# Systamatic Review On Depression During Covid-19

Ms. Siji mol<sup>1</sup>, Dr.Monisha S<sup>2</sup>

<sup>1</sup>Tutor, Meenakshi Academy of Higher Education and Research <sup>2</sup>Junior Resident, Meenakshi Academy of Higher Education and Research <sup>1</sup>sijishanmugham1992@gmail.com

ABSTRACT:In 2020, millions of cases of COVID-19 have been detected all over the world. Different infectious diseases are very frightening as of they can lead to death. According to the World Health Organization (WHO), COVID-19 was a virus that a sick person couldn't fight and infect the healthy ones in a short amount of time. WHO has established recommendations, such as isolation, avoiding close contact, caring for oneself and others, keeping updated about the symptoms and risk, recommending appropriate actions, to contain the infection<sup>1</sup>. The current study is evaluation of the literature done on the depression during the COVID-19 Pandemic. Scopus database have been used for the selection of the articles. Total 1612 articles have been evaluated for the systamatic review.

KEYWORDS: Depression, Covid-19, Suicide, Review

### 1. INTRODUCTION

To protect individuals and the environment from any infection of the deadly airborne disease, a full surveillance framework had been stepped up<sup>2-4</sup>. The enhancement of intellectual freedom resulted in a distinct positive effect on individual's quality of life. Researchers have discovered a variety of different psychological and emotional symptoms in people infected with the SARS virus. This demonstrated the value of measuring the underlying fear against doctors in this fatal pandemic. It was proposed that online mental health services should be undertaken in order to diminish peoples' worries and anxieties. While no one factor caused this, the major contributing factor was adverse experiences related to COVID-19 <sup>5-7</sup>. At present, the studies are primarily based on the psychological processes of people who are affected by and AIDS and there is a lack of psychosocial research on coping mechanisms employed by this people. There are a number of scholars evaluated the depression and its impact on the human during the current pandemic (COVID-19)<sup>8</sup>.

#### 2. METHOD

The present study attempts to evaluate the literature done the depression during the current pandemic. 2978 articles have been downloaded from Scopus by using the Boolean "COVID-19" AND "Depression". After the evaluation and following the PRISMA guidelines 1612 articles have been selected for the purpose of analysis.

#### 3. ANALYSIS AND DISCUSSION

This part reveals the outcome of data analysed from the 1612 papers. Figure one reveals the keywords used by the authors in their research papers. Anxiety, Sleep depression, Suicide are the prominent keywords used by the authors. Anxiety words used most number of times as a keyword in the manuscripts written on the depression.

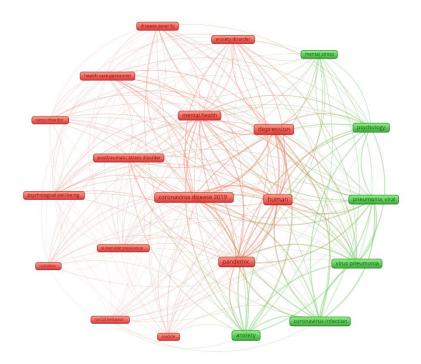


Fig.1. Keywords

Table 1 reveals the statistics of the keyword use by the authors. It can be observed that anxiety is being used maximum number of time and vulnerable population used the minimum number of times.

| Sl No | keyword                  | occurrences |
|-------|--------------------------|-------------|
| 1     | anxiety                  | 1080        |
| 2     | anxiety disorder         | 325         |
| 3     | coronavirus disease 2019 | 1190        |
| 4     | coronavirus infection    | 858         |
| 5     | depression               | 1609        |
| 6     | disease severity         | 169         |
| 7     | health care personnel    | 281         |
| 8     | human                    | 1313        |
| 9     | isolation                | 66          |
| 10    | mental health            | 757         |
| 11    | mental stress            | 287         |
| 12    | pandemic                 | 1186        |
| 13    | pneumonia, viral         | 849         |
|       | posttraumatic stress     |             |
| 14    | disorder                 | 244         |
| 15    | psychological well-being | 157         |
| 16    | psychology               | 608         |
| 17    | sleep disorder           | 107         |
| 18    | social behavior          | 54          |
| 19    | suicide                  | 85          |
| 20    | virus pneumonia          | 83          |
| 21    | vulnerable population    | 82          |

## Table.1. Keywords statistics

Further figure two shows the citation source wise. It can be observed from the table that journal "Brain, behavior, and immunity" used most number of citation "1767" for 35 documents whether "Asian journal of psychiatry" got 958 citation for 66 documents. Table 2 reveals the statistics of the citation source wise.

