Heuristic "Bottom-up": COVID-19

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Abstract

Background: COVID 19, a global pandemic has led to the disruption all over the world. Not only the COVID outbreak but the measures taken to straighten the curve led to the psychological distress amongst people. The disruption in daily routine which changed People's lifestyle, the changed business working environment while COVID and post COVID. The concept to adapt to the new normal still seems abrupt.

Method: This present study was done amongst Indian youth and working professionals (age 18-28) in order to understand their psychological well-being in these COVID times. With collection of data through an online questionnaire more than 350 people participated. The instrument used was DASS-21 and a self-conceptualized VIRUS scale. All statistical analysis was computed through SPSS 21.

Conclusion: This paper aims to contribute through exploration into the stressors and how the COVID situation has brought about vexation, immediate concern, routine disruption and uncertainty about future. Through these four factors we obtain results that elaborates on what will affect their life's the most, highlighting the need for post-COVID interventional strategies in business environments and in one's lifestyle.

Keywords: *Covid-19, DASS21, Mental Health.*

Introduction

The novel coronavirus has taken over our normal lives, this virus has transmitted globally and transformed the normal of the world. We can only talk about the new normal, the daily update of the increasing cases has a great psychological effect on the human mind. COVID-19 has wired youth to fear, uncertainty, dragging people with frustration and sadness. Reports have proven other pandemics have played a similar role like the SARS and H1N1 over human behavior showing signs of distress and anxiety. Generally, more than 25% of the population in China faced high- level stress traits (Wang et al., 2020)[(1)]. The state of mind and the behavior during these times are due to misinterpretation of the set-offs by themedia.

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These reports are similar to what was described during the time of the SARS epidemic moreover, the experience and the idea of contracting the COVID-19 have put pressure and increased psychological suffering. In any epidemic, physical health suffers but a significant amount of damage is caused to mental health too. Trauma, panic, anxiety, and suicidal thoughts during an outbreak of such disease are common psychological distress caused in an individual (Tucci et al., 2017; Taylor et al., 2008).[(2)(3)]

Anxiety can be understood as a sense of worry, tension, physical changes such as trembling, dizziness, or increased blood pressure or change in a heartbeat. Anxiety can lead to many issues which can lead to limited socialization and limitations in daily life activities. If caused within the larger population, it can lead to panic buying which leads to exhaustion of resources. Many people tend to get affected mentally due to a pandemic and can cause high anxiety which affects the emotional well-being adversely. Thus, it is critical to manage mental well-being. Research has shown that approximately 1/5th of the people experiences severe to very severe anxiety and in terms of gender, females

tend to feel more anxious than male (Moghanibashi-Mansourieh,2020)[4].

As a preventive measure, the government of India decided to implement a lockdown and people were home quarantined which drastically changed people's lives. However, mental health degradation was not because of the control measures (lockdown/Quarantine) but due to the changes it caused in daily life (Li et al., 2020) [5]. It has been found that disruption in daily routine can lead to a variety of mental disorders. Due to the prolonged Lockdown as a countermeasure against coronavirus, there has been a disruption in the lifestyle of people which may increase the emotional distress amongst people and can result in developing psychological distress (mental illness) even amongst those healthy individuals with no prior medical history (Zhang and Ma, 2020)[6]. It has been said that people end up suffering more mentally than the number of people who are physically injured after such an outbreak. The psychological wellbeing is affected immensely and may last for a longer duration. (Allsopp et al., 2019) [7].

Psychology is extremely relevant in understanding how people cope or react in such times. The experience of the COVID-19 is changing our lives. The disruptions faced in such unfamiliar living situations – work, financial worries and relationships. Change in lifestyle has led to **vexation** in our relationships with lack of physical meeting or touch and at the same time the trauma of the virus has created frustration, **immediate concern** about the lockdown, the idea of panic buying being prevalent, **routine disruption** coming to our lives lack social meetings or any daily activity be it work or school, overall facing uncertainty about the future not knowing the timeline of this virus which is complexed, the exceptional circumstances have created an ambiguity and major procrastinations among individuals.

The COVID 19 pandemic has caused distress in many people's lives and left many people vulnerable to mental health issues and has led to suicidal behavior. Mental health consequences are likely to be present for longer and peak later than the actual pandemic. This paper talks about the sensitive topics - depression, anxiety and stress among youth. Crippling bouts of COVID-19 began to take over the youth's mind, leading to mental stress. This is the study of negative mental health outcomes (depression, anxiety, and stress) and psychological distress (VIRUS stressors). The question here arises that during this lockdown how seriously these negative health outcomes affected the respondent. Negative outcomes include impaired performance (unproductive feel), poor quality of life, the uncertainty of the future, fear all around due to increasing cases of COVID, and others.

