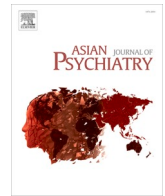




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Review article

COVID-19 and suicidal behavior: A bibliometric assessment

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ABSTRACT

The paper examines the global research output on suicidal behavior during the COVID-19 pandemic. The Scopus database was used to identify the publications on suicidal behavior during the COVID-19 pandemic from the beginning of the pandemic to up to 17th May 2021. The 686 publications emerging from 78 countries were found on the topic. These publications received 7970 citations, with an average of 11.62 citations per paper. About one-sixth (16.33%) of the total publications were funded, and these publications averaged 17.24 citations per paper. The publications from the top 10 most productive countries accounted for 92.71% of all publications. The highest number of publications emerged from United States, United Kingdom, and India. However, the relative citation index was highest for publications arising from France, Bangladesh, and Germany. The total number of organizations and authors involved in these publications were 286 and 290, respectively. The top 20 most productive organizations and authors contributed to 35.13% and 17.64% of publications and 79.15% and 58.61% global citations share, respectively. The maximum number of papers were published in the Asian Journal of Psychiatry, followed by Psychiatry Research and Lancet Psychiatry. This study suggests that suicidal behavior has received considerable attention during the ongoing COVID-19 pandemic.

1. Introduction

Coronavirus disease 19 (COVID-19), has led to significant psychological distress in the general population. It was forecasted that there would be an increase in suicidal behavior, i.e., suicidal ideations, suicidal attempts, and completed suicide after the onset of the pandemic, due to various reasons. However, some recent reviews have reported a lack of data to suggest an actual increase in suicidal behavior (John et al., 2020). However, possibly there is an increase in publications related to suicidal behavior in the scientific literature. There are different ways to understand the publications on a particular topic, i.e., carrying out a review, metaanalysis, or studying Bibliometric trends. Bibliometrics is also an essential tool and is widely used in various fields to measure and evaluate scientific research quantitatively and qualitatively. Bibliometrics, along with novel visualization methods of scientific information, can help identify the contribution of publications from various countries, institutions, and authors (Agarwal et al., 2016).

Only a few bibliometric studies have been undertaken to understand the literature on suicide and suicidal behavior. In one of the studies, authors carried out a quantitative assessment of publications (n = 41,276) on suicidal behavior published from 1989 to 2018. Over 30

years, the number of annual publications multiplied by six times. Psychiatry and psychology were the dominant research areas. Three-quarters of all publications were from high-income countries. This study also showed that a significant gap persisted between male and female researchers over time. In terms of funded research, it was primarily public-funded with a smaller share from the private sector. The authors recommended a need to encourage more research on the topic from the low- and middle-income countries where 80% of suicides occur (Astraud et al., 2020). The authors also emphasized the need to bridge the gender gap in terms of the authors (Astraud et al., 2020). Another study evaluated the 1078 publications with one of the authors from India, on suicide during 2005–2014 years, as indexed in Scopus database, with a focus on publication growth, citation impact, international collaboration, subject-wise distribution of publications, contribution, and citation impact of Indian organizations and authors, medium of communication, and characteristics of its high-cited papers (Gupta et al., 2016). A recent study evaluated the impact of COVID-19 on global research related to suicidal behavior to understand the active authors, organizations, journals, and countries involved in this research of COVID and suicide. The authors evaluated the research published up to 25.10.2020. As per this study, MA Mamun was the most active author

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with 11 papers, with the highest citations. The highest number of publications (n = 42) emerged from the United Kingdom, and the highest number of publications were published in Lancet Psychiatry (Jayaram and Singh, 2020). However, much data has emerged in the last seven months when one looks at the available literature. Hence, it is vital to have a look at the landscape of publications on suicidal behavior again. Accordingly, this study aimed to evaluate the publications related to “COVID-19 and suicide” using bibliometric methods to understand global.

literature’s bibliometric characteristics and study the research trends. The study also evaluates the origin of the publication in terms of countries, organizations, authors, and journals.