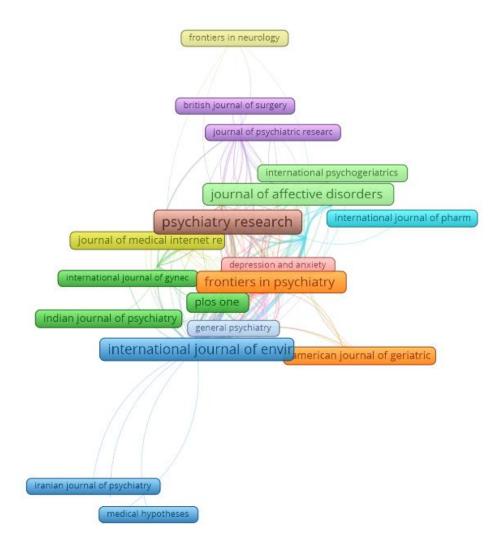


Fig.2. Source wise citation

|       |  | document | citation |
|-------|--|----------|----------|
| Sl No | source                                   | S        | S        |
| 1     | american journal of geriatric psychiatry | 18       | 49       |
| 2     | asian journal of psychiatry              | 66       | 958      |
| 3     | bmc psychiatry                           | 7        | 3        |
| 4     | brain and behavior                       | 7        | 23       |
| 5     | brain, behavior, and immunity            | 35       | 1767     |
| 6     | british journal of surgery               | 8        | 12       |
| 7     | canadian journal of psychiatry           | 6        | 9        |

| 8  | child and adolescent mental health                         | 6  | 5    |
|----|--|----|------|
| 9  | clinical neuropsychiatry                                   | 9  | 94   |
| 10 | comprehensive psychiatry                                   | 5  | 47   |
| 11 | depression and anxiety                                     | 6  | 35   |
| 12 | eastern mediterranean health journal                       | 5  | 0    |
| 13 | eclinicalmedicine  | 5  | 81   |
| 14 | epilepsy and behavior                                      | 5  | 5    |
| 15 | frontiers in neurology                                     | 6  | 14   |
| 16 | frontiers in psychiatry                                    | 47 | 211  |
| 17 | frontiers in psychology                                    | 27 | 64   |
| 18 | general psychiatry   | 6  | 522  |
| 19 | globalization and health                                   | 7  | 67   |
| 20 | indian journal of psychiatry                               | 20 | 47   |
|    | international journal of environmental research and public |    |      |
| 21 | health   | 76 | 1808 |
| 22 | international journal of gynecology and obstetrics         | 6  | 29   |
| 23 | international journal of pharmaceutical research           | 10 | 0    |
|    | international journal of research in pharmaceutical        |    |      |
| 24 | sciences   | 10 | 5    |
| 25 | international journal of social psychiatry                 | 15 | 84   |
| 26 | international psychogeriatrics                             | 13 | 54   |
| 27 | iranian journal of psychiatry                              | 6  | 4    |
| 28 | jama - journal of the american medical association         | 7  | 24   |
| 29 | jama network open  | 7  | 978  |
| 30 | jmir research protocols                                    | 5  | 1    |
| 31 | journal of adolescent health                               | 12 | 66   |
| 32 | journal of affective disorders                             | 54 | 269  |
| 33 | journal of alzheimer's disease                             | 5  | 48   |
| 34 | journal of medical internet research                       | 16 | 32   |
| 35 | journal of psychiatric research                            | 8  | 9    |
| 36 | journal of psychosomatic research                          | 16 | 80   |
| 37 | journal of the american medical directors association      | 5  | 14   |
| 38 | medical hypotheses   | 7  | 14   |
| 39 | medicine   | 6  | 5    |
| 40 | multiple sclerosis and related disorders                   | 5  | 12   |
| 41 | perspectives in psychiatric care                           | 5  | 3    |
| 42 | plos one   | 33 | 291  |
| 43 | psychiatria danubina                                       | 9  | 15   |
| 44 | psychiatry and clinical neurosciences                      | 16 | 83   |
| 45 | psychiatry research  | 82 | 1144 |
| 46 | psychotherapy and psychosomatics                           | 5  | 180  |
| 47 | sleep medicine   | 10 | 96   |
| 48 | the bmj  | 9  | 140  |
| 49 | the lancet psychiatry                                      | 8  | 804  |
| 50 | the primary care companion for cns disorders               | 7  | 0    |
| 51 | translational psychiatry                                   | 7  | 33   |

