Impact of Mass Media on Quality of Life during COVID-19 Pandemic among Indian Population

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ABSTRACT

Background: With the course of the COVID-19 outbreak, it has fabricated a health crisis globally. At this time mass media plays an important role by covering the news on COVID-19 and diverse steps taken by the Indian government to combat with this crisis, which creates a remarkable effect on the daily life of citizens that is accountable for giving rise to threat and disruption in prolongation of life among Indian population.

The present study aims to evaluate the mass media impact on Quality of life during the COVID-19 pandemic among the Indian population.

Methods: To carry out this study, an online questionnaire was prepared on Google forms and distributed among the Indian population. The survey was conducted from 15th June to 30th June 2020. A total of 320 sample responses were received and data were analyzed by using SPSS software. A correlation has been used to find out the association between mass media and domains of Quality of Life (Psychological, Physical, Environmental, and Social) during COVID-19.

Result: We found a significant positive statistical correlation at 0.01 level between hours spent for COVID-19 news on the view of mass media with anxiety and nervousness 0.54, with worry 0.41 and with Quality of life 0.48.

Conclusion: This study found a positive association between mass media and the Psychological domain of Quality of life and on overall Quality of life among the Indian population during COVID-19. However, it needs to study further to identify the impact of mass media on a particular age group so that adequate health intervention can be planned.

Keywords: Mass media, Psychological, Physical, Social, Environmental, COVID-19, and Quality of Life.

INTRODUCTION

Human aligned their cultural and value system with relative to their aims, expectation, and standard of living for to lives a better life [1] that assimilate their quality of life that includes individual's physical and psychological health, and how they have a rapport with environment and society. [2] This advancement was probably distressed by the most condemnatory period where its prolongation is in commination by the surfacing of a novel corona virus [3] that was the first outline on December 2019 in a Wuhan city of China, [4] later it was divulged as a public health emergency outbreak of COVID 19, after escalating to other countries on January 30, 2020, by the World Health Organization. [5,6] This outbreak has fabricated a health crisis globally and creates remarkable knock-on possessions on the daily life of citizens, as well as about the global economy. [7] Not only the rate of imparting of the disease influence the life but because of slackening of socio-economic activities and outspread curtailment to stay at home effects [8] the daily routine work, that is accountable for giving rise to threat and disruption in prolongation of life amid general

population, [9] after taking diverse steps by the Indian government.

Throughout the health crisis, mass media has an eminent role to play in the current community. [10] The mass media - print, television, radio, and the internet - has an unprecedented outstretch as an imparting appliance. In the course of a public health crisis (COVID-19) mass media directly influence the solitary life in a positive and negative demeanor both and glance the all age group in one and the potency by patronage to the other abstruse alteration, economic stagnation, education, well-being, employment, communal relationships, healthcare provocation to combat COVID 19, and many more amid the society. [11] Infelicitous irrational outcomes among people have been seen to expand remarkably course of knowledge and rampart providing information and messages prevail via mass media. It follows administer the special recognition to a particular matter, the more coverage on the subject matter by media, [12] sustain more recognition and perturb, especially when it comes to the health of people's lives and have potentiality in mounting an agenda by formulating the issuance to take measures [13] on that. It is conscientiously realized that the mass media, principally its conventional elements (print, television, and radio) is in numerous ways that impoverished channel for the transmission of scientifically precise details about health and medicine, [14] susceptible to aggrandizement, the transgression of exclusion, and absolute inaccuracy. [15] Various studies also outlined unjustifiable rumors or staggering media coverage has the proficiency to construct misapprehension, misinformation concerning threat approximate in the minds of the extensive public with regards to the likelihood [16] in a public health crisis.

As a sequel, rapidly expanding information by mass media accountable for fabricating panic concerning COVID-19 and may acquire it undergo psychological problems in public from all the socioeconomic domains, which could be even more deleterious in the long run than the virus itself. Bridget Dibb also found a positive association between one of the most important mass media i.e. social media with physical health, well being, and Quality of life. [17] Therefore during pandemic mass media plays a foremost role by providing the diverse feature of information on a mass level and those may impact on individual's physical, social, psychological, and environmental domains of quality of life. [18] Hence the present study aims to determine the association of mass media with psychological, physical, social, and environmental domains of quality of life during COVID 19 pandemic.

