REVERBERATION OF PANDEMIC ON INCOME OF HEALTH CARE PROFESSIONALS

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Abstract : This study has been undertaken to find out the reverberation of pandemic on income of health care professionals. A cross sectional online survey was sent to health care professionals during lockdown period. The sample size for current cross sectional study was 150, in which we get only 104 responses. One sample proportion test was used in the analysis of this current study, to test hypothesis. After analyse the data we found most of health care professionals is age between 22-30 years, male and freelancer. Maximum number of participants difference in income compared to pre covid are same. So, the conclusion of this study shows that difference in income of most of the participants compared to pre covid are same, average patient are increased, and there job are at no risk.

IndexTerms - **pandemic, corona, health care professionals, income.**

I - INTRODUCTION

Confusion about the meaning of the word "pandemic" and how to recognize pandemics when they occur. Any assumption that the term pandemic had an agreed-upon meaning was quickly undermined by debates and discussions about the term in the popular media and in scientific publications. Uses of the term by official health agencies, scientists, and the media often seemed to be at odds. For example, some argued that a level of explosive transmissible was sufficient to declare a pandemic, whereas others maintained that the severity of infection should also be considered. Commentators questioned whether we could effectively deal with a pandemic, when we could not agree on what a pandemic is or whether we were experiencing one. Amid this discussion, a New York Times commentary, published 8 June 2009, struck at the heart of the problem with its challenging headline, "Is This a Pandemic? Define 'Pandemic'[1,2].

Three days later, the World Health Organization (WHO) announced that the pandemicalert for the 2009 H1N1 influenza virus had been raised to its highest level, "phase 6." Because it is generally agreed that we are currently in the midst of a global in influenza pandemic caused by the novel H1N1 2009 influenza virus, it may now be a good time to ask again: what is a pandemic? Modern definitions include "extensively epidemic"[3]

Even if there is no single accepted definition of the term pandemic, it may still be fruitful to consider diseases commonly said to be pandemic and to try to understand them better by examining similarities and differences among them. Diseases that we might consider—chosen empirically to reflect a spectrum of etiologies,mechanisms of spread, and eras of emergence—include acute hemorrhagic conjunctivitis (AHC), AIDS, cholera, dengue,influenza, plague, severe acute respiratory syndrome (SARS), scabies, West Nile disease, and obesity. In what basic aspects are such pandemic diseases alike and different, and is it possible to identify key features that apply to all or almost all of them? Almost all uses of the term pandemic refer to diseases that extend over large geographic areas—for example, the 14th-century plague (the Black Death), cholera, influenza, and human immunodeficiency virus (HIV)/AIDS. In a recent review of the history of pandemic influenza co authored by one of us (D.M.M.), pandemics were categorized as transregional (2 adjacent regions of the world), interregional (2 nonadjacent regions), and global[4].

CoronaVirus Disease-19 (Covid-19) is a new type of disease which was found in Wuhan, China at the end of 2019 (WHO). The disease, which is caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov-2), quickly spreads from infected people to surrounding people through respiratory droplets and aerosols (World Health Organization [WHO], 2020).A person infected with Covid-19 will generally feel fever (83-99%), cough (59-82%), Fatigue (40-84%), breathlessness (31-40%), myalgia (11-35%). , and other nonspecific Signs such as insomnia, nausea, diarrhea, loss of appetite (Jin et al., 2020). The World Health Organization (WHO) classifies the severity of Covid-19 based on the symptoms that appear To be mild, moderate, severe and critical. The respective percentages of Covid-19 severity Are 40% at a mild level, 40% at a moderate level, 15% at a severe / bad level, and 5% at a Critical level (Jin et al., 2020; World Health Organization [WHO], 2020[5].

