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Financial Burden of COVID-19 on Orthopeadic Surgeons

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Abstract

Introduction Objectives: Coronavirus disease 2019 (COVID-19) has spread throughout the world, affecting people from all walks of life, including orthopedic doctors in India. We've We' have seen a significant decrease in the number of patients. The study's study's goal was to determine the extent to which the epidemic has affected Indian orthopaedic practice.

Methods: An online survey of currently practicing Indian orthopaedic doctors was done. The study enlisted the help of 500 orthopaedic surgeons. A statistical analysis was performed to determine the relationship between the demographic profile of study participants and other orthopaedic practice characteristics.

Results: Maximum participants belonged to the age group of 30-–40 years (39.8%) and only 13.6% belonged to the age group of 51-–60 years. Approximately, 85.8% participants were married. Out of all, 86% participants were consultants and 14% were residents. Most of the participants (35.2%) have 5-–10 years of practice experience. Most of the participants were working in charity hospitals (31.4%) and very few of them (4.8%) were working in government hospitals.

Conclusion: Practicing orthopaedic surgeons working in the private sector and running their own (individual) hospitals and clinics have been the most badly afflicted in terms of earnings, while those working in the government sector and medical universities have been the least afflicted.

Keywords: Coronavirus disease 2019COVID-19, financial loss, orthopedic surgeons, clinical practice, World Health Organization. WHO

Introduction

Coronavirus disease 2019 (COVID-19) is a pathogen that is highly infectious and can be fatal. It was initially reported to the World Health Organization (WHO) as an unknown kind of pneumonia around the end of December 2019 [1]. A single-stranded RNA genome consistent with a coronavirus was identified and named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which was branded COVID-19 by the WHOWorld Health Organization in the early February 2020 [2]. Since then, the disease has expanded internationally, culminating in an ongoing epidemic with over a million confirmed cases worldwide. The sickness was once thought to be limited to China's China's Hubei province, but by 20 January 20, 2020, Japan, South Korea, and Thailand had reported their first cases [3]. On January 21, 2020, the first case in the United States was discovered in Washington State. The WHO declared the COVID-19 outbreak a pandemic on March 11th [4]..

Elective procedures were put on hold for the next few weeks in order to prevent the spread of the virus and preserve the supply of personal protective equipment (PPE) and ventilators [5, 6]. The elimination of elective surgery has put several health-care organizations' organizations' financial solvency in jeopardy, as they are already in financial difficulties as a result of the crisis. The pandemic has challenged health-care organizations on many fronts, such as training medical staff on new protocols, securing scarce PPE and ventilators, and creating additional intensive care units (ICU) and COVID-19 recovery beds, to name a few [7]. Without federal and state relief, the moratorium on elective procedures will, further, increase the financial burdens already threatening the viability of marginally resourced hospitals. Even without the pandemic,

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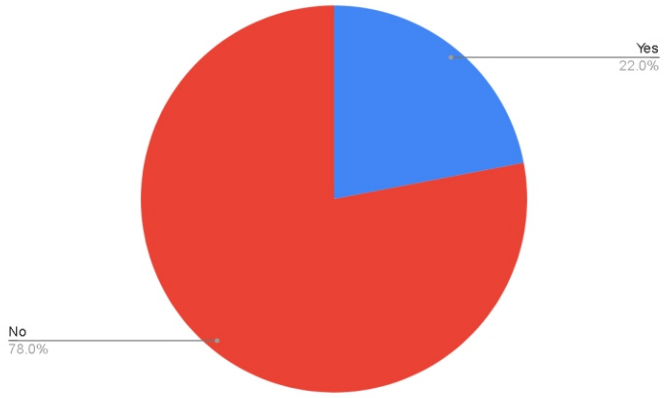
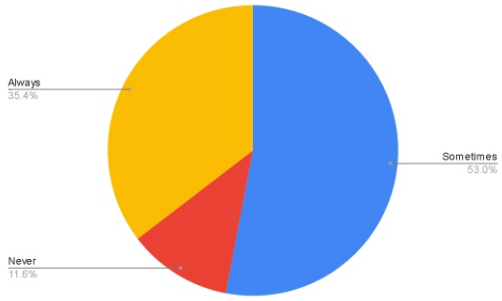