| 52 | world psychiatry | 9 | 98

## **Table.2. Source wise citation statistics**

Third figure shows the citation country wise and it can be observed that United states received the maximum number of citation, followed by Canada and other countries. United States, Indian and Chile are the countries which received more than 1000 citations.

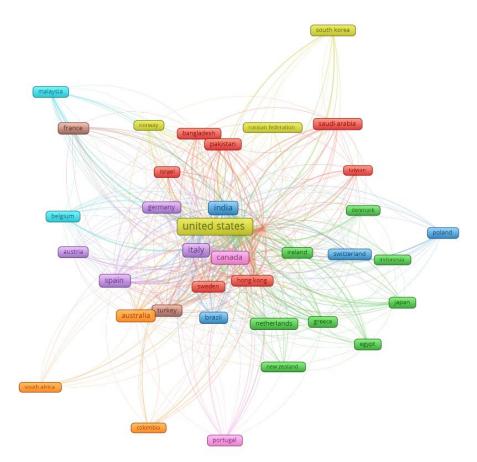


Fig.3. Country wise citation

| Sl. No | country        | documents | citations |
|--------|----------------|-----------|-----------|
| 1      | argentina      | 8         | 11        |
| 2      | australia      | 64        | 449       |
| 3      | austria        | 17        | 113       |
| 4      | bangladesh     | 18        | 153       |
| 5      | belgium        | 19        | 36        |
| 6      | brazil         | 51        | 174       |
| 7      | canada         | 92        | 1133      |
| 8      | chile          | 5         | 11        |
| 9      | colombia       | 10        | 22        |
| 10     | croatia        | 7         | 13        |
| 11     | czech republic | 5         | 0         |
| 12     | denmark        | 13        | 167       |
| 13     | ecuador        | 6         | 30        |
| 14     | egypt          | 21        | 55        |
| 15     | france         | 46        | 163       |
| 16     | germany        | 51        | 449       |

| 17 | greece         | 18  | 269  |
|----|----------------|-----|------|
| 18 | hong kong      | 28  | 415  |
| 19 | india          | 150 | 1067 |
| 20 | indonesia      | 13  | 16   |
| 21 | iran           | 57  | 390  |
| 22 | ireland        | 23  | 309  |
| 23 | israel         | 21  | 211  |
| 24 | italy          | 161 | 1776 |
| 25 | japan          | 28  | 78   |
| 26 | jordan         | 7   | 27   |
| 27 | lebanon        | 9   | 14   |
| 28 | malaysia       | 14  | 11   |
| 29 | mexico         | 9   | 39   |
| 30 | nepal          | 8   | 17   |
| 31 | netherlands    | 32  | 202  |
| 32 | new zealand    | 13  | 56   |
| 33 | nigeria        | 5   | 14   |
| 34 | norway         | 13  | 296  |
| 35 | pakistan       | 33  | 342  |
| 36 | peru           | 6   | 33   |
| 37 | poland         | 14  | 46   |
| 38 | portugal       | 16  | 72   |
| 39 | qatar          | 8   | 28   |
| 40 | romania        | 5   | 7    |
|    | russian        |     |      |
| 41 | federation     | 11  | 9    |
| 42 | saudi arabia   | 32  | 45   |
| 43 | serbia         | 9   | 37   |
| 44 | singapore      | 26  | 1947 |
| 45 | south africa   | 12  | 104  |
| 46 | south korea    | 15  | 94   |
| 47 | spain          | 84  | 753  |
| 48 | sweden         | 21  | 93   |
| 49 | switzerland    | 27  | 160  |
| 50 | taiwan         | 13  | 93   |
| 51 | tunisia        | 7   | 24   |
| 52 | turkey         | 46  | 199  |
|    | united arab    |     |      |
| 53 | emirates       | 8   | 27   |
| 54 | united kingdom | 158 | 1634 |
| 55 | united states  | 355 | 3397 |
| 56 | viet nam       | 8   | 491  |

**Table.3. Statistics of Country wise citation** 

Lastly the Figure 4 shows the details of co authorship. China shares the most number of co authorship (6000+) followed by the USA, ITALY and Canada. There are very few studies done in the UAE, Russia and Cuba on the depression during the current pandemic.