Healthcare providers seek to improve the health of their patients. However, health can be a multidimensional goal for both providers and patients, and may have different meanings for different people. Interdisciplinary Collaboration is a vital phenomenon to healthcare providers and patients. The level of collaboration that takes place among providers can directly impact patient outcomes. The Joint Commission currently reports that almost 70% of patient adverse events cite the lack of collaboration and communication between providers as a main cause of error. An increase in nurse-physician collaboration and communication can improve both patent outcomes and provider satisfaction. In healthcare, collaboration is defined as "a complex phenomenon that brings together two or more individuals, often from different professional disciplines, who work to achieve shared aims and objectives[6].

Excellent time to consider factors that may have affected COVID-19 outcomes before the advent of any secondary spikes. Income inequality has played a role in explaining the differences in COVID-19 outcomes. In developed countries, income inequality is more important in determining health outcomes than absolute income. There is considerable research linking income inequality to a whole range of outcomes and it is possible that income inequality has played a direct role in COVID-19 outcomes[7].

II - METHODOLOGY

2.1. Ethical statement - The web-based open E-survey research is submitted and Approved by the ethics committee of Saaii college, Kanpur. we ensured that the study was performed according to the principles laid by, declaration of Helsinki (Revised 2013), Council for International Organizations of Medical Sciences (CIOMS) guidelines, International ethical guidelines for health-related research involving humans (2016) and National guidelines for biomedical and health research involving human participants (2017). The purpose of the survey, introduction and about the length of the survey was added within the web-based open E-survey. A separate statement of consent was asked before starting the survey questionnaire.

2.2. Sample and design -A cross-sectional online survey was sent to physiotherapy professionals during COVID-19 period in the March months of 2022 and may 2022. Health care professionals were included in the study by a simple random sampling method. Health care professionals who are not willing to spare time for filling survey questionnaires, who do not have an account in social networking sites such as Facebook, WhatsApp, and Instagram and who do not have smartphones were excluded from the web-based open E-survey.

2.3. Survey development - A series of questionnaires were created for the survey. The Survey contained three sections. The first section contains a consent form, the second section includes Demographic data, the third section of survey comprises questions about Reverberation of Pandemic on Income of Healthcare professionals. Demographic related questions included in the survey were name, gender and email address . Third section contains questions related to Reverberation of Pandemic on Income of Health care professionals. We want to know how health care professionals tackle these conditions in their practices.

2.4. Administration of survey - The study was executed by sending the online link (https://forms.gle/mhDzEGTH4Hw1Aep18) to the Health care professionals through social networking sites such as Facebook, WhatsApp, and Instagram. 130 potential participants were identified and E-survey link was sent to them through the messaging services. The Survey was administered using the online survey portal, Google forms. As people are mostly active on social networking sites and messengers when compared to frequent checking emails, social networking sites were used for circulating the survey questionnaire. The reminder survey link was sent to them, if response was not received within a period of two weeks. Web-based open E-survey is cost-effective, eco-friendly, time-saving and practically feasible during the pandemic period.

2.5. Sample size - The sample size for this cross-sectional study was 130, in which only 104 responses were received. The incomplete submission of survey questionnaires was not possible due to the function in Google Forms which prevents submission of partially answered or filled Questions. Hence, when the survey responses hit 104 and time limit is exceeded the web based open E-survey link is closed for accepting further responses and analyzed.

2.6. Variable - According to Polit DF, Hungler BP (2004)[8] A variables imply something that varies, and variables may be any quality of a group or situation that takes on different values. Research variables: Reverberation of Pandemic on Income of Health care professionals.

2.7 Selection and development of tools:- Tool is an instrument used by the researcher to collect data. The instrument selected in a research should be as far as possible be the vehicle that would be best obtaining data for drawing conclusions, which are pertinent to data. The self-structured questionnaire was used for study, where interested in establishing rapport and obtaining facts of study.