MATERIALS AND METHODS

A cross-sectional, observational study carried out among the Indian population to determine the impact of mass media on Quality of life during COVID 19. A snowball sampling technique was used. The questionnaire was sent via what's app, Facebook, and G-mail to the contacts of authors and also requested to further share among their contacts and encouraged to fill by all age groups. 320 responses were accepted online from various states of India with different age groups of participants between 15th June to 30th June 2020.

The Questionnaire was developed by using Google form which included consent, demographic details, and 5 sections. The first section was Questions on the usage of mass media by participants. The second section was the Psychological domain which included 5 Questions regarding mental health, the third section was physical health which included 3 Questions on Physical Health, fourth section was based on social health and the last section was environmental health which asked 2 Questions based on their environment during COVID 19. In the last, one question was asked from all the participants on their overall Quality of Life during COVID 19 pandemic. All the domains were assessed on the 5 points Likert scale.

STATISTICAL METHODS

Data of this study was compiled in the Microsoft Excel sheet and was analyzed on descriptive statistics of SPSS version 16.0. Cronbach alpha (α) was used for testing the reliability of the questionnaire. The demographics of the subjects were analyzed by descriptive statistics. Spearman correlation was used to find the correlation between mass media and quality of life during this COVID-19 pandemic. The level of acceptable significance was set at $p < 0.01$.

RESULT

The value of Cronbach alpha (α) came out to be 0.78 indicating the questionnaire is reliable with an appropriate sample size of 320.

DEMOGRAPHIC DATA: A total number of 320 individuals of all age groups responded. Out of 320 respondents, 141 were males and 179 were females. The majority of them belong to the age group of 18-38 years. The majority of participants were using Television and social media of mass media for COVID-19 news. Demographic details are given in table 1.

Table 1: Demographic Variables of Participants

Variables	Participants, n (%)
Gender	
Male	141 (44.0)
Females	179 (55.9)
Age (years)	
< 18	12 (3.75)
18-38	246 (76.8)
38-60	49 (15.31)
>60	13 (4.06)
Qualifications	
PhD	3 (0.9)
Master	104 (32.5)
Bachelor	170 (53.1)
Diploma	7 (2.18)
High school or below high school	36 (11.25)

ROLE OF MEDIA

This section of the questionnaire asks about mass media usage and their views on media. The first question asked about the duration spends on mass media for watching the news on COVID 19. Responses are shown in fig 1. The majority of them watch news < 1 hour daily. The second question of this section was about their views regarding COVID-19 news showing on media. 31.9 % were of the view that there is a big difference between news and reality, 30.7 % responded that media is not able to show an exact picture but judgment can be made, 29.8 % were having a view that media only gives us stress due to continuous coverage of COVID-19, whereas remaining 7.6 % are in the favor that media is showing the reality which is on the ground. The third question asked was "Do you think that publishing more news related to COVID-19 on media has created panic?" 48.5 % responded yes, 14.1 % responded no and the remaining 37.4 % responded maybe. The last question of this section was "Do you think filters need to be added for specifying news on media?" 60.4% responded yes whereas 18.7 % said no and the remaining 20.9 % responded maybe.
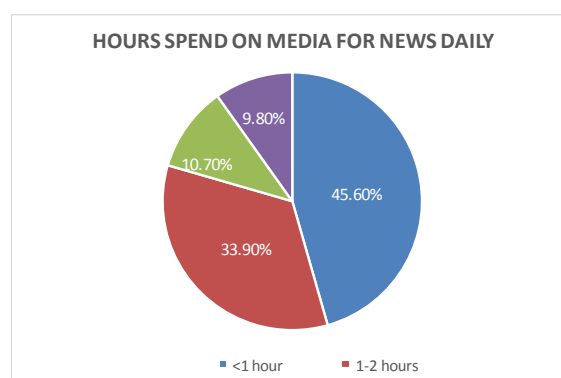

Fig 1: Hours spend on media for news daily

PSYCHOLOGICAL AND SOCIAL DOMAIN: The questionnaire includes questions that determine the effect of mass media on mental health and social interactions during this pandemic. The responses indicate that 27.81 % of the respondents felt anxious and nervous quite often after they watch the news on COVID 19. In the question which stated, "How often you felt down, depressed, or hopeless after watching the news on COVID 19?" 26.87 % responded that they most of the time felt this. And in the question "How often have you been not able to stop yourself from worrying about deteriorating conditions occurring worldwide during COVID-19",

27.18 % answered that they rarely feel like this. These are the 3 components in the psychological domain which are most affected. In the question related to the social domain, the response indicates that they are not that much affected emotionally as well as socially. The responses to all the questions related to the psychological and social domains are given in table 2.