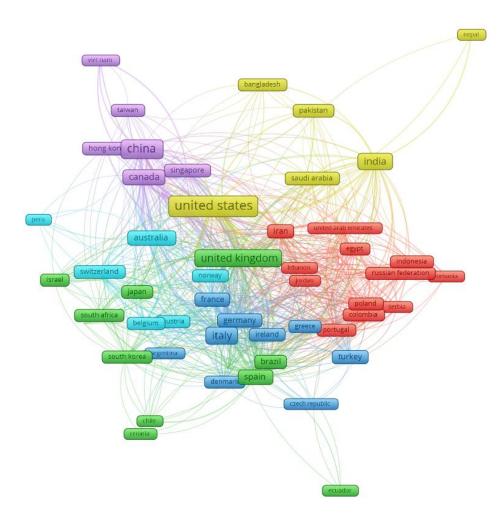


Fig.4. Country wise co-authorship

| Sl. No | country        | documents | citations |
|--------|----------------|-----------|-----------|
| 1      | argentina      | 8         | 11        |
| 2      | australia      | 64        | 449       |
| 3      | austria        | 17        | 113       |
| 4      | bangladesh     | 18        | 153       |
| 5      | belgium        | 19        | 36        |
| 6      | brazil         | 51        | 174       |
| 7      | canada         | 92        | 1133      |
| 8      | chile          | 5         | 11        |
| 9      | china          | 279       | 6622      |
| 10     | colombia       | 10        | 22        |
| 11     | croatia        | 7         | 13        |
| 12     | czech republic | 5         | 0         |
| 13     | denmark        | 13        | 167       |
| 14     | ecuador        | 6         | 30        |
| 15     | egypt          | 21        | 55        |
| 16     | france         | 46        | 163       |
| 17     | germany        | 51        | 449       |
| 18     | greece         | 18        | 269       |
| 19     | hong kong      | 28        | 415       |