Graph 1: Do you have a national Covid-19 health response policy?
INTERPRETATION:- 78% has no Covid 19 health response policy and 22% had Covid 19 health response policy



Graph 2: Have you had any difficulty gaining access to personal protective equipmentPPE at your workplace?
INTERPRETATION:-35.4% always had difficulty in gaining access to personal protective equipment's (PPE), 53% faced difficulty in gaining access to PPE, 11.6% never had a difficulty in gaining access to PPE.

many health-care organizations filed for bankruptcy in 2019; this number increased in 2020 [8].

The present pandemic has pushed the health-care system to new heights. Elective surgical operations generate a disproportionate amount of income in our health-care system, and these earnings are used to indirectly support the care of other patients. Health care accounts for 18 percent % of the gross domestic product, and the loss of three 3 months of elective surgery will result in a 12.5 percent% annual decline in hospital income [9]. On average, hospital profit margins are insufficient to cover these losses.

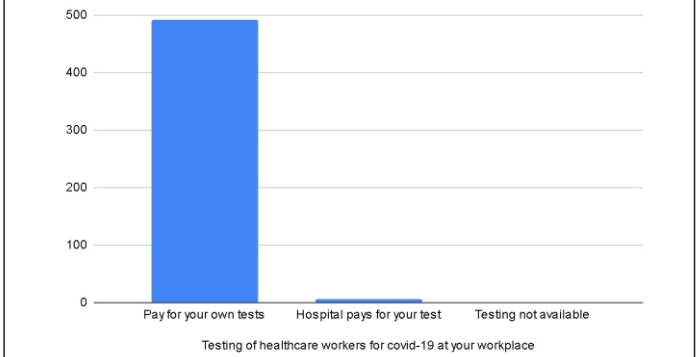
The COVID-19 pandemic has severely affected the health care and financial situation in India. Both elective and emergency services in the health-care sector have been affected. The obvious restrictions on elective surgeries have shown an impact on the specialties that are dependent on these kinds of procedures for income, like that on orthopedic surgery. Majority of doctors reported a considerable decrease in income, with many saying that they have seen >50% losses.

Many studies are done to evaluate the mental status of the patients and how the pandemic has directly/indirectly affected them, but, currently, there is little information about the surgeons/residents financial and academic impact, during the COVID-19 pandemic. This observational retrospective study is done to assess the impact of the pandemic on orthopedic surgeons and residents, focusing on the financial burden during the pandemic period, compared with the pre-pandemic era.

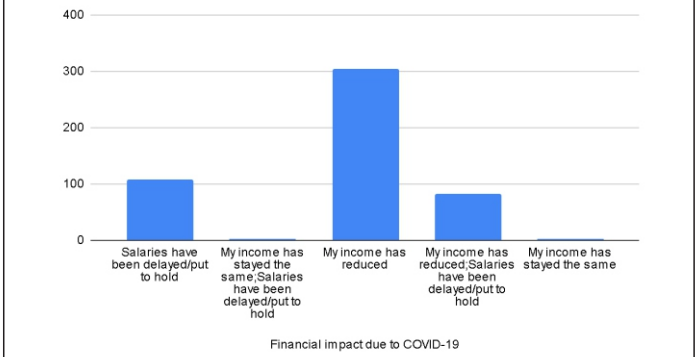
Materials and Methods

This is a two2- month retrospective questionnaire research including 300 Orthopedic Surgeons from throughout the country. D.Y. Patil Hospital in Navi Mumbai assembled and examined the research. The purpose of this study was to determine how the COVID COVID-19 epidemic has affected Orthopedic surgeons/residents in India using a questionnaire that was sent to the subjects through via Email.