Table 2: Psychological and Social Domain

Variables	Every time	Most of the time	Quite often	Rarely	Not at all
How often have you been feeling nervous and anxious after watching the news on COVID 19?					
N (%)	39 (12.18)	58 (18.12)	89 (27.81)	75 (23.43)	59 (18.43)
How often are you feeling afraid as if something awful might happen after watching the news on COVID 19?					
N (%)	31(9.68)	85 (26.56)	95 (29.68)	70 (21.87)	39 (12.18)
How often you felt down, depressed, or hopeless after watching the news on COVID 19?					
N (%)	39 (12.18)	86 (26.87)	84 (26.25)	73 (22.81)	38 (11.87)
How often you are not able to concentrate on daily routine work and job life after watching the news on COVID 19?					
N (%)	29 (9.06)	66 (20.62)	79 (24.68)	90 (28.12)	56 (17.5)
How often have you been not able to stop yourself from worrying about deteriorating conditions occurring worldwide due to COVID 19?					
N (%)	32 (10.0)	69 (21.56)	84 (26.25)	87 (27.18)	48(15.0)
How much have you been affected emotionally due to physical distancing during COVID 19 period?					
N (%)	46 (14.37)	97 (30.31)	104(32.5)	46 (14.37)	27(8.43)

We found a significant positive correlation between the number of hours people spend on mass media for news daily and how often they felt nervous and anxious after watching the news on COVID-19 (r=0.54 ; p<0.01). Another statistical significant positive correlation was found between the number of hours spent on mass media and how often they are not able to stop worrying about conditions occurring worldwide due to COVID-19 (r= 0.41 ; p<0.01) (table 4)

PHYSICAL AND ENVIRONMENTAL DOMAIN OF QOL
This section includes questions related to the physical and environmental domains. The analysis of the data revealed that major component which is affected in the physical domain is sleeping i.e. 38.75 % of the respondents are dissatisfied with their sleep during COVID-19 period. Whereas the environmental domain is not affected much. Responses of all the questions are given in table 3.

Table 3: Physical and Environmental domain

	Very Satisfied	Very Dissatisfied	Dissatisfied	Neither sat.nor diss.	Satisfied
How satisfied are you with your work capacity?					
N (%)	24 (7.5)	66 (20.62)	85 (26.56)	123 (38.4)	22 (6.87)
How satisfied are you with the quality of sleep during the COVID 19 period?					
N (%)	49 (15.31)	124 (38.75)	112 (35.0)	23 (7.18)	12 (3.75)
How satisfied are you with energy for everyday life?					
N (%)	6 (1.87)	23 (7.18)	88 (27.5)	128 (40.0)	75(23.43)
How satisfied are you with the conditions of your living place?					
N (%)	14 (4.37)	38 (11.87)	86 (26.87)	125 (39.06)	5(17.81)
How satisfied are you with your access to health services?					
N (%)	37 (11.56)	74 (23.12)	106 (33.12)	92 (28.75)	11 (3.43)