2.8 Validity of tool: Burns N, Groove SK (2003)[9] , states that validity is the extent to which the method of measurement includes all the major elements relevant to the construct being measured. To measure the content validity of the tool, the questionnaire was given to the 3 experts from the field of health . The experts were chosen based on their clinical expertise, experience, qualification, and interest in the problem area. The validity of the tool was confirmed by expert's opinions regarding the relevance of items.

2.9 Reliability of tool: Polit DF, Hungler BP (2004)[10], states that reliability of an instrument is the degree of consistency with which it measures the attributes it is supposed to be measuring. Reliability of the tool was estimated by a split half method which included computing Pearson's coefficient of correlation and thereafter applying Spearman Brown prophecy formula, which was found to be r' 0.84. Hence the tools were reliable.

III - PROCEDURE

Burns N, Groove SK (2003)[11], states that data collection is the identification of subjects and precise, systematic gathering of information (data) relevant to the research purpose or the specific objectives, questions or the assumptions of a study. The data was collected from health care professionals by sending the link of google form through mail, WhatsApp and Facebook. The present

study was conducted on 01/03/22 to 20/05/22. Purpose of the study was explained to the subjects. The subjects were assured about anonymity and confidentiality of the information provided by them as informed consent was taken from those who were willing to participate in the study. 130 potential participants were identified and an E-survey link was sent to them through the messaging services and time taken by each survey to fill approximately 5 – 10 minutes.

IV - ANALYSIS

Data analysis was done using IBM SPSS Statistics (software package used for statistical analysis 2019 version - 26). One sample proportion test is used in the analysis of this study, to test hypothesis; which help to determine whether to reject or accept Null hypothesis.

Total Consent for Participation=130

Total Successful Participants in Survey=104

Total Unsuccessful Participants in Survey=26

Table-1: Gender wise distribution of all participants.

Category	Number of Participants	Participants %
Male	46	44.23
Female	58	55.77
Others	00	00
Total	104	

Table-2: Age wise distribution of all Participants.

Age group (In Yrs)	Number of Participants	Participants %
Under 21	15	14.5
22-30	69	66.5
31-40	16	15.5
41-50	4	3.5
Total	104	

Table-3: Type of Income wise distribution of all participants.

Category	Number of Participants	Participants %
Salaried	28	27
Freelance	76	73
Total	104	

Table-4: Field of treatment wise distribution of all Participants.

Age group (In Yrs)	Number of Participants	Participants %
Neurology	23	22.11
Orthopedics	45	43.26
Cardiology	17	16.35
Others	19	18.28
Total	104	

Table-5: Type of clinical setting wise distribution of all participants.

Category	Number of Participants	Participants %
Hospital	44	42.31
Clinic	39	37.50
Home health	21	20.21
Total	104	

Table-6: Average patient treated compare to pre covid wise distribution of all Participants.

Age group (In Yrs)	Number of Participants	Participants %
Severe drop	6	5.79
drop	28	26.92
Same	32	30.76
increased	38	36.53
Total	104	

Table-7: Difference in income compare to pre covid wise distribution of all Participants.

Age group (In Yrs)	Number of Participants	Participants %
Severe drop	10	9.61
drop	30	28.85
Same	34	32.69
increased	30	28.85
Total	104	

Table-8: Job security wise distribution of all participants.

Category	Number of Participants	Participants %
No risk	61	58.65
At risk	43	41.35
Total	104	