Research Objectives:

1. To study the level of stress, anxiety and depression in the Indian environment due to Covid- 19.
2. To Study the Factors affecting the mental health
3. To study the psychological stress (unpleasant feeling or emotions that have an impact on the level of functioning/negative views or perception we are attached toCOVID-19)

Review of the Literature: Outbreaks of diseases and pandemics have been found to create distress and have shown major mental illness (Bao et Al 2020) [8]. There is the future scope for research and exploration with a clinical scope. Pandemics and outbreaks are catalysts to the global mortality rate (Verikios2016) [9]. Various factors including gender, explicit experience with COVID19 infection, Isolation, and exposure to media can make one vulnerable to Mental illness and can cause psychological distress (Li et al., 2020) [5].

Chinese individuals' psychological wellbeing has fallen apart, a higher prevalence rate of depression (50.7%), Sleep-deprived (36.1%), anxiety (44.7%), and stress-related problems (73.4%). Lack of information related to COVID 19 led to these higher rates of mental health issues in China. Generally, at the beginning phases of a pandemic, individuals have little data about the nature of the disease, treatment, casualty rate, and so forth fueling the fear (Xiang et al.2020)[10]. Isolation can induce fatigue, outrage, nervousness, loneliness, boredom, and depression. Economic damage and widespread lockdown led to much psychological distress amongst people. Added to this is the plenty of falsehood information circulating on the internet and social networking media that led to a lot of uneasiness. Circulating this misinformation can contribute tot he spread of illness and that is very much common for COVID-19.

Although there is no current evidence as to the direct effects of SARS-COV-2 on mental wellbeing, there has been a significant increase in psychological distress such as anxiety and depression along with more negative impacts on the health of the general public

(Vindegaard and Eriksen Benros, 2020)[11].In addition, it causes severe psychological anxiety (Chen et al., 2020) [12], whichcould adversely affect the quality of life and can influence individuals working and social functioning (Monson, Caron, McCloskey, and Brunet, 2017)[13]. As specialists all over the world work hard to find effective vaccines and antibodies against COVID-19, the mental effect of the disease is to a great extentdisregarded.

Pandemics like these do not only affect physical wellbeing; they in general influence the quality of living not only on an individual level but as a whole; causing widespread panic, xenophobia, social dysfunction, and social stigma. The first suicidal case in India of a 50-year-old man was reported dead fearing that he had contracted coronavirus. So, he locked his family and killed himself (Goyal, Chauhan, Chhikara, Gupta & Singh, 2020)[14] As the worldwide prevalence increased, people started hoarding medical supplies and basic necessity which caused havoc in many countries, people started isolating themselves due to the fear of the COVID and restricted their social interaction to minimal, People got health conscious but it was so anxiety-driven that even a mild condition like cold which is just one of the symptoms of the illness led to an increase in psychological distress (Duan and Zhu, 2020)([15] When contrasted with before the outbreak situation, information is still scarce on the effect of mental wellness in the general population (Sonderskovetal., 2020)[16]. Researchers have found no major distinction in anxiety, depression, and stress level sin the period with numerous new cases compared with the period of many recovering (Wang et al., 2020)([1]. Long-lasting impacts of COVID 19 should be expected, it is known from the earlier experience of SARS-CoV-1, that those who were affected by it (for example; due to isolation) had mental side effects a long time (several months) even after the controlover the epidemic.

At any point when a country is struck by large-scale and deadly disasters of different types, the quality of psychological well-being is affected, and various issues related to mental health can emerge which can differ across different periods. Any significant outbreak will negatively affect people and society. Terrorist attacks like one at the Pentagon and anthrax attacks demonstrated how important it is to re-establish the resources and mobilize them in order to respond quickly to the disaster-related mental health needs of the affected individual (Dodgen, LaDue and Kaul, 2002)[17] When the SARS plague hit, mental health was affected not exclusively due to the working condition of the workplace but also due to the thoughts of close ones getting affected by the virus which generated psychological trauma (Wu et al., 2009)[18] Most COVID-19 patients experienced PTSD (Post-traumatic stress disorder) before even leaving the hospital, and these side effects may prompt negative results in their day to day life after COVID for example, lower personal satisfaction and performance of work. Following the episode SARS in 2003, the predominance of Post-traumatic stress disorder (PTSD) in SARS survivors was 9.79% in their initial recovery stage (Fang, Zhe, andShuran, 2004)[19] and Post-SARS assessment (approximately after 30 months) it was 25.6%. (Mak, Chu, Pan, Yiu, and Chan, 2009)[20]