QUALITY OF LIFE
The last question of this questionnaire asks the respondents about their quality of life. Do you feel media has affected your QOL during COVID-19 as compared to the pre-COVID 19 periods? The analysis revealed that 26.25 % of the respondents have felt that their QoL is affected slightly whereas 25.93% responded that their QoL is moderately affected. The response to this question is shown in fig.2. Further, we find a statistically significant positive correlation between the number of hours spent on mass media for watching the news on COVID-19 and Quality of life (r=0.480; p<0.01) as shown in table 4.
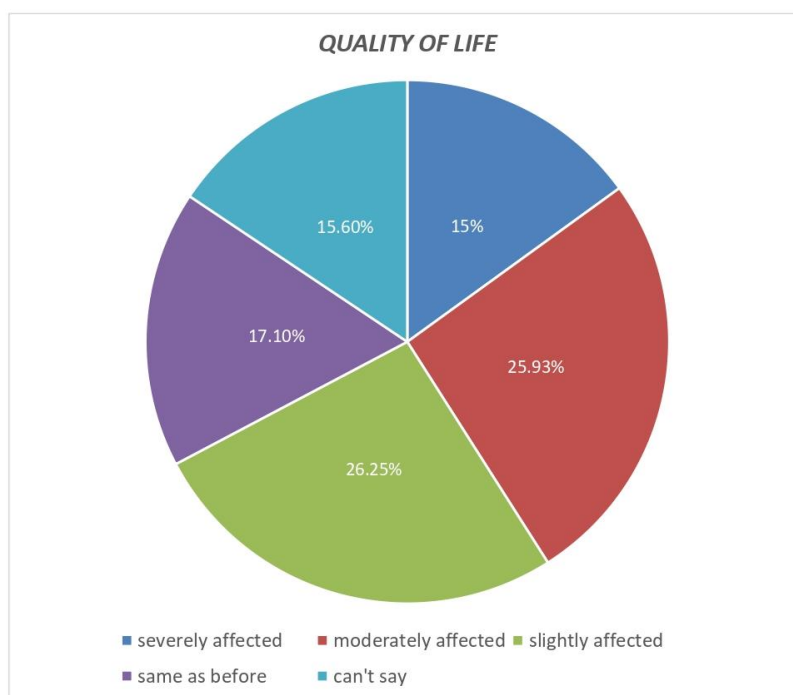
Figure 2: Quality of life

Table 4 represents the correlation of spending hours on mass media by participants with nervousness and anxiety, worrying, and quality of life during the COVID 19 period

PARAMETER	CORRELATION (r)	p VALUE
Hours spend on media for COVID news and anxiety & nervous	0.54	0.0*
Hours spend on media for COVID news and worry	0.41	0.0*
Hours spend on media for COVID news and Quality of life	0.48	0.0*

*=correlation is significant at 0.01 level

DISCUSSION

The present study was conducted to determine the impact of mass media on the quality of life. The results revealed that mass media had an impact on the quality of life of individuals of all age groups as mass media is responsible for creating an image on education, health, business, social relationships, and many more among the society. [11] During this pandemic, various restrictive measures were applied in several countries that appeared to be effective in containing the spread of COVID-19. [19] But these measures disrupted people's daily employment and activities which affected their health and overall well being. [20]

The results of this study showed that the major impact of mass media has been reflected in the psychological domain of quality of life of all the individuals. Mohit Varshney et al. [21] in their study reported that the news coverage by mass media on the issues regarding economic growth, health, the progression of the disease, and livelihood has been increased day by day since after this pandemic which creates a significant impact on mental health among Indian population. The analysis revealed a significant positive correlation of 0.54 between hours spent on mass media for COVID-19 news with nervousness and anxiety. The results of this study are in the same line with the results found in another study. [22] Another significant positive correlation of 0.4 was seen between hours spend on media and worry. The underlying cause behind this major impact on mental health in this study could be the stress created due to the publishing of the news by mass media without filter [23] and the fake news shown by the media during this COVID-19 period. [24] Various studies have also reported a negative impact of media exposure on mental health during this pandemic. [22,24-26,27,28]

Under the physical domain, this study showed that the majority of the respondents were satisfied with their

working capacity and energy for daily living. The major component which in most affected under this domain is sleep quality. About 38.75 % are dissatisfied with their sleep quality. This is one of the common problems which is seen during this period and has also been reported by Domina petrica. [29] The reason of this could be lack of physical activity as mentioned by Altena et al, [30] also in 2020 which stated that there is a decrease in physical activity during this period a majority of the people are in their home and lack of social peers, such as daily work schedule and social interactions which could have led to decrease in sleep quality. Furthermore, Mesfin A. Bekalu [31] reported a positive association between physical health and usage of media. As media can be considered as the source, which connects the person to a real-life scenario by updating them about the current situation and with person to person by the means of social media, [32] but it provides lots of information without filter, same as in during COVID-19 which is responsible for creating panic and anxiety after watching the news which could have led to poor sleep quality.

Social distancing is one of the important measures taken to combat COVID-19 (WHO) and to further control this pandemic, several guidelines had been released by the Indian Govt. (Closing gym, malls, work from home, etc.) which has been shown by mass media [33] over time consistently. This could have affected the individuals emotionally even after connecting digitally, [20,34] the analysis of this study also revealed that almost 30.31% of the respondents are affected emotionally most of the time due to physical distancing during this pandemic.