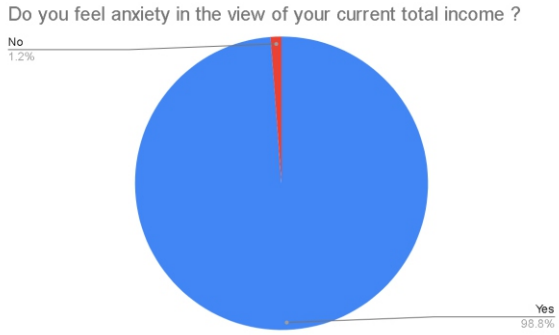
The Institutional Ethics Committee provided ethical approval (IEC). The survey URL was digitally provided to all



Graph 3: Testing of healthcare workers for COVIDcovid-19 at your workplace
INTERPRETATION:- 98 % people had to pay for their own test whereas 2 % people had their tests funded by their respective hospitals.



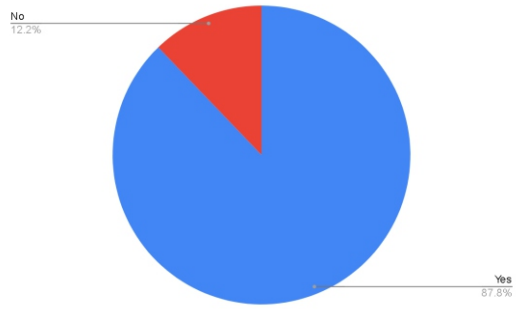
Graph 4: Financial impact due to COVID-19
INTERPRETATION:- 60% people had their reduced salaries, 20% people salaries were put on hold, 15% income had reduced and salaries put on hold, 5% people had the same salary but was put on hold, 5% had the same salary.



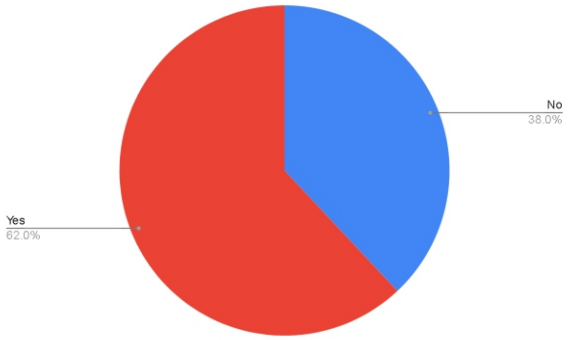
Graph 5: Do you feel anxiety in the view of your current total income?
INTERPRETATION :- 98.8% people feel anxious with their current total income, 1.2 % people feel no anxiety with their current total income.

Graph 6: Did you have a thought of opening a COVID hospital during the COVIDcovid waves considering the profits in COVIDcovid care hospital?
INTERPRETATION :-55.6% people had a thought of opening a Covid hospital during the COVID waves whereas 44.4% people did not have thoughts of opening a Covid hospital during the COVID waves.

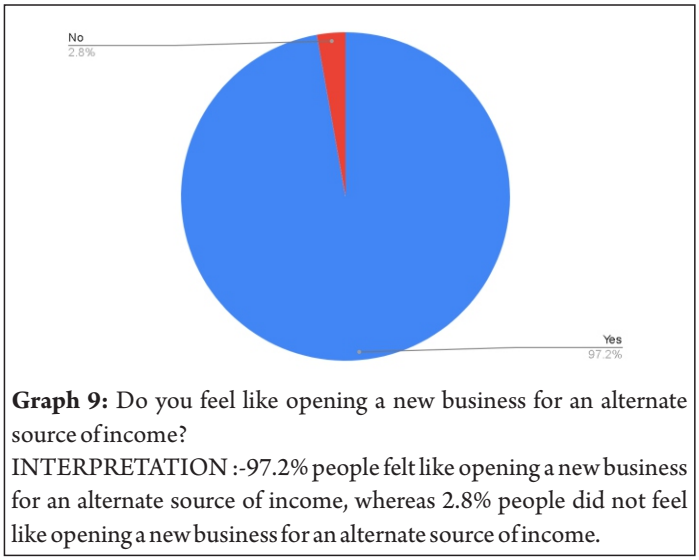
participants, adhering to the COVID-19 social distancing protocols. The institution was not burdened in any way as a result of the study's study's completion. Informed consent forms for human research subjects were submitted in three languages (English, Hindi, & and vernacular language of the participant).
It was an online study. Participants with access to the internet could participate in the study. The study included orthopaedic surgeons/residents who were currently practicing and willing to participate. The study excluded orthopaedic surgeons and residents who were not presently practicing.
The online self-reported, and closed-ended questionnaire contained two parts. The first part consisted of socio-demographic variables including age, social status, and regarding their practice. The second part contained different questions related to financial burdens among the surgeons in India.
We asked respondents to choose "Yes" or "No" in response to the following questions:
Do you feel anxiety in the view of your current total income?
Did you have a thought of opening a COVID hospital during the COVID waves considering the profits in COVID care hospital?
Did you have a feeling of getting attached to more hospitals to increase the orthopaedic practice?
Did you think of doing home visits to increase the income and patient base?
Do you feel like opening a new business for an alternate source of income?
Do you feel like investing in equity (stock market) as an alternate source of income?
Did your salary/payment was delayed during COVID waves?
Did you ever have to operate due to fear of not losing the income during the pandemic?
The participants were encouraged to enroll as many people as possible. Accordingly, the link was forwarded to people. On receiving and clicking the link, the participants got auto directed to the information about the study. After the participants accepted the survey, they filled up the demographic details. Then, a set of several questions appeared, in which the participants were to answer. The data collection was initiated on 4th February 4th, 2022 and closed on 9th March 9th, 2022. Descriptive statistics