One survey showed that respondents aged 12-21 had severe impacts on their mental health due to the prolonged lockdown. This age bunch mostly consisted of school students and undergraduates who were affected because of the school closure, uncertainty about their exams, and making arrangements for online education. Young individuals have had their education and career interrupted and are anxious about the future. UGC has given a few rules to Higher Education Institutes, to deal with the Mental Health, Psychosocial concerns and Well Being of Students Community during and after COVID-19 Pandemic. Loss of work and monetary stressors are recognized as the major factors which can lead to suicide. (Stuckler, Basu, Suhrcke, Couttsand McKee, 2009) [21] Studies have shown that adults who were not working reported worse health. Studies have shown a high and perhaps even alarming prevalence of depressive symptoms in both developed and developing countries (Al-faris et al., 2012) [22]. It is demonstrated through a study that 3% to 9% of adolescents are found to be depressed anytime, and 20% of them report a lifetime pervasiveness of depression toward the end of the adolescence (Zuckerbrot and Jensen, 2006) [23]. Malaysian report uncovered that nearly 1 out of 5 Malaysian adolescence is found to be depressed (Kaur et al., 2014) [24]. Teenagers who felt lonely more often than others or continually felt alone over a period of 1 year are 3 times more likely to be characterized as depressed by the DASS21 assessment and that social isolation was one of the major reasons for depression in 11-to 14-year-olds. Longer duration of depression and more frequent episodes can lead to poor work performance, poor coping skills, and various negative traits such as low self-esteem and low positivity. It can also affect your relationships with your loved ones (Pettit, Lewinsohn, Roberts, Seeley, and Monteith, 2008) [25]. 7 out of 10

US adults experience anxiety/stress at a moderate level every day, as indicated by an ongoing report led by the Anxietyand Depression Association of America. Whiles tress is considered to bean inevitable part of life, it is present and very much becoming prevalent in students (Gallagher, 2008; Mackenzieetal., 2011).[26][27] Younger peopled is playa high risk of psychological problems (Huang & Zhao, 2020)[28].

Mental health professionals should be advised to instruct people about the psychological consequences, they should promote healthy mental behaviors. People should be encouraged to reduce their exposure to negative information. And in order to maintain social distancing people should use more virtual networks (Banerjee, 2020) [29]. Furthermore, the need of the hour is to create mental health interventions that can be communicated to general health care workers and volunteers and these strategies can be spread amongst workers (*Rajkumar*, 2020)[30]. Psychological distresses should be identified at the initial stage for allowing the efficient implementation of interventional strategies.

Research Methodology: Research Goal: The goal of the present study is to evaluate the potential sources of depression, anxiety, and stress correlating with the stressors of VIRUS (vexation, immediate concern, routine disruption, and uncertainty about future).

These were addressed by surveying a sample with a mix of young adults and working professionals (age group 18-28 yrs) from varied sources using the DASS 21 scale with VIRUS stressors.

Data Collection: The primary method of data collection was used, an online questionnaire was distributed. More than 350 people participated.

Given the established measure of the DASS21 Lovibondversion of it, the survey consisted of a demographics section, a list of stressors (VIRUS), and 21 questions.

The first portion of the survey constituted the most inevitable part of life, stressors that were pertinent in the times of a pandemic Covid-19. The responses were recorded on a Likert scale (0-3). It was estimated individuals would exhibit increased levels of those stressors.

DASS21 measured the prevalence of the symptoms on a 4-point Likert scale 0-3. A score of 0 indicated that the item "did not apply to them," and a score of 3 meant that the participant considered the question to apply "very much, or most of the time" (Gomez, n.d.).