V - RESULT

Graph - 1 : Gender of all the participants
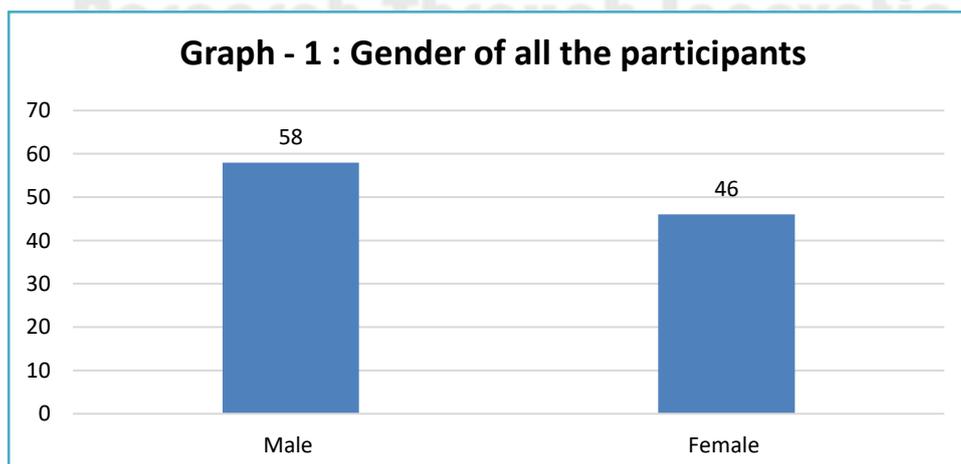
Graph – 1 : Represents the gender wise distribution of all the 104 participants. The result suggest that 55.77% of participants (58 out of 104 participants) are male, 44.23% of participants (46 out of 104 participants) are female, it reflects that maximum number of participants are male.
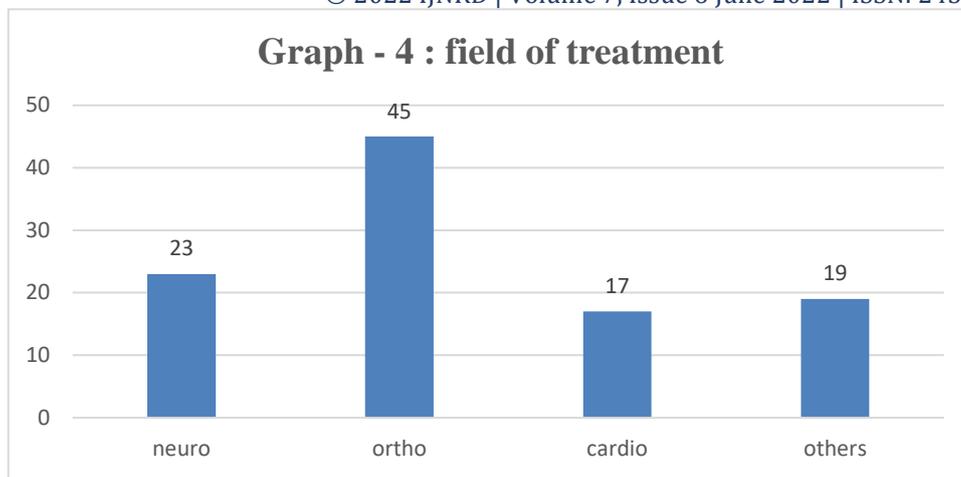
Graph - 2 : Age of all the participants
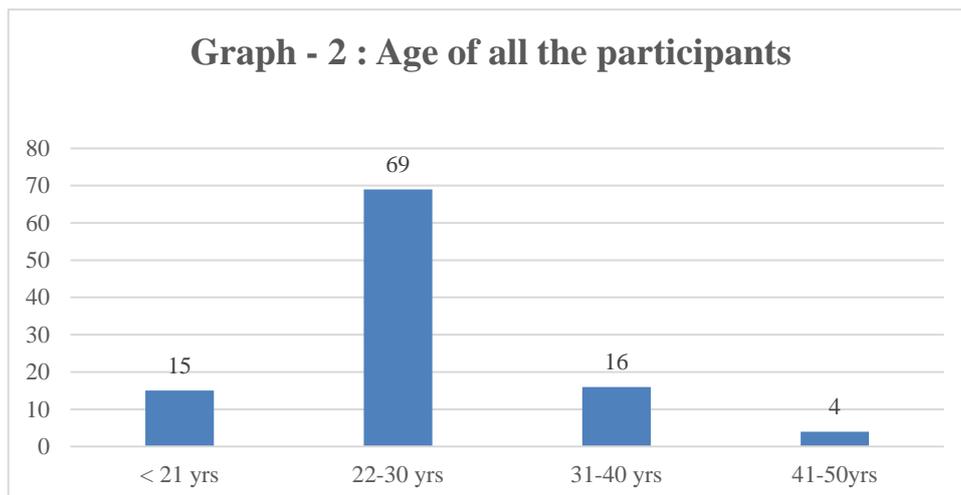
Graph - 2 : Represents the age wise distribution of all the 104 participants. The result suggest that 14.5% of participants (15 out of 104 participants) are under 21 years, 66.5% of participants (69 out of 104 participants) are 22-30 