



**ANALYZING THE IMPACT OF COVID PANDEMIC ON STUDENTS  
MENTAL HEALTH ILLNESS IN DISTANCE E-LEARNING:  
REMEDIAL STRATEGIES AND FUTURE COURSE  
OF ACTION**  
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**ABSTRACT**

The main objective of the present study is to investigate the effect of COVID-19 on the student's mental health illness and to identify the factors causing mental health problems among the students originated in COVID-19 pandemic era. Efforts have been also made to identify the role of academic institution in controlling and managing the stress among students and to offer recommendations as future course of action to combat mental health problems. Moreover, remedial measure and strategies, role of yoga and meditation to address mental health illness resulting due to conduct of online classes and e-learning is also presented.

Undoubtedly, life is full of challenges, uncertainties, multidimensional and moves through different swing and phases during its entire journey and span. The outbreak of COVID-19 pandemic has affected trade and commerce, health sector, country wide education network, employment and socio economic development across nation. It has also affected the functioning of all section of society and changed the face and pace of life globally. It is obvious that outbreak of corona virus and lockdown as anti epidemic measure resulted in impediment of students from traditional face to face teaching learning and conduct of traditional class. Online education is only viable solution to continue and impart teaching, learning in COVID-19 era as result of forced closure of educational institution. In response to COVID-19 situation, students face several issues, challenges, threats and experience different barriers *viz.* technological, individuals, domestic, community and institutional in distance e-learning resulting in mental health problems. Keeping in view the same, therefore, it is imperative to understand the sources and impact of mental health problems among students in order to derive adequate and efficient intervention strategies.

**Keywords:** Corona Virus, COVID-19, Education, Technology, E-learning, Mental Health, Yoga, Meditation, Life-Style.

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## 1. INTRODUCTION

The outbreak of corona virus in the beginning of 2020 has changed the face and pace of life globally. Isolation and quarantine, physical distancing, community containment and lockdown are widely followed anti epidemic measure to curb the spread of the disease. Lockdown is an intervention applied for separation of people to an entire community/city/region to prevent the person to-person spread of disease by interrupt transmission [1-3]. The closure of educational institutions due to COVID-19 pandemic disrupted education nationwide and has forced all educational institutions viz. pre-primary/primary/secondary schools, college or university-level education to switch from traditional face to face learning to distance e-learning mode resulting in affecting student's life and their studies. No doubt, closure of educational institutions not only impacted students, teachers, and families, but also has far-reaching economic and societal consequences. It forced to conduct various students centered activities through virtual world using Information and Communication Technology. Almost 60.2 million instructors from educational institution are far from traditional face to face classroom teaching and conducting classes in online mode through different learning platform. Distance e-learning online classes are conducted by the instructor using different online platform as an alternative to traditional face to face classes. Instructor imparting content delivery in online classes through these online video-conferencing platforms is required to set up their accounts to engage with students. These tools enable us to conduct online classes, web conferences, webinars, video chat and live interactive meeting. Certainly, the COVID-19 pandemic results in evolution of new era of online e-learning, instructional delivery and brings a new culture of remote working. The unexpected and undesired changes and inability to cope with realistic situations arise due to distance e-learning results in mental health problems. It is a threat to students mental, physical, emotional and spiritual well being resulting due to reaction to short lived situation. Mental health problems result biochemical, physiological behavioral and psychological changes among students, and may also damage student's physical health [4-12].

Keeping in view the safety of students, teacher and their family the educational institutions are still continuing teaching and learning in online remote e-learning mode to ensure physical distancing and to prevent person to-person spread of disease.

### 1.1 PANDEMIC INDUCED CONSEQUENCE: CORE PROBLEM OF MENTAL ILLNESS

Online education is only viable solution to continue and impart teaching, learning in COVID-19 era as result of forced closure of educational institution. Conduct of several hours online classes; interaction through virtual environment; long time sitting on screen; meeting of academic demands and assignments from homes through online mode; conduct of online examination; online assessment; preparation and submission of midterm paper, independent study; uncertainty of academic and professional career; study of new subjects through new digital learning platform; change in environment and life style due to whole time stay at homes; long hours lack of social contact with nearer, dearer and far from peer group; least participation in group sports and physical activities; exposure to social media; lack of e-resource and connectivity; financial constraint results in mental health problems of students. Besides these factors, economic uncertainty in family on one side and relational family conflict on the other side; fear of losing job by parents and issues of unemployment of family members; change in life style are also the major challenge which further cause the fear, insecurity for future and mental illness.