2. Materials and methods

For this study, the global publications on the "Impact of COVID-19 on Suicide" were identified, retrieved, and downloaded from the Scopus database (<http://www.scopus.com>) on 17.05.2021 using a search strategy, where a set of two types of keywords related to "COVID-19" and "Suicide" were used in "Keyword tag" and "Article Title tag" (joined by Boolean operator "OR") of the Scopus database. The country’s search strategy was further refined to get publication output data of the top 10 countries and get statistics on global output by the subject, collaborating country, organization, author, and journal. Citations to publications were counted from the date of their publication till the 17th of May 2021.

3. Results

3.1. Publication growth

The global publications on “Impact of COVID-19 on Suicide” consisted of 686 records (2020 = 483; 2021 = 203) as indexed in the Scopus database. These 686 publications received 7970 citations, with a mean of 11.62 citations per paper (CPP). Only 112 (16.33%) out of 686 publications were based on funded work, and these publications accounted for about one-fourth (n = 1931) of the total citations, with an average of 17.24 CPP. The articles and letters constituted the largest share (43.15% and 27.11%, respectively) of the full share of the publications, followed by reviews, editorial, and notes (10.64%, 10.20%, and 8.31%) and short surveys and erratum (0.29% each).

3.2. Countries with a higher number of publications

The authors from 78 countries contributed to publications, and their distribution was uneven, with authors from 60 countries publishing 1–10 papers and authors from 14 countries publishing 11–50 articles. The authors from 3 countries published 51–100 papers, and authors from only one country contributed to more than 100 papers (Table 1). The highest number of publications emerged from the United States,

Table 1
Profile of publications from Top 10 countries on suicidal behavior and COVID-19.

| S. No. | Name of the country | TP | TC | CPP | %TP | HI | ICP | %ICP | RCI |
|--------|---------------------|-----|--------|-------|-------|------|-----|-------|------|
| 1 | USA | 207 | 2788 | 13.47 | 30.17 | 25 | 66 | 31.88 | 1.16 |
| 2 | UK | 92 | 1319 | 14.34 | 13.41 | 15 | 52 | 56.52 | 1.23 |
| 3 | India | 74 | 659 | 8.91 | 10.79 | 12 | 17 | 22.97 | 0.77 |
| 4 | Australia | 55 | 1629 | 29.62 | 8.02 | 10 | 29 | 52.73 | 2.55 |
| 5 | Canada | 44 | 742 | 16.86 | 6.41 | 11 | 24 | 54.55 | 1.45 |
| 6 | Italy | 43 | 737 | 17.14 | 6.18 | 11 | 20 | 46.51 | 1.48 |
| 7 | China | 41 | 1542 | 37.61 | 5.98 | 13 | 15 | 36.59 | 3.24 |
| 8 | France | 31 | 405 | 13.06 | 4.52 | 11 | 9 | 29.03 | 1.13 |
| 9 | Bangladesh | 27 | 488 | 18.07 | 3.94 | 9 | 19 | 70.37 | 1.56 |
| 10 | Germany | 22 | 325 | 14.77 | 3.21 | 6 | 16 | 72.73 | 1.27 |
| | Total | 636 | 10,634 | 16.72 | 92.71 | 12.3 | 267 | 41.98 | 1.44 |
| | World | 686 | 7970 | 11.62 | | | | | |

TP=Total Papers; TC=Total Citations; CPP=Citations Per Paper; ICP=International Collaborative Papers; HI=H-Index; RCI=Relative Citation Index.

followed by the United Kingdom and India, accounting for 30.17%, 13.41%, and 10.79% of the total publication share, respectively (Table 1). Publications from four out of the top 10 countries had CPP and relative citation index above the global average (11.62 and 1.44 respectively) on the topic (Table 1). Overall, the top ten countries accounted for 92.7% of the total publications on the subject.