years, 15.5% of participants (16 out of participants) are 31-40 years, 3.5% of participants (4 out of participants) are 41-50 years, it reflects that maximum number of participants are of age between 22-30 years.
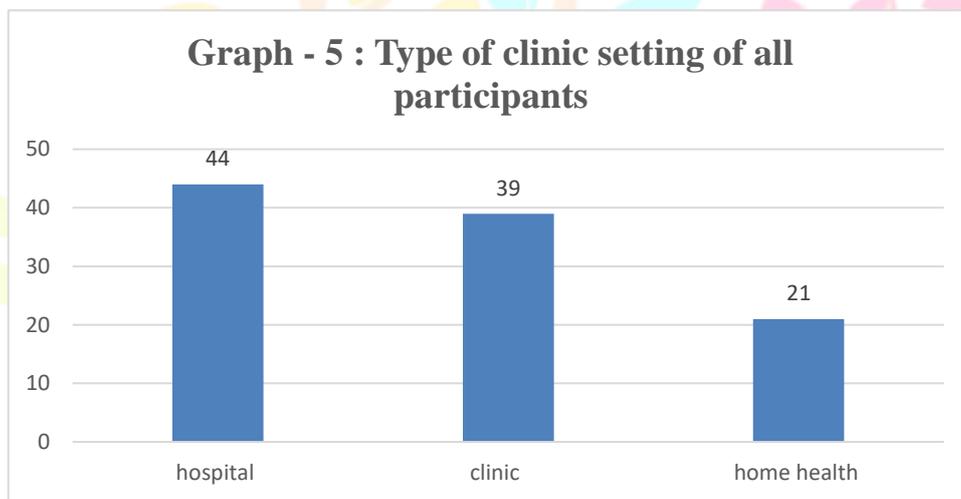
Graph - 3 : Type of Income
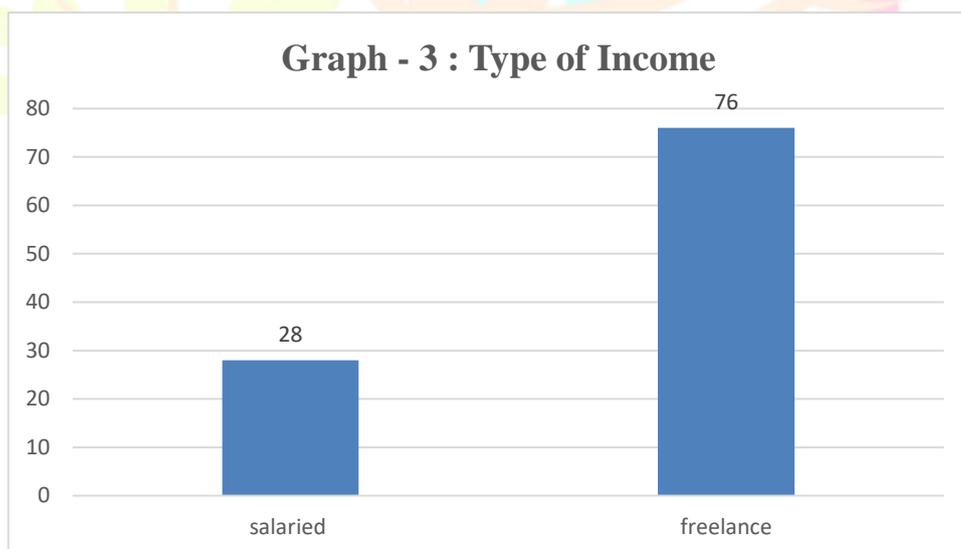
Graph - 3 : Represents the type of income wise distribution of all the 104 participants. The result suggest that 27% of participants (28 out of 104 participants) are salaried, 73% of participants (76 out of 104 participants) are freelance, it reflects that maximum number of participants are freelance.
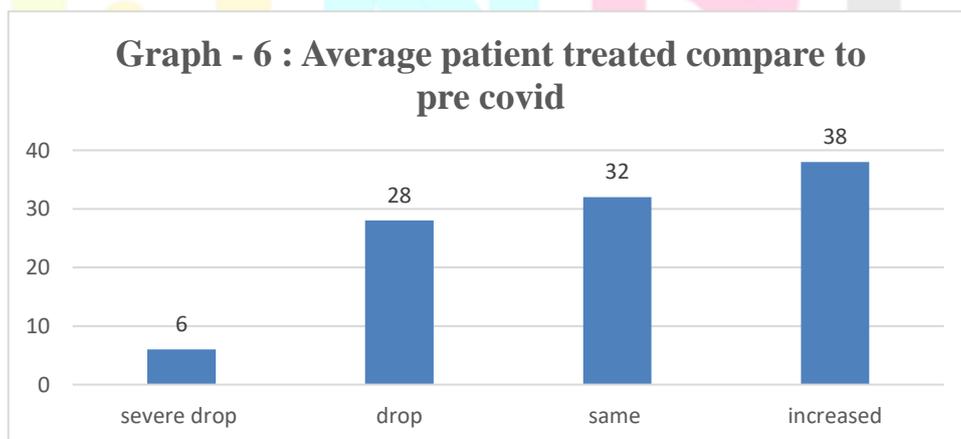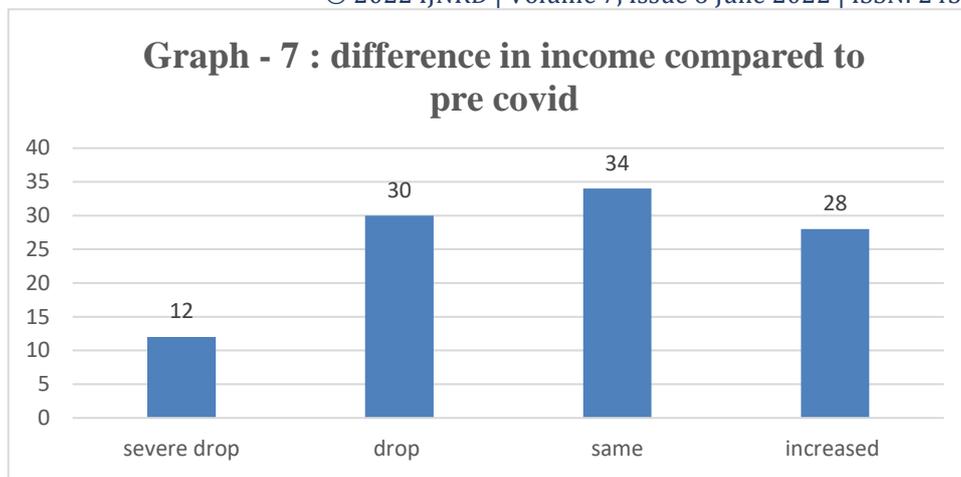
Graph - 4 : field of treatment