Virus Stressors:

Vexation: Feeling imprisoned at home, relationship with loved ones and being unproductive

Immediate concern: Feeling afraid if something awful might happen, an increasing number of Covid-19 cases, and changed lifestyle

Routine disruption: Spending more time on gadgets for media consumption, learning new courses or exploring E-platforms

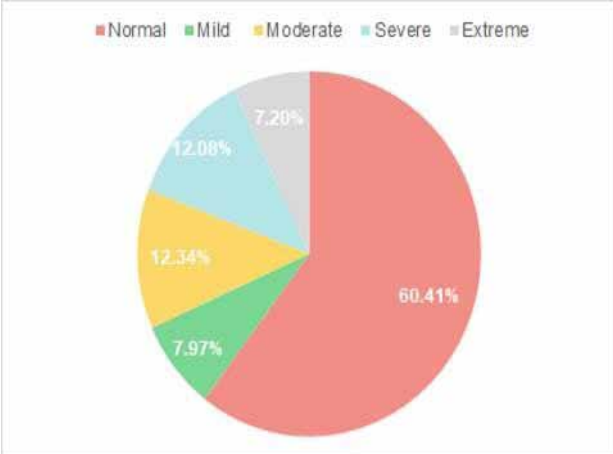
Uncertainty about future: Academics and graduation timeline, market disruptions, and financial challenges

Data Analysis method: After the data were collected and inserted in SPSS software, they were analyzed descriptive statistics (mean and standard deviation) and inferential statistics (independent t-test and analysis).

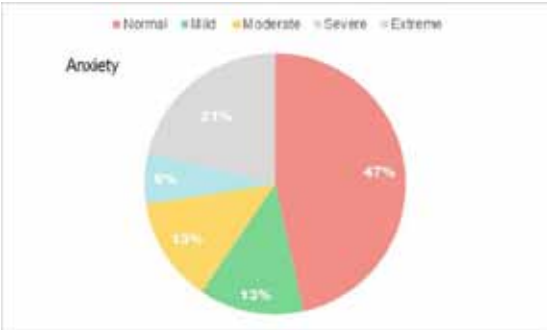
Data Analysis: The Findings suggest a correlation disclosed that VIRUS stressor sf or each aspect had a significant positive correlation.

DASS 21-The tallies of DASS 21 positions each partaker's depression, anxiety, and stress levels, assorting each area as either "normal," "mild," "moderate," "severe," or "extremely severe." Out of those analyzed,60.41% accounted for symptoms of severe levels of stress,47% signaled severe anxiety, and 44% severe depression.

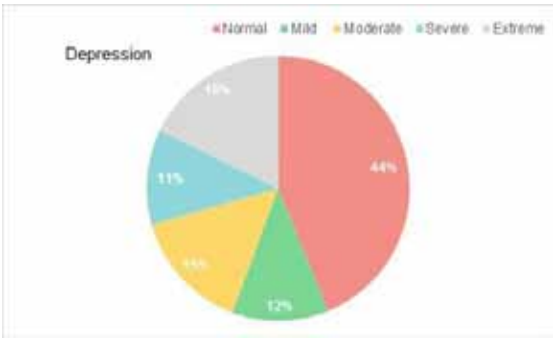
A. Stress



B. Anxiety



C. Depression



Our sample was able to filter out top 7 sources of concern, based on the DASS moderate and extreme cases were Uncertainty about Future (Market disruptions & Financial challenges), Routine disruption (Spending more time on gadgets for media consumption, Sleep-deprived al the time & Learning new courses), Immediate Concern (Increasing cases of COVID 19) and Being Unproductive.

A succession of ANOVAs with VIRUS as an independent factor and the DASS-21 scales as the dependent factors showed a significant effect of the scales, including:

Table 1: Stress and Virus (R2 =0.357, F=17.16, P < 0.01)

Stress	Coefficients
Feeling imprisoned at home	0.730
Being Unproductive	0.853
Spending more time on gadgets for media consumption	0.884

Table 1 speaks about the body's response to the circumstance where we feel imprisoned at home threatens the feeling of self. Individuals are vulnerable to widespread concern and are feeling more lonely. Stress is researched to be beneficial for being productive, the unproductive stress is making individuals overwhelmed. There is a lack of accomplishment in these times. Major setback being exposure to gadgets, there is a growing addiction to technology and an overdose to media.

Table 2: Depression and Virus (R2=0.384,F=19.29, P < 0.01),

Depression	Coefficients
Feeling imprisoned at home	0.672
Changed Lifestyle	1.061

Table 2 gives data on Mental health, that has brought about a status among individuals hence they feel worthless and trapped at home, this feeling has affected their outlook towards life. Individuals are not able to accept the change and take a toll on their mental health.