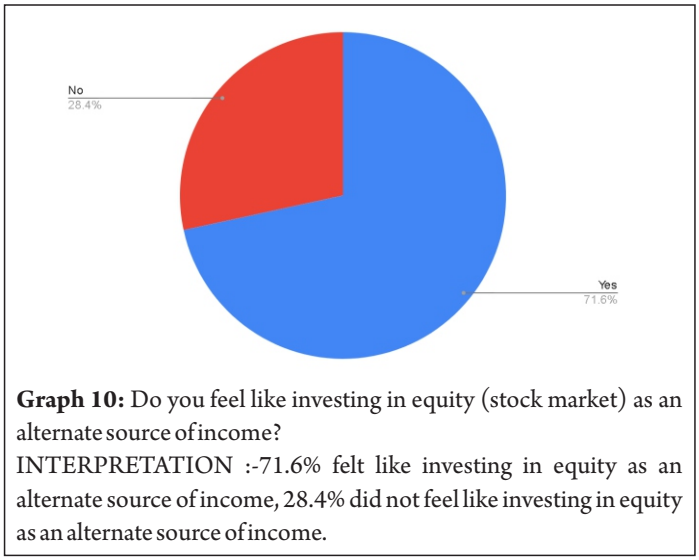
Graph 7: Did you have a feeling of getting attached to more hospitals to increase the orthopedic practice?
INTERPRETATION:- 87.8 % people had a feeling of getting attached with more hospitals to increase their orthopaedics practice, 12.2 % people did not have a feeling of getting attached with more hospitals to increase their orthopaedics practice.



Graph 8: Did you think of doing home visits to increase the income and patient base?
INTERPRETATION:- 62% people thought of doing home visits to increase the income and patient base, 38% people did not think of doing home visits to increase the income and patient base.



Graph 9: Do you feel like opening a new business for an alternate source of income?
INTERPRETATION :-97.2% people felt like opening a new business for an alternate source of income, whereas 2.8% people did not feel like opening a new business for an alternate source of income.



Graph 10: Do you feel like investing in equity (stock market) as an alternate source of income?
INTERPRETATION :-71.6% felt like investing in equity as an alternate source of income, 28.4% did not feel like investing in equity as an alternate source of income.

have been used in the study to analyze the findings. Mean and standard deviation have been used to estimate the results of the study.