3.3. Important keywords

A list of 33 important keywords was identified based on the frequency of appearance from the literature. The most frequent keywords, along with suicide, were depression and mental health (Table 2).

3.4. Top 20 most productive organizations

Two hundred and eighty-six organizations contributed to the research on suicidal behavior in the context of COVID-19, with authors from the majority of the organizations published 1–5 papers (n = 241), authors from 35 organizations published 6–10 pieces, and authors from 10 organizations were publishing 11–20 articles each. Authors from the top 20 most productive organizations together contributed to 35.13% (n

Table 2
The common Keywords in the literature on suicidal behavior published in relation to COVID-19.

| S. No | Name of the Keyword | Frequency | S. No | Name of the Keyword | Frequency |
|-------|-----------------------|-----------|-------|-----------------------|-----------|
| 1 | Suicide | 396 | 18 | Fear | 66 |
| 2 | Depression | 291 | 19 | Automutilation | 64 |
| 3 | Mental Health | 291 | 20 | Social Distancing | 62 |
| 4 | Psychology | 264 | 21 | Loneliness | 61 |
| 5 | Anxiety | 215 | 22 | Psychology Wellbeing | 51 |
| 6 | Suicidal Ideation | 211 | 23 | Copying Behavior | 48 |
| 7 | Mental Disease | 196 | 24 | Psychosis | 48 |
| 8 | Quarantine | 143 | 25 | Psychological Stress | 46 |
| 9 | Suicidal Behavior | 120 | 26 | Domestic Violence | 43 |
| 10 | Social Isolation | 115 | 27 | Lockdown | 36 |
| 11 | Suicide Attempts | 105 | 28 | Sleep Disorders | 31 |
| 12 | Post-traumatic Stress | 103 | 29 | Mood Disorders | 28 |
| 13 | Mental Health Service | 98 | 30 | Psychology Resilience | 28 |
| 14 | Mental Stress | 88 | 31 | Alcoholism | 26 |
| 15 | Insomnia | 74 | 32 | Job Stress | 26 |
| 16 | Distress Syndrome | 72 | 33 | Substance Abuse | 24 |
| 17 | Mental Health care | 71 | | | |

= 241) of the total publications, and these publications contributed to 79.15% (n = 6308) of the citations share (Table 3).

3.5. 20 most productive authors

Two hundred ninety authors participated in global research on suicidal behavior about COVID-19. The majority of the authors published between 1 and 5 papers, and only 12 authors published 12 or more documents. The research productivity of the top 20 most productive authors varied from 8 to 22 articles, and together these 20 authors contributed 35.1% (n = 241) of the publications and four-fifth (79.15%; n = 6308) citations share (Table 4).

3.6. Medium of research communication

All papers on the topic appeared in 318 journals, with the majority of the journals (n = 298) publishing 1–5 articles, 13 journals publishing 6–10 papers, and seven journals published 11–46 reports. The top 20 most productive journals accounted for 37.81% share of global publications in journals. The *Asian Journal of Psychiatry* was the topmost productive journal (with 46 papers), followed by *Psychiatry Research* (38 articles), *Lancet Psychiatry* (20 documents), *Frontiers in Psychiatry* (19 reports), and *Journal of Affective Disorders* (15 papers). Papers published in *Brain*, *Behavior & Immunity* were the most impactful in terms of citation per paper (79.25), followed by *Lancet Psychiatry* (71.4), *Psychiatry & Clinical Neuroscience* (56.63), *BMJ* (21.8), *Encephale* (21.0), and *Psychiatry Research* (17.97) (Table 5).