| 21     indonesia     13     16       22     iran     57     390       23     ireland     23     309       24     israel     21     211       25     italy     161     1776       26     japan     28     78       27     jordan     7     27       28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8 <th>1</th> <th>1</th> <th>ı</th> <th>1</th>                       | 1  | 1              | ı   | 1    |
|--|----|----------------|-----|------|
| 22     iran     57     390       23     ireland     23     309       24     israel     21     211       25     italy     161     1776       26     japan     28     78       27     jordan     7     27       28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     ney zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5  | 20 | india          | 150 | 1067 |
| 23     ireland     23     309       24     israel     21     211       25     italy     161     1776       26     japan     28     78       27     jordan     7     27       28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     federation  | 21 | indonesia      | 13  |      |
| 24     israel     21     211       25     italy     161     1776       26     japan     28     78       27     jordan     7     27       28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     federation     11     9       43     saudi arabia     <   |    |                |     | 390  |
| 25     italy     161     1776       26     japan     28     78       27     jordan     7     27       28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       42     federation     11     9       43     saudi arabia     32     45<   | 23 | ireland        | 23  | 309  |
| 26     japan     28     78       27     jordan     7     27       28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947 </td <td></td> <td>israel</td> <td>21</td> <td>211</td>         |    | israel         | 21  | 211  |
| 27     jordan     7     27       28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     russian     refederation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46  | 25 | italy          | 161 | 1776 |
| 28     lebanon     9     14       29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     russian     refederation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south korea     15     94       48 <td>26</td> <td>japan</td> <td>28</td> <td>78</td>   | 26 | japan          | 28  | 78   |
| 29     malaysia     14     11       30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain<  | 27 | jordan         | 7   | 27   |
| 30     mexico     9     39       31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     russian     7       42     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84 <td>28</td> <td>lebanon</td> <td>9</td> <td>14</td> | 28 | lebanon        | 9   | 14   |
| 31     nepal     8     17       32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     russian     7       42     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21<  | 29 | malaysia       | 14  | 11   |
| 32     netherlands     32     202       33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       42     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     2  | 30 | mexico         | 9   | 39   |
| 33     new zealand     13     56       34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     russian     7       42     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     27     160       51     taiwan     1  | 31 | nepal          | 8   | 17   |
| 34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     27     160       51     taiwan     13     93       52     tunisia     7     24       53     turkey     46  | 32 | netherlands    | 32  | 202  |
| 34     nigeria     5     14       35     norway     13     296       36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     27     160       51     taiwan     13     93       52     tunisia     7     24       53     turkey     46  | 33 | new zealand    | 13  | 56   |
| 36     pakistan     33     342       37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     russian     7     42       42     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     27     160       51     taiwan     13     93       52     tunisia     7     24       53     turkey     46     199       united     arab </td <td>34</td> <td></td> <td>5</td> <td>14</td>  | 34 |                | 5   | 14   |
| 36   pakistan   33   342     37   peru   6   33     38   poland   14   46     39   portugal   16   72     40   qatar   8   28     41   romania   5   7     russian   7   7     42   federation   11   9     43   saudi arabia   32   45     44   serbia   9   37     45   singapore   26   1947     46   south africa   12   104     47   south korea   15   94     48   spain   84   753     49   sweden   21   93     50   switzerland   27   160     51   taiwan   13   93     52   tunisia   7   24     53   turkey   46   199     united   arab   emirates   8   27     55   united kingdom   158   1634  | 35 | norway         | 13  | 296  |
| 37     peru     6     33       38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       42     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     27     160       51     taiwan     13     93       52     tunisia     7     24       53     turkey     46     199       united     arab     emirates     8     27       55     united king  | 36 |                | 33  | 342  |
| 38     poland     14     46       39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     27     160       51     taiwan     13     93       52     tunisia     7     24       53     turkey     46     199       united     arab     emirates     8     27       55     united kingdom     158     1634       56     united states     355     3397  |    | peru           |     | 1    |
| 39     portugal     16     72       40     qatar     8     28       41     romania     5     7       russian     11     9       42     federation     11     9       43     saudi arabia     32     45       44     serbia     9     37       45     singapore     26     1947       46     south africa     12     104       47     south korea     15     94       48     spain     84     753       49     sweden     21     93       50     switzerland     27     160       51     taiwan     13     93       52     tunisia     7     24       53     turkey     46     199       united     arab     emirates     8     27       55     united kingdom     158     1634       56     united states     355     3397   | 38 | -              | 14  | 46   |