In response to COVID situation, transition from traditional face to face learning to online distance e-learning results in online fatigue, weariness and monotony due to attending multiple long hour class's every day, long hours sitting on digital device and continuous looking on screens for studies as well as for recreational activities and for preparation of power point presentation, assignments and worksheet. Resultantly, students face difficulty in concentrating, physical exhaustion, anxiety, irritability, headache and eye strain. The increase in screen time, combined with prolonged sitting and screen exposure; lack of physical activity is vital cause of mental illness. The pandemic induced remote e-learning results in major concern of mental health problems due to conduct of all students centered activities in online mode. It results into a range of behavioral issues and gives rise to unexpected and undesired stress and anxiety [13-26].

No doubt, ICT play a vital role in digital and global era but long time online content delivery through online mode results in mental illness in student's certainly. Keeping in view the unexpected circumstance of corona virus pandemic, the present study is planned to access and identify the various factors causing mental health illness and academic stress among students. The various strategies and remedial measure, role of yoga and meditation, due course of action need to be initiated as roadmap in future by academic institution to address, cope and overcome with mental health illness among students is also presented.

## 2. LITERATURE REVIEW AND RELATED WORK

Although there is a vast scientific literature in context of outbreak of corona virus, pandemic and its consequence on education and health sector, impact of distance e-learning in different course of studies in different educational domains and professional course. But in this study, a concise review of literature in context of analyzing the impact of COVID-19 pandemic on student's mental health illness resulting due distance e-learning, remedial measures and role of yoga and meditation to address the same is presented. Table 1 depicts the literature in context of the present study.

**Table 1: Literature Review and Related Work**

S.No	Domain	Authors
1	Online and remote learning in educational institutions during COVID-9 pandemic and Educational Challenges	Shivangi Dhawan, 2020; Parvat Kumar Jena, 2020; Ramakanta Mohalik and Sonali Suparna Sahoo, 2020; Chrysi Rapanta <i>et al</i> , 2020; Wahab Ali, 2020; Petar Jandrić <i>et al</i> , 2020; Pratima Khandelwal <i>et al</i> , 2020; Jyoti Bawane, 2020.
2	Impact of COVID-19 on students mental illness due to online and remote e-learning	Ruba Abdelmatloub Moawad, 2020; Sai Saliesh Kumar Goothy <i>et al</i> , 2020; Utsav Raj, 2020, Kshipra Moghe <i>et al</i> , 2020; Nicholas Grubic <i>et al</i> 2020, Pardeep Sahu, 2020; Leilei Liang <i>et al</i> 2020; Shweta Singh <i>et al</i> 2020, S Subedi <i>et al</i> , 2020; Sanasam Pauline Devi, 2020; R.Radh <i>et al</i> , 2020; Sanasam Pauline Devi, 2020; Dangi Ravi Rai <i>et al</i> , 2020; Adrija Roy <i>et al</i> , 2020, Anuradha Khattar <i>et al</i> , 2020; Dangi Ravi Rai <i>et al</i> , 2020; Barnali Bhattacharjee and Tathagata Acharya, 2020.
3	Role of yoga and meditation to combat students mental health illness	Gopal Krushna Pal <i>et al</i> , 2020; R Nagarathna <i>et al</i> , 2020; Raju Roy and Malay Kumar Mukhopadhyay; 2020, Ananda Balayogi Bhavanani, 2020, Kanupriya Sharma, 2020; Nishitha Jasti, 2020.

The main objective of the present study was to investigate the effect of COVID-19 on the student's mental health and to identify the factors causing mental health problems among the students originated in COVID pandemic era. To identify the role of academic institution in controlling and managing the stress among students and to offer recommendations as future

roadmap and course of action to combat mental health problems. To explore the various strategies and technique, remedial measure to combat, prevent and to find out possible measures that would reduce the stress level. Keeping in view the objectives, the present study is planned and organized in the forthcoming sections.