Graph - 4 : Represents the field of treatment wise distribution of all the 104 participants. The result suggest that 22.11% of participants (23 out of 104 participants) are neuro, 43.26% of participants (45 out of 104 participants) are ortho, 16.35% of participants (17 out o 104 participants) are cardio, 18.28% of participants (19 out of 104 participants) are from other fields, it reflects that maximum number of participants are from ortho field.
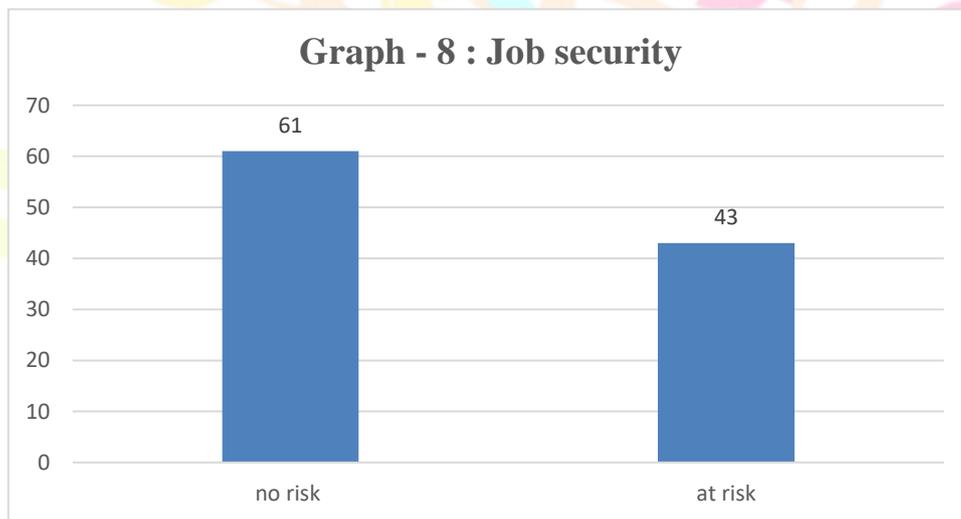
Graph - 5 : Type of clinic setting of all participants

