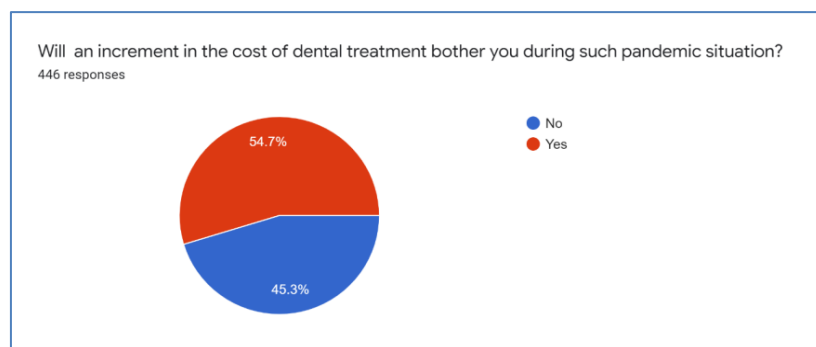
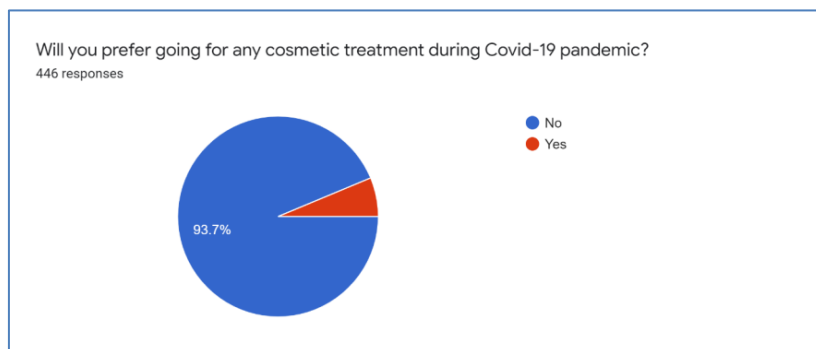
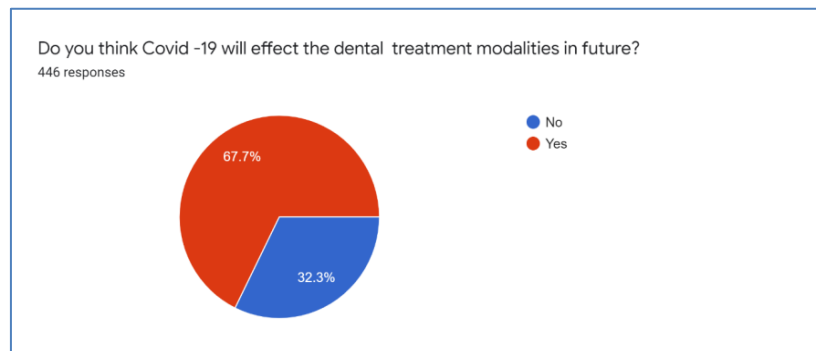
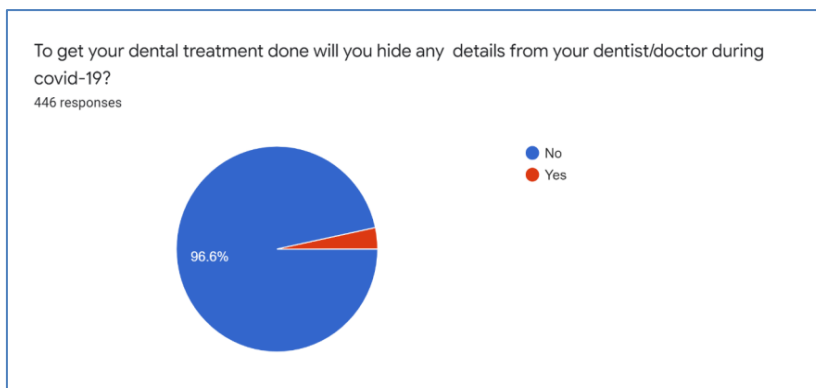
RESULTS

The google forms instantly generated the results of the questionnaire.









DISCUSSION

This survey provides an insight on the level of awareness, perception, and attitude of patients regarding dental procedures during COVID-19 pandemic.

A total of 446 responses were received from subjects comprising of 57.6% male and 42.4 % female participants. Majority of subjects had a minimum qualification of intermediate accounting for 58.1% of total participants and 29.1% individuals were post

graduates. 52% were already aware of COVID-19 pandemic through news channels and 30.5% received basic knowledge about the pandemic from official websites. Besides 13.5% used social media to get daily updates about corona virus.