### **3. METHODOLOGY**

The present investigation is planned and based on secondary information that is based on narrative study, interview, views and observation from faculty, student's perception and view point, review of literature of related work on the previous studies conducted, published and unpublished reports in this domain. The succeeding section describes the cause and consequence of mental health problems among students.

#### **3.1 Identification of Cause of Mental Health Illness**

Life is complex, complicated, dynamic, realistic & full of uncertainties and far from imagination of each and every one. Each student's irrespective of gender, age, medium of study, course of study, socio economic status, residing in rural or urban area experience mental health problems differently in COVID-19 era. Indeed, it is obvious that in dynamic, competitive and global digital era, youth already by themselves are aware and exposed to Information and Communication Technology, all kinds of digital resources; device and electronic gadgets that already develop mental stress and health problems. It is true that students enjoy social media and digital life. In fact, it is a matter of great concern that youth is already making excessive use of digital technology and face difficulty in managing their own schedule, activity and life.

Indeed, transition from traditional face to face learning to online distance e-learning forced youth to primarily switch and conduct their students centered activities using Information and Communication Technology, digital device and electronic gadgets. Moreover, the usage of the same differs from individuals to individuals as per course of study and instructional delivery. The excessive use of digital technology affects student's body, mind, and behavior in many ways. No doubt, each student move through a developmental stage in which they experience many waves of success and failures. Resultantly, when individual's students are unable to manage and cope the waves of life changes and when the same is not handled properly it brings mental health issues. There are numerous cause of mental health illness among students resulting due to various uncontrolled internal/ external factors associated with students life changes. It is a matter of great concern that students mental illness has increased in this era of pandemic and digital revolution. Infact, mental health illness is the negative outcome of digital and modern lifestyle varied from individual students to students and as a result of various external factors, life style, expectation from success/failure of individuals etc to name only a few.

The probable reasons of mental health problems originated in COVID-19 pandemic and the factors that can contribute to stress among students are identified as below:

- Financial and economic uncertainty;
- Major dependence on ICT and increased screen time;
- Delay in online scheduling of examination;
- Lack of ICT & e-resource;
- Excessive use of social media;
- Unhealthy and excessive eating;
- Change in environment and lack of interaction with peers;
- Imbalance between studies, sports and physical activity;
- Imbalance in course of studies and competitive examination preparation;
- Inadequate coping skills and conflict;

- Relational conflict;
- Individual personality factors;

One of the major concerns of increase in mental illness in COVID-19 pandemic era is major dependence on use of ICT, e-resource, electronic gadget in remote e-learning. Majorly, all students centered activities related to their studies are conducted in online mode and continue even after unlock phase in digital online mode. Students are almost sitting 4 to 8 hours every day in online mode leading to increase in screen time. Since much of routine activities either online classes or entertainment of students are dependent on the use of ICT and e-resource. It results in behavioral and emotional disorders due to spending long screen hours. The long hour's classes and dead line to meet online e-assignments, projects, independent study, power point presentation, and conduct of laboratory virtually further also increase the screen time. Academic pressure such as completion of curriculum and fear of online examination; work pressure and demanding deadlines of meeting academic e-assignments, worksheet further aggravated the situation [13-26].

Besides the above stated factor, the individual personality factors such as physical illness, late night sleep, self indiscipline and faulty time management, inadequate rest, inadequate exercises, faulty lifestyle, inadequate leisure time, faulty dietary habits also results in mental health problems. Moreover, association with negative mind set, change in life style and day to day routine due to forced closure of educational institutions and restriction of outdoor recreational activities, isolation from nearer, dearer and peer friends, fear of transmission of disease from other results in mental health illness.

In light of the above discussion, it is obvious that above stated factors play a significant role in developing mental health illness and affecting student's academic performance. Resultantly, it has a dramatic impact on student's life and therefore it is the need of hour to take vital steps to combat and to bring balance in physical health, mental, emotional, and spiritual dimension to the students.