Graph - 5 : Represents the type of clinic setting wise distribution of all the 104 participants. The result suggest that 42.31% of participants (44 out of 104 participants) are work in hospital, 37.50% of participants (39 out of 104 participants) are work in clinic, 20.21% of participants (21 out of 104 participants) are work as home health, it reflects that maximum number of participants are working in hospital.

Graph - 6 : Average patient treated compare to pre covid

Graph - 6 : Represents the Average patient treated compare to pre covid wise distribution of all the 104 participants. The result suggest that 5.79% of participants (6 out of 104 participants) average patient treated compare to pre covid are severe drop, 26,92% of participants (28 out of 104 participants) average patient treated compare to pre covid are less drop, 30.76% of participants (32 out of 104 participants) average patient treated compare to pre covid are same, 36.53% of participants (38 out of 104 participants) average patient treated compare to pre covid are increased, it reflect that maximum number of participants average patient treated compare to pre covid are increased.

Graph - 7 : difference in income compared to pre covid

Graph - 7 : Represents the difference in income compared to pre covid wise distribution of all the 104 participants. The result suggest that 9.61% of participants (12 out of 104 participants) difference in income compared to pre covid are severe drop, 28.85% of all the participants (30 out of 104 of all the participants) difference in income compared to pre covid are drop, 32.69% of all the participants (34 out of the 104 participants) difference in income compared to pre covid are same, 28.39% of partcipants (28 out of 104 participants) difference in income compared to pre covid are increased, It reflect that maximum number of participants difference in income compared to pre covid are same.

Graph - 8 : Job security

Graph - 8 : Represents the job security wise distribution of all the 104 participants. The result suggest that 58.65% of participants (61 out of 104 participants) job security are at no risk, 41.35% of participants (43 out of 104 participants) job security are at risk, it reflect that maximum number of participants job security are at no risk.