There is less impact seen in the environmental domain of QOL but it has been reported that mass media is criticized for their efficacy of content [35] especially during the public health crisis as the Indian healthcare system have been already facing several challenges for providing healthcare services throughout the country. The present study reported 11.87% participants are dissatisfied with the conditions of living place and 23.12 % are dissatisfied with access to health services as financial, organizational, social, and cultural domains has been noticed as a barrier in the accessibility of healthcare services, even in the places where they are available [36] and mass media also mislead normal population during a public health crisis. [16]

This present study found a significant positive correlation between Quality of life and hours spent on mass media for COVID 19 news. All four domains of QOL are affected, among which the psychological domain is highly affected whereas other domains are also slightly affected. So, there is the overall impact of media usage on QOL during the COVID-19 pandemic.

Limitations
Some limitations of this study include: Self-reported data from selected participants and relying on other networks for sharing the Questionnaire. There was no age-specific population has been targeted to determine the impact of mass media on Quality of life.

There is a scope of further study to identify the impact of mass media on Quality of life at a specific age group. As a result of this study found more impact on the Psychological domain on Quality of life, it needs to do further study on the Psychological domain by targeting all age groups individually with the usage of validated Psychological health-based Questionnaire or approach.

CONCLUSION AND IMPLICATIONS
The study concluded that time spent on mass media for news on COVID-19 daily has a direct impact on Quality of life on the population of all age groups. However, among all the domains of the Quality of life, the psychological domain is highly affected. So, with this study, we can imply that times spend on mass media for watching COVID-19 news should be

reduced to limit their effects on QOL. Further authentication and reliability of the Source of news should be checked appropriately before considering it. Moreover, the publisher/reporter should also consider the true authenticity & reliability of the information and also needs to add some filter for specifying the information before disseminating the news through mass media.

REFERENCES

1. Ruževičius J, Akranavičiūtė D. Quality of life and its components measurement. Engineering economics. 2007;2:43-8.
2. Ruževičius J. Quality of life and Working Life: Conceptions and Research. In Liverpool (2014): 17th Toulon-Verona Conference" Excellence in Services" 2014 Aug 18.
3. Hick JL, Biddinger PD. Novel coronavirus and old lessons-preparing the health system for the pandemic. New England Journal of Medicine. 2020 May 14;382(20):e55.
4. Zheng J. SARS-CoV-2: an emerging coronavirus that causes a global threat. International journal of biological sciences. 2020;16(10):1678.
5. WHO Director-General's statement on IHR Emergency Committee on Novel Coronavirus (2019-nCoV). https://www.who.int/dg/speeches/detail/who-director-general-s-statement-on-ihr-emergency-committee-on-novel-coronavirus-(2019-ncov). (Accessed Feb 9, 2020).
6. GÜNER HR, HASANOĞLU İ, AKTAŞ F. COVID-19: Prevention and control measures in community. Turkish Journal of medical sciences. 2020 Apr 21;50(SI-1):571-7.
7. Ebrahim SH, Ahmed QA, Gozzer E, Schlagenhauf P, Memish ZA. Covid-19 and community mitigation strategies in a pandemic.
8. Kumar M, Dwivedi S. Impact of coronavirus imposed lockdown on Indian population and their habits. International Journal of Science & Healthcare Research. 2020; 5(2): 88-97.
9. Pulla P. Covid-19: India imposes lockdown for 21 days and cases rise.
10. Gunther AC. The persuasive press inference: Effects of mass media on perceived public opinion. Communication Research. 1998 Oct;25(5):486-504.
11. Alalawi N, Al-Jenaibi B. A Research Into the Fact That Media Have Direct Effects on People in Different Ways. J Mass Communicat Journalism. 2016;6(287):2.
12. Institute of Medicine (US) Committee on Assuring the Health of the Public in the 21st Century. The Future of the Public's Health in the 21st Century. Washington (DC): National Academies Press (US); 2002. Available from: https://www.ncbi.nlm.nih.gov/books/NBK221239/ doi: 10.17226/10548
13. McCombs ME, Shaw DL. The agenda-setting function of mass media. Public opinion quarterly. 1972 Jan 1;36(2):176-87.
14. Snow J. How the media are failing the health service. Bmj. 2008 Jun 30;337.
15. Leask J, Hooker C, King C. Media coverage of health issues and how to work more effectively with journalists: a qualitative study. BMC public health. 2010 Dec;10(1):535.
16. Fishman JM, Casarett D. Mass media and medicine: when the most trusted media mislead. In Mayo clinic proceedings 2006 Mar 1 (Vol. 81, No. 3, p. 291). Mayo Foundation for Medical Education and Research.
17. Dibb B. Social media use and perceptions of physical health. Heliyon. 2019 Jan 1;5(1):e00989.
18. González-Blanch C, Hernández-de-Hita F, Muñoz-Navarro R, Ruíz-Rodríguez P, Medrano LA, Cano-Vindel A. The association between different domains of quality of life and symptoms in primary care patients with emotional disorders. Scientific reports. 2018 Jul 25;8(1):1-0.
19. Bedford J, Enria D, Giesecke J, Heymann DL, Ihekweazu C, Kobinger G, Lane HC, Memish Z, Oh MD, Schuchat A, Ungchusak K. COVID-19: towards controlling of a pandemic. The Lancet. 2020 Mar 28;395(10229):1015-8.
20. Galea S, Merchant RM, Lurie N. The mental health consequences of COVID-19 and physical distancing: The need for prevention and early intervention. JAMA internal medicine. 2020 Jun 1;180(6):817-8.
21. Varshney M, Parel JT, Raizada N, Sarin SK. Initial psychological impact of COVID-19 and its correlates in Indian Community: An