3.7. High cited papers

Of the 686 papers, only 21 (3.06% share) papers were cited more than 80 times since the publication time (cumulative total citations-3943), averaging 187.76 CPP. The distribution of these 21 highly-cited papers was skewed: seven articles registered citations in the range 81–99 per paper, eight papers were cited 102–178 times, five papers were cited 212–349 times, and one-piece received 868 citations. Of the 21 highly cited papers, seven were published as letters, six as articles, four as reviews, two as notes, and one each as editorial and a short survey. The 21 high cited papers involved authors from 89 organizations and 96 authors. Of the 21 highly cited articles, 8 came from authors from single organizations (non-collaborative reports), and 13

papers had authors from two or more organizations (3 national collaboratives and ten international collaborative pieces). The majority of the highly cited papers had authors from the United States (8 articles), followed by authors from the United Kingdom (4 articles), Italy (4 articles), Australia (3 papers), and China (3 pieces). These 21 highly papers were published in 13 journals. Five papers were published in *Brain*, *Behavior & Immunity*, two papers each in *Asian Journal of Psychiatry* and *The Lancet Psychiatry*, and one paper each in 10 other journals.

4. Discussion

The present study examines the literature (686 records) on "COVID-19 and suicidal behavior" covered in the Scopus database covering 2020–21. The Scopus database is more comprehensive than Pubmed, including some of the journals not listed in Pubmed. The 686 publications on the topic received 7970 citations, averaging 11.62 CPP. Only one-sixth (16.33%) of the publications received funding support from various national and international research agencies. These findings suggest that there is a rapid proliferation of publications on this topic. In the previous Bibliometric analysis of the papers on the subject, which covered the database, up to 25.10.2020, although the authors did not provide the exact details of the total number of publications, it appears that in the last seven months, there is a significant increase in the number of publications on the topic. This suggests that increased attention has been paid to suicidal behavior.

These publications emerged from 78 countries, with papers from the top 10 most productive countries accounting for 92.71% share and most citations output. The finding suggests that information about suicidal behavior in the context of an ongoing pandemic from more than half of the world's countries. Accordingly, it can be said that, although there has been a significantly higher number of publications on the topic, these publications, in a real sense, do not reflect the global perspective concerning suicidal behavior. The highest number of publications emerged from the United States, followed by the United Kingdom and India, with authors from these countries accounting for 30.17%, 13.41%, and 10.79%, respectively. These countries are among the most severely hit by the pandemic regarding the number of cases, mortality, and possibly another socio-economic impact. Accordingly, this finding may reflect the pandemic's impact and suggest that the countries that are badly hit by the pandemic may also encounter more suicidal behavior. However, this hypothesis needs to be established with more

Table 3
20 most productive organizations to suicide research during the COVID-19 pandemic.