Results

Table 1 depicted the demographic details of the participants. Maximum participants belonged to the age group of 30-–40 years (39.8%) and only 13.6% belonged to the age group of 51-–60 years. Approximately 85.8% participants were married. Out of all, 86% participants were consultants and 14% were residents. Most of the participants (35.2%) have 5-–10 years of practice experience. Most of the participants were working in charity hospitals (31.4%) and very few of them (4.8%) were working in government hospitals. (Graph 1-12)

Table 1: Demographic details of the participants

Variables	Percentage
Age (in years)	
<30	14.4
30–40	39.8
41–50	32.2
51–60	13.6
Social status	
Single	13.2
In a relationship	1
Married	85.8
Work status	
Resident	14
Consultant	86
Years of practice (in years)	
<5	16
5–10	35.2
11–15	24.8
>15	24
Place of practice	
Private	22.8
Corporate hospital	21.6
Government hospital	4.8
Charity hospital	31.4
Multiple	19.4

Table 1: Demographic details of the participants
Graph 1: Do you have a national Covid-19 health response policy?
Graph 2: Have you had any difficulty gaining access to PPE at your workplace?
Graph 3: Testing of healthcare workers for covid-19 at your workplace
Graph 4: Financial impact due to COVID-19
Graph 5: Do you feel anxiety in the view of your current total income?
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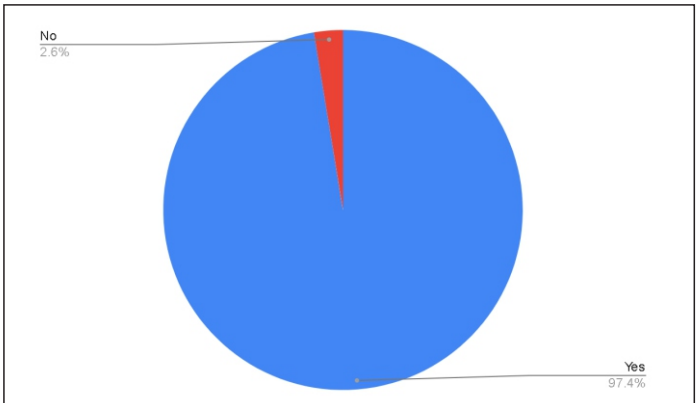
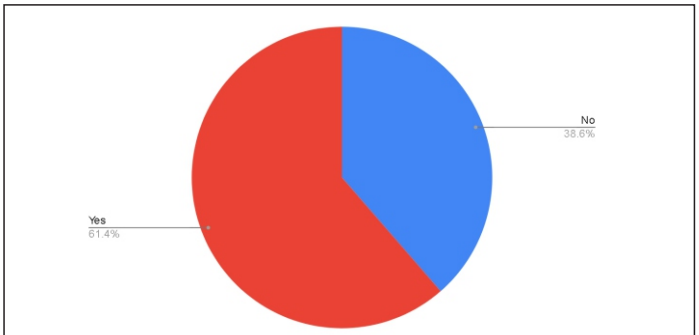
Graph 7: Did you have a feeling of getting attached to more hospitals to increase the orthopedic practice?
Graph 8: Did you think of doing home



Graph 11: Did your salary/payment was delayed during COVID waves?
INTERPRETATION:- 97.4 % people's salary was delayed during COVID waves, whereas 2.6 % people received their salaries on time.



Graph 12: Did you ever have to operate due to fear of not losing the income during the pandemic?
INTERPRETATION:-61.4 % people had to operate due to fear of not losing the income during the pandemic, whereas 38.6% people did not have to operate due to fear of not losing the income during the pandemic.

visits to increase the income and patient base?

Graph 9: Do you feel like opening a new business for an alternate source of income?

Graph 10: Do you feel like investing in equity(stock market) as an alternate source of income?

Graph 11: Did your salary/payment was delayed during COVID waves?

Graph 12: Did you ever have to operate due to fear of not losing the income during the pandemic?

Discussion

Epidemics and pandemics occur on a regular basis. During such times, the general public faces a number of issues. These diseases and pandemics frequently have heightened consequences, which can negatively affect a population"s well-being. Hence, the current present study was done to assess the financial burden of COVID-19 on the surgeons. This study, we believe, is the first of its sort in India, addressing the magnitude of change in orthopaedic practices since the commencement of the COVID-19 pandemic.