online (FEEL-COVID) survey. Plos one. 2020 May 29;15(5):e0233874.

22. Hamidein Z, Hatami J, Rezapour T. How People Emotionally Respond to the News on COVID-19: An Online Survey. Basic and Clinical Neuroscience. 2020 Mar 1:180-79.

23. Welbers K, Opgenhaffen M. News through a social media filter different perspectives on immigration in news on website and social media formats. Benjamins Translation Library.2019;146.

24. Kumar Chandan Srivastava, Deepti Shrivastava, Kumar Gaurav Chhabra, Waqar Naqvi, Arti Sahu. Façade of media and social media during COVID-19: A review. Ijrps [Internet]. 2020Jun.19 [cited 2020Aug.2];11(SPL1):142-9. Available from: https://pharmascope.org/ijrps/article/view/2288

25. Wang C, Zhao H. The Impact of COVID-19 on Anxiety in Chinese University Students. Frontiers in Psychology. 2020 May 22;11: 1168.

26. Gao J, Zheng P, Jia Y, Chen H, Mao Y, Chen S, Wang Y, Fu H, Dai J. Mental health problems and social media exposure during COVID-19 outbreak. Plos one. 2020 Apr 16;15(4):e0231924.

27. Olagoke AA, Olagoke OO, Hughes AM. Exposure to coronavirus news on mainstream media: The role of risk perceptions and depression. British Journal of Health Psychology. 2020 May 16: e12427.

28. Chao M, Xue D, Liu T, Yang H, Hall BJ. Media use and acute psychological outcomes during COVID-19 outbreak in China. Journal of Anxiety Disorders. 2020 May 28:102248.

29. Petric D. Negative mental health effects of COVID-19 pandemic and panic.

30. Altena E, Baglioni C, Espie CA, Ellis J, Gavriloff D, Holzinger B, Schlarb A, Frase L, Jernelöv S, Riemann D. Dealing with sleep problems during home confinement due to the COVID-19 outbreak: Practical recommendations from a task force of the European CBT-I Academy. Journal of Sleep Research. 2020 Apr 4:e13052.

31. Bekalu MA, McCloud RF, Viswanath K. Association of social media use with social well-being, positive mental health, and self-rated health: disentangling routine use from emotional connection to use. Health Education & Behavior. 2019 Dec; 46(2_suppl):69S-80S.

32. Akram W, Kumar R. A study on positive and negative effects of social media on society. International Journal of Computer Sciences and Engineering. 2017 Oct; 5(10):351-4.

33. Collinson S, Khan K, Heffernan JM. The effects of media reports on disease spread and important public health measurements. PloS one. 2015 Nov 3;10(11):e0141423.

34. Pfefferbaum B, North CS. Mental health and the Covid-19 pandemic. New England Journal of Medicine. 2020 Apr 13.

35. Henderson L, Hilton S. The media and public health: where next for critical analysis?.

36. Kasthuri A. Challenges to healthcare in India-The five A's. Indian journal of community medicine: official publication of Indian Association of Preventive & Social Medicine. 2018 Jul;43(3):141.

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