| S.No | Name of the Organization | TP | TC | CPP | HI | ICP | %ICP | RCI |
|------|--|-------|-------|-------|-----|-----|--------|------|
| 1 | Harvard Medical School, USA | 22 | 366 | 16.64 | 5 | 7 | 31.82 | 1.43 |
| 2 | VA Medical Center, USA | 18 | 253 | 14.06 | 5 | 3 | 16.67 | 1.21 |
| 3 | University of Toronto, Canada | 18 | 622 | 34.56 | 9 | 11 | 61.11 | 2.97 |
| 4 | University of Melbourne, Australia | 17 | 1429 | 84.06 | 6 | 10 | 58.82 | 7.23 |
| 5 | Institut national de la santé et de la recherche médicale (INSERM), France | 16 | 316 | 19.75 | 8 | 5 | 31.25 | 1.70 |
| 6 | Icahn School of Medicine at Mount Sinai, USA | 15 | 183 | 12.20 | 5 | 2 | 13.33 | 1.05 |
| 7 | Nottingham Trent University, UK. | 12 | 318 | 26.50 | 7 | 12 | 100.00 | 2.28 |
| 8 | King's College London, U.K. | 12 | 111 | 9.25 | 5 | 6 | 50.00 | 0.80 |
| 9 | Jahangirnagar University, Bangladesh | 12 | 414 | 34.50 | 6 | 11 | 91.67 | 2.97 |
| 10 | Center for Health Innovations Networking Training Action Research, Bangladesh | 12 | 416 | 34.67 | 6 | 10 | 83.33 | 2.98 |
| 11 | Postgraduate Institute of Medical Education & Research, Chandigarh | 10 | 287 | 28.70 | 3 | 0 | 0.00 | 2.47 |
| 12 | Jawaharlal Institute of Postgraduate Medical Education & Research, Pondicherry, India | 10 | 33 | 3.30 | 3 | 2 | 20.00 | 0.28 |
| 13 | University of Glasgow, U.K. | 9 | 497 | 55.22 | 6 | 7 | 77.78 | 4.75 |
| 14 | Brigham & Women's Hospital, USA | 9 | 312 | 34.67 | 3 | 4 | 44.44 | 2.98 |
| 15 | University of Oxford, UK. | 9 | 77 | 8.56 | 6 | 6 | 66.67 | 0.74 |
| 16 | Tongji Medical College, China | 8 | 72 | 9.00 | 4 | 3 | 37.50 | 0.77 |
| 17 | University of Manchester, UK. | 8 | 347 | 43.38 | 5 | 4 | 50.00 | 3.73 |
| 18 | Yale School of Medicine, USA | 8 | 22 | 2.75 | 2 | 1 | 12.50 | 0.24 |
| 19 | AP-HP Assistance PubliqueHopital de Paris, France | 8 | 212 | 26.50 | 7 | 1 | 12.50 | 2.28 |
| 20 | Rocky Mountain Illinois Research education & Clinical Centre for Suicide Prevention, Aurora, USA | 8 | 21 | 2.63 | 3 | 0 | 0.00 | 0.23 |
| | Total of 20 organizations | 241 | 6308 | 26.17 | 5.2 | 105 | 43.57 | 2.25 |
| | Global total | 686 | 7970 | 11.62 | | | | |
| | Share of top 15 organizations in global total | 35.13 | 79.15 | | | | | |

TP=Total Papers; TC=Total Citations; CPP=Citations Per Paper; ICP=International Collaborative Papers; HI=H-Index; RCI=Relative Citation Index.

Table 4

Top 20 most productive authors on publications on suicidal behavior during the COVID-19 pandemic.