| 40   qatar   8   28     41   romania   5   7     russian   11   9     42   federation   11   9     43   saudi arabia   32   45     44   serbia   9   37     45   singapore   26   1947     46   south africa   12   104     47   south korea   15   94     48   spain   84   753     49   sweden   21   93     50   switzerland   27   160     51   taiwan   13   93     52   tunisia   7   24     53   turkey   46   199     united   arab   emirates   8   27     55   united kingdom   158   1634     56   united states   355   3397   | 39 | portugal       | 16  | 72   |
| 41   romania   5   7     russian   11   9     43   saudi arabia   32   45     44   serbia   9   37     45   singapore   26   1947     46   south africa   12   104     47   south korea   15   94     48   spain   84   753     49   sweden   21   93     50   switzerland   27   160     51   taiwan   13   93     52   tunisia   7   24     53   turkey   46   199     united   arab   emirates   8   27     55   united kingdom   158   1634     56   united states   355   3397  | 40 | 1 0            | 8   |      |
| 42   russian federation   11   9     43   saudi arabia   32   45     44   serbia   9   37     45   singapore   26   1947     46   south africa   12   104     47   south korea   15   94     48   spain   84   753     49   sweden   21   93     50   switzerland   27   160     51   taiwan   13   93     52   tunisia   7   24     53   turkey   46   199     united   arab   emirates   8     54   emirates   8   27     55   united kingdom   158   1634     56   united states   355   3397   | -  |                | 5   |      |
| 43 saudi arabia 32 45   44 serbia 9 37   45 singapore 26 1947   46 south africa 12 104   47 south korea 15 94   48 spain 84 753   49 sweden 21 93   50 switzerland 27 160   51 taiwan 13 93   52 tunisia 7 24   53 turkey 46 199   united arab emirates 8   54 emirates 8 27   55 united kingdom 158 1634   56 united states 355 3397  |    |                |     |      |
| 44 serbia 9 37   45 singapore 26 1947   46 south africa 12 104   47 south korea 15 94   48 spain 84 753   49 sweden 21 93   50 switzerland 27 160   51 taiwan 13 93   52 tunisia 7 24   53 turkey 46 199   united arab emirates 8   54 emirates 8 27   55 united kingdom 158 1634   56 united states 355 3397  | 42 | federation     | 11  | 9    |
| 45 singapore 26 1947   46 south africa 12 104   47 south korea 15 94   48 spain 84 753   49 sweden 21 93   50 switzerland 27 160   51 taiwan 13 93   52 tunisia 7 24   53 turkey 46 199   united arab emirates 8   54 emirates 8 27   55 united kingdom 158 1634   56 united states 355 3397   | 43 | saudi arabia   | 32  | 45   |
| 46 south africa 12 104   47 south korea 15 94   48 spain 84 753   49 sweden 21 93   50 switzerland 27 160   51 taiwan 13 93   52 tunisia 7 24   53 turkey 46 199   united arab 90   54 emirates 8 27   55 united kingdom 158 1634   56 united states 355 3397  | 44 | serbia         | 9   | 37   |
| 47 south korea 15 94   48 spain 84 753   49 sweden 21 93   50 switzerland 27 160   51 taiwan 13 93   52 tunisia 7 24   53 turkey 46 199   united arab emirates 8   54 emirates 8 27   55 united kingdom 158 1634   56 united states 355 3397   | 45 | singapore      | 26  | 1947 |
| 48 spain 84 753   49 sweden 21 93   50 switzerland 27 160   51 taiwan 13 93   52 tunisia 7 24   53 turkey 46 199   united arab   54 emirates 8 27   55 united kingdom 158 1634   56 united states 355 3397   | 46 | south africa   | 12  | 104  |
| 49 sweden 21 93   50 switzerland 27 160   51 taiwan 13 93   52 tunisia 7 24   53 turkey 46 199   united arab   54 emirates 8 27   55 united kingdom 158 1634   56 united states 355 3397   | 47 | south korea    | 15  | 94   |
| 50     switzerland     27     160       51     taiwan     13     93       52     tunisia     7     24       53     turkey     46     199       united     arab     emirates     8     27       55     united kingdom     158     1634       56     united states     355     3397  | 48 | spain          | 84  | 753  |
| 51   taiwan   13   93     52   tunisia   7   24     53   turkey   46   199     united   arab   27     54   emirates   8   27     55   united kingdom   158   1634     56   united states   355   3397  | 49 | sweden         | 21  | 93   |
| 52   tunisia   7   24     53   turkey   46   199     united   arab   9   9     54   emirates   8   27     55   united kingdom   158   1634     56   united states   355   3397   | 50 | switzerland    | 27  | 160  |
| 53   turkey   46   199     united   arab   27     54   emirates   8   27     55   united kingdom   158   1634     56   united states   355   3397  | 51 | taiwan         | 13  | 93   |
| united arab emirates   8   27     55 united kingdom   158   1634     56 united states   355   3397   | 52 | tunisia        | 7   | 24   |
| 54   emirates   8   27     55   united kingdom   158   1634     56   united states   355   3397  | 53 | turkey         | 46  | 199  |
| 55     united kingdom     158     1634       56     united states     355     3397   |    |                |     |      |
| 56 united states 355 3397  | 54 | emirates       | 8   | 27   |
|  | 55 | united kingdom | 158 | 1634 |
|  | 56 | united states  | 355 | 3397 |
| 57 viet nam 8 491  | 57 | viet nam       | 8   | 491  |

Table. 4 statistics of Country wise co-authorship

## 4. DISCUSSION

It is visible that developed countries i.e., USA, China, Canada are the one where most of the authors concentrated on the topic depression and study it in detail<sup>9–13</sup>. Authors of the smaller countries does not concentrate more. Anxiety, Sleep Disorder, Suicide, Mental stress and

isolation are the major keywords used by the authors<sup>14,15</sup>. There are few major journals which published the dedicated issues on the depression during the pandemic.

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