### **3.2. Mental Health Problems**

Mental health problems in students have been on the rise since COVID-19. Commonly, identified mental health issues originated in response to COVID-19 pandemic situation resulting in digestive symptoms, emotional negative effect, physical impact are listed below:

- Irritability and mood swings;
- Anxiety and low mood;
- Anger, outbursts, isolating self and video fatigue;
- Depressive thoughts and recurrent suicidal thoughts because of social isolation;
- Feeling of distrust due to not being able to physically meet with friends and other peers;
- Eye strain, eye infection and other related issues caused by long term sitting for online study and recreational activities and long hours looking at a screen.
- Various kind of disorder and issues such as panic, phobic, sleep disorders, eating disorders etc

Mental health problems originated due online learning may lead to various health issues such as headaches, nervous stomach, change in appetite, rapid breathing, rapid heart rate, sweaty palms, irritability, anxiety, fatigue, insomnia, dissatisfaction, anger, depression, inability to concentrate, emotional problems tiredness all the time neck pain, back pain, migraine headache. Moreover, prolonged exposure to usage of e-resource in remote e-learning mode results in mental illness, increase wear and tear of the body and mind which in turns leads to mental disorder etc.

### 3.3 Strategies for Coping with Mental Health Illness

The optimal usage of digital e-resource and taking frequent break from screen time is an effective step in managing mental health problems resulting due to remote e-learning. The various strategies for addressing and coping with mental health illness is depicted in figure 1.

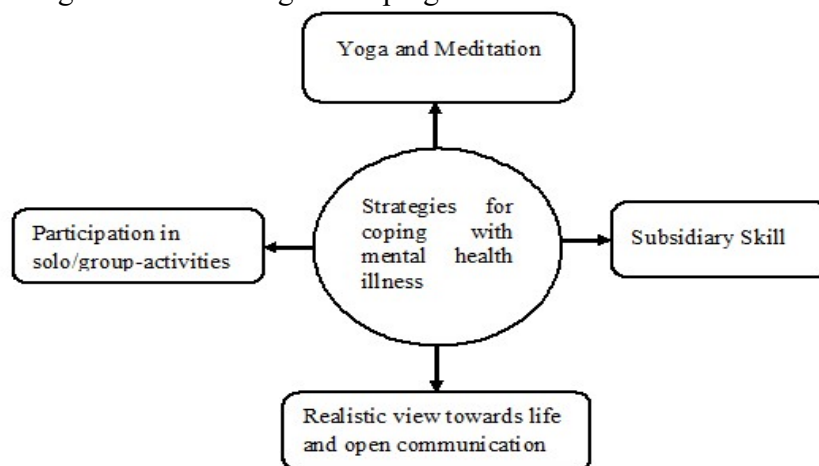


Figure 1: Strategies for Coping with Mental Health Problems

### 3.4 Emphasis on Participation in Solo/Group-Activities

The involvement of students in various activities such as reading, writing, photography, art, listening music and playing a musical instrument, cycling, gardening, dancing, running, participation in disposal of routine work at home play an indispensable role. Moreover, participation in various activities by maintaining proper physical distances such as student's welfare activities, indoor/outdoor sports, virtual field visit, participation in societal activities play a vital role. Supportive exercise/ physical exercise and workout routine such as jumping jacks; wall sit; pushups; crunches; step-ups; squats; lunges are vital to boost mood [27].