| S. No. | Name of the Author | Affiliation of the Author | TP | TC | CPP | HI | ICP | %ICP | RCI |
|--------|--------------------|---|-------|-------|-------|------|-----|--------|------|
| 1 | M.A.Mamun | Center for Health Innovations Networking Training Action Research, Bangladesh | 13 | 420 | 32.31 | 6 | 11 | 84.62 | 2.78 |
| 2 | MD.Griffiths | Nottingham Trent University, UK. | 11 | 304 | 27.64 | 6 | 11 | 100.00 | 2.38 |
| 3 | L. Sher | Icahn School of Medicine at Mount Sinai, USA | 9 | 157 | 17.44 | 4 | 0 | 0.00 | 1.50 |
| 4 | V.Menon | Jawaharlal Institute of Postgraduate Medical Education & Research, Pondicherry, India | 8 | 22 | 2.75 | 2 | 2 | 25.00 | 0.24 |
| 5 | A. John | Swansea University, UK. | 7 | 400 | 57.14 | 6 | 5 | 71.43 | 4.92 |
| 6 | E. Arensman | National Suicide Research Foundation, Ireland | 5 | 334 | 66.80 | 5 | 3 | 60.00 | 5.75 |
| 7 | S.A. Cloonan | University of Arizona College of Medicine, Tucson, USA | 5 | 142 | 28.40 | 5 | 1 | 20.00 | 2.44 |
| 8 | NS. Dailey | University of Arizona College of Medicine, Tucson, USA | 5 | 142 | 28.40 | 5 | 1 | 20.00 | 2.44 |
| 9 | S.Grover | Postgraduate Institute of Medical Education & Research, Chandigarh, India | 5 | 34 | 6.80 | 2 | 0 | 0.00 | 0.59 |
| 10 | D.Gunnell | University of Bristol, U.K. | 5 | 347 | 69.40 | 5 | 4 | 80.00 | 5.97 |
| 11 | K.Hawton | The University of Oxford, Medical Science Division, U.K. | 5 | 320 | 64.00 | 4 | 4 | 80.00 | 5.51 |
| 12 | WD.Killgore | University of Arizona College of Medicine, Tucson, USA | 5 | 142 | 28.40 | 5 | 1 | 20.00 | 2.44 |
| 13 | M.Leboyer | AP-HP Assistance PubliqueHopitau de Paris, France | 5 | 155 | 31.00 | 4 | 0 | 0.00 | 2.67 |
| 14 | R.C.O'Connor | University of Glasgow, U.K. | 5 | 331 | 66.20 | 5 | 5 | 100.00 | 5.70 |
| 15 | SK. Padhy | All India Institute of Medical Sciences, Bhubaneswar | 5 | 4 | 0.80 | 1 | 1 | 20.00 | 0.07 |
| 16 | M.Pompili | Sapienza University of Rome, Italy | 5 | 305 | 61.00 | 2 | 4 | 80.00 | 5.25 |
| 17 | E.C.Taylor | University of Arizona College of Medicine, Tucson, USA | 5 | 142 | 28.40 | 5 | 1 | 20.00 | 2.44 |
| 18 | E.Townsend | University of Nottingham, U.K. | 5 | 326 | 65.20 | 3 | 2 | 40.00 | 5.61 |
| 19 | I. Appleby | University of Manchester, UK. | 4 | 326 | 81.50 | 3 | 3 | 75.00 | 7.01 |
| 20 | K.Knipe | University of Bristol, U.K. | 4 | 318 | 79.50 | 3 | 3 | 75.00 | 6.84 |
| | | Total of top 15 authors | 121 | 4671 | 38.60 | 4.05 | 62 | 51.24 | 3.32 |
| | | Global total | 686 | 7970 | 11.62 | | | | |
| | | Share of top 15 authors in global total | 17.64 | 58.61 | | | | | |

TP=Total Papers; TC=Total Citations; CPP=Citations Per Paper; ICP=International Collaborative Papers; HI=H-Index; RCI=Relative Citation Index.

Table 5

Journals which published a higher number of papers on suicidal behavior during the COVID-19 pandemic.

| S. No | Name of the Journal | TP | TC | CPP |
|-------|---|-------|------|-------|
| 1 | Asian Journal of Psychiatry | 46 | 669 | 14.54 |
| 2 | Psychiatry Research | 38 | 683 | 17.97 |
| 3 | Lancet Psychiatry | 20 | 1428 | 71.40 |
| 4 | Frontiers in Psychiatry | 19 | 39 | 2.05 |
| 5 | Journal of Affective Disorders | 15 | 94 | 6.27 |
| 6 | Brain, Behavior & Immunity | 12 | 951 | 79.25 |
| 7 | International Journal of Environmental Research & Public Health | 11 | 47 | 4.27 |
| 8 | BMJ | 10 | 218 | 21.80 |
| 9 | Indian Journal of Psychiatry | 10 | 16 | 1.60 |
| 10 | Australian & New Zealand Journal of Psychiatry | 8 | 10 | 1.25 |
| 11 | European Archives of Psychiatry & Clinical Neurosciences | 8 | 5 | 0.63 |
| 12 | Journal of Medical Internet Research | 8 | 110 | 13.75 |
| 13 | Journal of Psychiatry Research | 8 | 28 | 3.50 |
| 14 | Psychiatry & Clinical Neuroscience | 8 | 453 | 56.63 |
| 15 | Encephale | 7 | 147 | 21.00 |
| 16 | Primary Care Companion for CNS Disorders | 7 | 7 | 1.00 |
| 17 | JAMA Network Open | 6 | 29 | 4.83 |
| 18 | Journal of Clinical Psychiatry | 6 | 93 | 15.50 |
| 19 | Lancet Public Health | 6 | 9 | 1.50 |
| 20 | Medical Journal of Australia | 6 | 35 | 5.83 |
| | Total of 15 journals | 259 | 5071 | 19.58 |
| | Global total | 685 | | |
| | Share of top 15 journals in global total | 37.81 | | |

TP=Total Papers; TC=Total Citations; CPP=Citations Per Paper.

systematic data.