As a matter of fact, 71.3% of participants showed their reluctance in undertaking dental treatment during this pandemic. 60.5% subjects were of the opinion that dental operatories can be potential source

of COVID-19 thus they refrained from getting treated. 67.7% didn't encounter any dental or oral disease during these days. Subjects rather opted for systemic medications than dental treatment with 69.7% showing preference to medicines over dental visits and treatment modalities. 54.7% didn't mind going through a screening test for COVID-19 while 45.3% showed reluctance in undertaking a swab test or RT-PCR.

An attempt was made to analyse if subjects were taking extra precautions of oral health with 66.4% following routine oral hygiene practices, 26% frequently rinsing with regular mouth wash, 25.1% swishing properly, 17% increased frequency of brushing and 9% even used flosses and interdental toothbrushes.

A total of 96.6% subjects agreed to transparency without hiding any details related to corona virus or any other systemic involvement during dental check-ups.

67.7% of participants believed that pandemic will affect the dental treatment modalities in future. 93.7% responded that they will avoid esthetic or cosmetic corrections during this pandemic. 54.7% reported that an increment in the cost of dental treatment will be a cause of concern for them.

There has been no evidence-based specific treatment for COVID-19, and management of COVID-19 has been largely supportive [3]. The current approach to COVID-19 is to control the source of infection; use infection prevention and control measures to lower the risk of transmission; and provide early diagnosis, isolation, and supportive care for affected patients [9].

LIMITATIONS

Despite the findings inferred here, it is important to stress that this online cross-section survey had limitations, including the relatively low response rate, which resulted in a smaller than expected sample size as 650 participants were included but only 446 responded. This could have been caused by the short period of data collection. However, this is considered a moderate sample size. Moreover, this pandemic has caused many to be busy with watching the news and taking care of personal affairs. This means that those who were active on social media during the short period of data collection were the only ones that had the chance to participate in the study. This could result in selection bias and sampling error, which prevents the ability to generalize our results.

CONCLUSION

Subjects were aware of COVID-19 symptoms, mode of transmission of the virus, screening test and in-

home precautions/measures to be taken. However, subjects had limited comprehension of the extra precautionary measures that protect them during dental procedures. Most of them refrained from visiting dentists and avoided esthetic procedures.

It is important to implement sound prevention measures in dental clinics and to increase the level of awareness among patients as well as dentists to prevent spread of virus. Hence, this study aimed to assess the level of knowledge and apprehension among Indian population regarding COVID-19. The survey is of one of the pioneer surveys regarding patient perception in India.

REFERENCES

1. Meng, L., Hua, F., & Bian, Z. (2020). Coronavirus disease 2019 (COVID-19): emerging and future challenges for dental and oral medicine. *Journal of Dental Research*, 99(5), 481-487.
2. Ibrahim, N. K., Alwafi, H. A., Sangoof, S. O., Turkistani, A. K., & Alattas, B. M. (2017). Cross-infection and infection control in dentistry: Knowledge, attitude and practice of patients attended dental clinics in King Abdulaziz University Hospital, Jeddah, Saudi Arabia. *Journal of Infection and Public Health*, 10(4), 438-445.
3. World Health Organization. (2020). Clinical management of severe acute respiratory infection when COVID-19 is suspected
4. Secon, H. (2004). Nearly 3,400 Chinese healthcare workers have gotten the coronavirus, and 13 have died. *Business Insider* 2020 Mar 04
5. Zemouri, C., de Soet, H., Crielaard, W., & Laheij, A. (2017). A scoping review on bio-aerosols in healthcare and the dental environment. *PloS one*, 12(5), e0178007.
6. Lauer, S. A., Grantz, K. H., Bi, Q., Jones, F. K., Zheng, Q., Meredith, H. R., ... & Lessler, J. (2020). The incubation period of coronavirus disease 2019 (COVID-19) from publicly reported confirmed cases: estimation and application. *Annals of internal medicine*, 172(9), 577-582.
7. Backer, J. A., Klinkenberg, D., & Wallinga, J. (2020). Incubation period of 2019 novel coronavirus (2019-nCoV) infections among travellers from Wuhan, China, 20–28 January 2020. *Eurosurveillance*, 25(5), 2000062.
8. Li, Q., Guan, X., Wu, P., Wang, X., Zhou, L., Tong, Y., & Xing, X. (2020). Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *New England Journal of Medicine*.
9. Wang, D., Hu, B., Hu, C., Zhu, F., Liu, X., Zhang, J., & Zhao, Y. (2020). Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus-infected pneumonia in Wuhan, China. *Jama*, 323(11), 1061-1069.