### 3.5 Realistic View towards Life

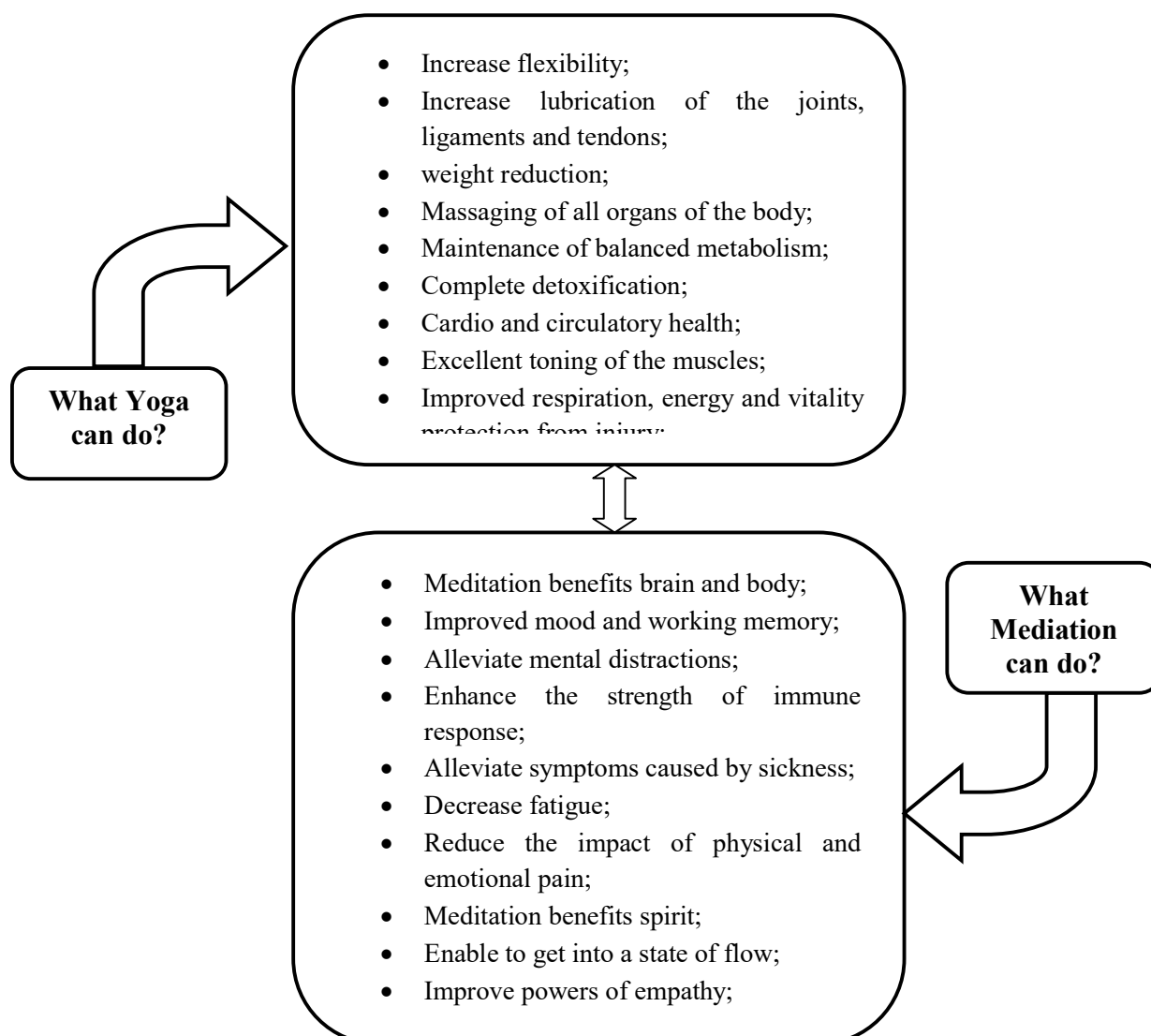
A realistic expectation of students from parents, teachers, nearer and dearer, friends, society and open communication with parents and teachers is an effective solution in this direction.

### 3.6 Subsidiary Skill

It involves planning, setting and managing of day to day routine activities by youth at their own level such as establishing priorities of everyday as per need, regulating and managing time for sports, studies and physical activity, recreational activities; time management and avoiding wastage of time, self care, discipline and management etc to name only a few.

### 3.7 Yoga and Meditation: Need of Hour

It is evident from vast scientific literature, reports and other studies that yoga is one of the oldest sciences with a holistic approach studied extensively from ancient past. There are numerous benefit of yoga, meditation and practicing it regularly stabilizes the mental health and led positive energy. Yoga practice ideally includes the complete package of asanas (body postures), pranayamas (breathing techniques), meditation and the ancient yoga philosophy. Undoubtedly, it is obvious from various studies conducted in COVID-19 era that yoga plays a vital role to keep physically, mentally fit and to cope with various mental health issues. Yoga and meditation is a vital tool that play an indispensable role in preventing, combating stress, anxiety and depression in students. The various benefits of yoga and meditation to address mental health issues is depicted in figure 2.