In terms of the type of publications, a large proportion of the publications were in the form of articles and letters (43.15% and 27.11%, respectively), followed by reviews, editorial, and notes (10.64%, and 10.20%). These findings possibly suggest that most of the literature on the topic is not in the form of systematic studies and is in the form of case reports and reviews on the subject. Accordingly, the available data in the form of publications may not be reflective of the actual situation.

The common keywords that were identified in the publications that reflected the suicide-related behaviors included suicide, suicidal ideations, suicidal behavior, and a suicidal attempt was depression, mental health/disease, anxiety, quarantine, social isolation, post-traumatic stress, mental health services, mental stress, fear, auto-mutilation, social distancing, loneliness, etc. These keywords reflect the psychiatric morbidity, psychological distress, or the situation/triggering factor/precipitating factors associated with suicidal behavior during the pandemic. This suggests that management of suicidal behavior during the pandemic requires a more holistic picture to address the psychiatric disorders and other triggering factors to prevent self-harming behavior.

The highest number of publications emerged from developed countries like the United States and the United Kingdom. This is understandable, as universities and authors from these countries were among the more prolific universities and authors. However, authors from some developing countries like India and Bangladesh also contributed significantly to the research on this topic. These findings can be understood in the light of the fact that irrespective of the pandemic situation, the suicide rates in these developing countries are high, and possibly during the pandemic, there was an upsurge in the same or this received more attention, that led to a higher number of publications from these countries.

Among the various journals, the highest number of papers were published in the *Asian Journal of Psychiatry* (with 46 articles), followed by *Psychiatry Research* (38 articles), *Lancet Psychiatry* (20 documents), and *Frontiers in Psychiatry* (19 articles). This was possibly guided by the policy of some of these journals to track fast the papers related to COVID-19 and publication of the same. However, the papers published in *Brain, Behavior & Immunity* received the highest number of citations, with a CPP of 79.25, followed by *Lancet Psychiatry* (71.4), *Psychiatry & Clinical Neuroscience* (56.63), *BMJ* (21.8), *Encephale* (21.0), and *Psychiatry Research* (17.97). These findings suggest that these journals possibly published a higher number of papers on the topic since the beginning of the pandemic. These were cited more, or this could be because these journals published better quality papers which received more citations. In future, the journals which have published the high cited papers are going to see an increase in the impact factor of these journals. Further, most of these papers were open access publications, which gave

researchers from different part of the world to access the same easily. This possibly increased the chances of citations.

In fact publication of high number of articles on suicidal behavior in the Asian Journal of Psychiatry was raised by a group representing the International COVID-19 suicide prevention research collaboration and raised concerns about titles and the content of some of the articles. The group also pointed out that potential harmful effect of news reports of suicide deaths on suicide rates. To this the editor responded that at the beginning of the pandemic the journal published the preliminary worth reporting reports as letter to the editor with the hope of alerting the readership and expressed that the journal would be more diligent in appraising the robustness of publications based on the dubious media reports (Tandon, 2021).

The strength of this study is based on the Scopus database, which is much more inclusive compared to Pubmed and covered the publications up to mid of May 2021. However, some of the limitations of this study include that we did not exactly evaluate the type of articles in terms of how many of the publications were original articles. Neither, our study attempted to assess the quality of the articles.

To conclude, the present study suggests that since the onset of the pandemic, many publications have addressed suicidal behavior. The majority of the publications have emerged from United States, United Kingdom, and India. The maximum number of publications have been published in the Asian Journal of Psychiatry, but the publications in Brain, Behavior & Immunology have been more often cited.

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Conflicts of interest

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