Table 3: Anxiety and Virus (r2=0.304, F= 13.515, P < 0.01)

Anxiety	Coefficients
Changed Lifestyle	0.851
Market Depression	0.882

Post regression analysis in Table 3 we observe with Anxiety and VIRUS factors show that economic fissures have created uncertainty about the market conditions among individuals. The possibility of job loss, salary cut, and the steps taken in the macro environment have created a feeling of anxiety.

Obsessive thoughts regarding the COVID are giving headaches and other common symptoms. These negative thoughts have created an irritable environment causing mental fatigue.

Table 4: Correlation

Variables	Depression	Anxiety	Stress
Relationship with loved ones	.006	.32	.22
Changed lifestyle	.01	.45	.07
Market disruptions	.040	.114	.203
Learning new courses or exploring E- platforms	.282	.975	.179

Table 4 presents Correlations between the DASS-21 scales and VIRUS as variables Referring to Table 1 using correlation the sig. value is .000, which is less than the alpha values 0.01. Therefore, thereexists a significant relationship between feeling imprisoned at home, being unproductive, feeling afraid if something

awful might happen, changed lifestyle, sleep-deprived at all the time, academics, relationship with loved ones, increasing number of Covid-19 cases, spending more time on gadgets, graduation timeline, financial challenges, learning or exploring new courses, and market disruptions with DASS.

Discussion and Conclusion

Our emotional resources are used up in trying to cope with challenging situations. We currently have two viruses to tackle, one being COVID, and other which we all are infected in some way or another when it comes to COVID VIRUS:

Vexation due to imprisonment at home, families are suffering relationship turmoil's and the morale is low due to the unproductive lifestyle. **Immediate concern** has created a mental health crisis, there is a feeling of helplessness and uncertainty, the increasing number of Covid-19 cases has added to manage this fear of the unknown and the changes in lifestyle such as norms of distancing and a not-so-luxurious life. **Routine disruption**, the fight against this virus is long, spending more time on gadgets for media consumption, giving time to self- improvement as learning new courses, or exploring E-platforms. **Uncertainty about the future,** be it economic uncertainty, academics and graduation timeline, market disruptions, and financial challenges.

DASS-21 is the assessment and clinically validated screening instrument of depression, anxiety, and stress among youth. This scale assesses the person's perception of life and interest in certain things. In COVID-19 times, we tried to assess the mental health among youth. This study evaluates the measures of depression, anxiety, and stress in young adults with the factors of concern for our sample, based on Covid-19 VIRUS correlating with depression, anxiety and stress were Vexation or Frustration (feeling imprisoned at home, being unproductive), Immediate concern (feeling afraid of the dire future, increasing number of coronavirus cases), Routine Disruption (spending more time on gadgets, sleep-deprived), & Uncertainty about future (academic and graduation timeline, financial challenges). There is a significant relationship between VIRUS and DAS (depression, anxiety, and stress).

The preliminary objective of this paper was to confine potential sources of depression, anxiety, and stress, respectively each item specified in the study had a significant positive correlation with scores of depression, anxiety, and stress. Out of the 4 parameters of VIRUS, vexation, or frustration (being imprisoned, and unproductive), evaluate the gravity of the symptoms of depression, anxiety, and stress. This paper included 12 factors under these parameters of VIRUS. There exists a negative impact on mental health problems due to spending too much

time on gadgets and sleep-deprived. Financial difficulties and academic concerns (future uncertainty) correlate with extreme levels of these mental health problems. The negative perception of fear of awful happenings and an increasing number of cases of coronavirus, causing an increase in depression, anxiety, and stress.

Present results coincide with previous research that shows multiplied incidences of mental health problems in times of a pandemic. Publications have taken up the psychological brunt of the virus on the masses, established on information from previous disease outbreaks and papers (Zandifar and Badrfam, 2020)[31] that show social isolation contributes towards mental illness. (Shigemura et al., 2020)[32]Showing the fiscal impact of the virus and mental health.

This paper is able to add the importance and role of educating the masses about the psychological effects of any pandemic, this will evolve the mindset and bring about the survival instinct to find strategies to handle the present-day crisis. We have analyzed the negative screens of DAS responsible to affect mental stability among youth. Further exploration can be piloted in this area to understand the Interventional strategies of post-COVID (In business and normal lifestyle).

Ethical Clearance: Not required (specific to management domain)

Source of Funding: Self

Conflict of Interest: Nil

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