VI - CONCLUSION

Hence, we concluded that over all based-on result of current study and previous researches, it can be said that Reverberation of pandemic on income of health care professionals as we concluded that –

1. Maximum number of participants are male.
2. Maximum number of participants are of age between 22-30 years.
3. Maximum number of participants are freelance.
4. Maximum number of participants are from the orthopaedics field.
5. Maximum number of participants are working in hospital.
6. Maximum number of participants average patient treated compare to pre covid are increased.
7. Maximum number of participants difference in income compared to pre covid are same.
8. Maximum number of participants job security are at no risk.

VII - DISCUSSION

To determine the Reverberation of pandemic on income of health care professionals we conducted cross sectional simple randomized online survey among the health care professionals. We received 104 feedback's with consent based on inclusion and exclusion criteria.

In question 1 we asked about the gender of all the participants, which represents the gender wise distribution of all the 104 participants, we found that maximum participants are male, the result suggest that 55.77% of participants (58 out of 104 participants) are male, 44.23% of participants (46 out of 104 participants) are female.

In question 2 we asked about the age of all the participants, which represent the age wise distribution of all the 104 participants, we found that maximum participants are of age between 22-30 years, The result suggest that 14.5% of participants (15 out of 104

participants) are under 21 years, 66.5% of participants (69 out of 104 participants) are 22-30 years, 15.5% of participants (16 out of participants) are 31-40 years, 3.5% of participants (4 out of participants) are 41-50 years.

In question 3 we asked about the type of income of all the participants, which represent the type of income wise distribution of all the 104 participants, we found that maximum participants are freelancer, The result suggest that 27% of participants (28 out of 104 participants) are salaried, 73% of participants (76 out of 104 participants) are freelance.

In question 4 we asked about the field of treatment of all the participants, which represents the field of treatment wise distribution of all the 104 participants, we found that maximum participants are from orthopedics field, The result suggest that 22.11% of participants (23 out of 104 participants) are neuro, 43.26% of participants (45 out of 104 participants) are ortho, 16.35% of participants (17 out o 104 participants) are cardio, 18.28% of participants (19 out of 104 participants) are from other fields.

In question 5 we asked about the type of clinic setting of all the participants, which represents the type of clinic setting wise distribution of all the 104 participants, we found that maximum participants are working in hospital, The result suggest that 42.31% of participants (44 out of 104 participants) are work in hospital, 37.50% of participants (39 out of 104 participants) are work in clinic, 20.21% of participants (21 out of 104 participants) are work as home health.

In question 6 we asked about the Average patient treated compare to pre covid of all the participants, which represents the Average patient treated compare to pre covid wise distribution of all the 104 participants, we found that maximum participants average patient treated compare to pre covid are increased. The result suggest that 5.79% of participants (6 out of 104 participants) average patient treated compare to pre covid are severe drop, 26,92% of participants (28 out of 104 participants) average patient treated compare to pre covid are less drop, 30.76% of participants (32 out of 104 participants) average patient treated compare to pre covid are same, 36.53% of participants (38 out of 104 participants) average patient treated compare to pre covid are increased.

In question 7 we asked about the difference in income compared to pre covid of all the participants, which represents the difference in income compared to pre covid wise distribution of all the 104 participants, we found that maximum participants difference in income compared to pre covid are same. The result suggest that 9.61% of participants (12 out of 104 participants) difference in income compared to pre covid are severe drop, 28.85% of all the participants (30 out of 104 of all the participants) difference in income compared to pre covid are drop, 32.69% of all the participants (34 out of the 104 participants) difference in income compared to pre covid are same, 28.39% of partcipants (28 out of 104 participants) difference in income compared to pre covid are increased.

In question 8 we asked about the job security of all the participants, which represents the job security wise distribution of all the 104 participants, we found that maximum participants are at no risk, The result suggest that 58.65% of participants (61 out of 104 participants) job security are at no risk, 41.35% of participants (43 out of 104 participants) job security are at risk.

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