Because COVID-19 is a disease that largely affects the musculoskeletal system, there is a scarcity of clinical and pathological (skeletal muscle and joint biopsy) data linked to orthopedics. However, because ofdue to the disease"s pandemic nature and airborne transmission, it has infected our specialty in ways that cannot be predicted by the disease"s nature alone. The efforts adopted by the Indian government have aided in fattening the pandemic curve to some extent [10, 11, –-12]. The vast majority of human, infrastructure, and financial resources have been devoted to containing the pandemic. One of the drawbacks of these measures has been the enormous amount of inconvenience that they have caused non-COVID patients. In most areas, routine outpatient departments (OPDs) were shut down, leaving residents in a state of bewilderment [13].

When it comes to COVID-19 and orthopaedic surgery, majority of the publications have been guidelines, author's author's opinions, letters to the editor, or commentaries [14, 15, 16, 17,-- 18]. However, due to the abrupt outbreak of the epidemic, we have had very little time, if any, to accept the necessary changes. In addition, the statewide lockdown and government directives to temporarily halt normal OPD visits have kept all patients waiting. A comparable infodemic has occurred in tandem with the medical pandemic [17]. Many of the guidelines that have been suggested will take some time to implement. Orthopaedic practice is projected to decline unless we start enacting these rules, both verbatim and in spirit. According to the respondents in our survey, the decline in OPD numbers is primarily due to three factors: (1) doctors are unwilling to take a risk without proper screening measures in place, (2) patients are afraid of contracting the disease, and (3) those patients who do want to see a doctor are unable to do so due to the cancellation of public transportation services. Patients, particularly the elderly and those with comorbidities, prefer to stick with over-the-counter pain relievers rather than venture out. Telemedicine will soon be a feasible option for those OPD instances that do not require a physical examination. Many of the guidelines [19] have made this point.0

Coming over to the finances, there are a variety of factors that contribute to decreasing patient information, ranging from increased unemployment, particularly among daily wage employees, to actual inability to visit hospitals due to a lack of public transportation. We cannot expect ourselves to be immune to the country's country's bad economic growth. The orthopaedic perspective of COVID-19's 19's economic implications was addressed by Anoushiravani et al. They said that the United States" health-care system was highly reliant on elective surgical procedures such as hip and knee arthroplasties, laminectomies, and spinal fusions. All of these treatments, as well as the treatment of lower limb fractures and dislocations, accounted for 17% of all operating room procedures [20].

Medical tourism generates a large portion of India's India's health revenue, which is primarily based on these treatments. Because international flights have been canceled, medical tourism, which is a separate business, has come to a halt. Corporate hospitals, which are the main centers of medical tourism, have incurred significant losses and have been forced to withhold a portion of surgeons" compensation and lay off a large number of personnel. A few steps must be taken to get out of the crisis. To begin, telemedicine should be commercialized. Elective procedures can be resumed in stages, given the precautions outlined above, and emphasized in many of the studies. We need hospitals to stay open, because shutting them down would result in layoffs for not only consulting doctors, but also the whole healthcare workforce, sending the health-care sector into a tailspin. Our findings highlight the dilemma of private-sector hospital owners, the majority of whom are already saddled with debt and staffing obligations and will face significant challenges in keeping their doors open. They can resume services after making appropriate improvements to the design of their hospitals in accordance with the recommendations and putting in place safe-practice guidelines [19].

Conclusion

According to the findings, the COVID-19 pandemic has had a significant impact on orthopaedic care in India. In terms of outpatient and operational numbers, orthopaedic surgeons operating in all sectors and in various types of setups have been affected resulting in a soaring 95% effect on financial income.

Practicing orthopaedic surgeons working in the private sector and running their own (individual) hospitals and clinics have been the most badly afflicted in terms of earnings, while those working in the government sector and medical universities have been the least afflicted, with an overall 30% reduction in income resulting in anxiety along with the existing pandemic. About 95% orthopedic surgeons have considered opening a COVID-19 hospital, while 90% pursuing alternative income source. The future of orthopaedic practice in COVID-19 is undoubtedly tough, both from a health and a materialistic standpoint, but it is revivable with the appropriate strategy and recommendations established by major orthopaedic groups.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the Journal. The patient understands that his name and initials will not be published, and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

Conflict of Interest: NIL; **Source of Support:** NIL

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