**Figure 2: Yoga and Meditation Effectiveness for Coping with Stress**

### 3.7.1 Pranayama

Undoubtedly, it is obvious from existing vast scientific literature that breathing right with pranayama play a vital role in controlling negative thought and free the mind with unnecessary clutter of thoughts that breed mental health problems. KapalBhati Pranayama (Skull-Shining Breathing technique); Bhastrika Pranayama; NadiShodhan Pranayam (Alternate Nostril Breathing); Bhramari Pranayama (Bee Breath) are commonly practiced breathing technique to reduce mental health illness. Yoga through meditation works remarkably to achieve this harmony and helps the mind work in synchronization with the body.

### 3.7.2 Yoga Module: Brief Outlook

It is the need of hour that each and every student may follow and adapt yoga module of almost 30 minutes to 1 hour regularly in their daily life routine to address various health issues. Regular practices of yoga module begins/involves starting with prayer of Gayatri mantra, Guru vandana; three to five round of Surya Namkasar and other simple asana; Shavasana; Nadi Shodhan Pranayam, Mediation followed by ending prayer Shantee Path.

No doubt, practicing yoga and meditation play an indispensable role to reduce stress levels; relieve anxiety; manage depression; decrease lower back pain; improve quality of life; stimulate brain function; prevent heart disease; improve sleeping pattern; reduces muscle tension, strain, and inflammation, sharpens attention and concentration, calms and centers the nervous system; treatment of chronic health conditions, controlling and focusing thoughts and lead more productive outcome to name only a few [28].

### **3.8 Future Road Map**

In this section, the role of instructors as well as educational institutions, future road map, new initiatives and some of the concert steps essentials to address academic stress and mental health problems and due course of action plan is described.

### **3.9 Instructor Role in Management of Mental Illness**

The author is of view that instructor in educational institution play a pivotal role in combating and reducing mental health problems and academic stress. Adoption of student centered active learning approach is the need of hour. Assimilation of student centered bidirectional innovative teaching pedagogy, problems and project based learning approach, brainstorming, role playing & inclusion of case studies in content delivery, encouraging hands on learning and learning by doing, connecting course content with real life situation & social relevance, encouraging autonomous learning; offering mentor classes & remedial classes, encouraging participation in extracurricular activities, offering guidance on career counseling, planning and mapping; developing emphasis on promoting entrepreneurship and start up skill to keep away from fear of unemployment; encouraging social participation and societal interconnection. Therefore, it is essentials to nurture innovation talents among young to cope with real life challenge and to keep far away from academic stress. Besides theses, guiding and counseling on effective time management; encouraging participation in physical exercise and indoor/outdoor sports activities; participation in family routine activities/work; participation in leisure activities, social support activities, spiritual strategies is also vital. Moreover, guiding, motivating and encouraging students to share problems with parents, teacher, counselor and friends and guiding to reframing problems as per demand and situation, changing situation, reaction, response and positive attitude is also essential to address the mental illness.

In light of the above discussion, it is evident that teacher play vital role in academic stress management by guiding, motivating and mentoring the students.

### **3.10 Educational Institutions: Future Course of Action**

Primarily, in author opinion majority of instructor realize that stress, depression and anxiety among students is a serious concern resulting from COVID-19 pandemic. In response to COVID-19 situation, before fully functioning and opening of educational institutions, it is essential to take vital steps by the educational institution as future roadmap to combat mental stress. In this direction, future course of action, recommendation and some of the concert steps, initiatives essentials for academic institution in due course of action plan are as follows:

- Inclusion of yoga breaks in time table and academic curriculum;
- Sensitization of students towards life style modification evolved in digital and global era;
- Creation of students centered activities and support centre;
- Sensitization towards use of social media;
- Establishment of nutrition and wellness centre in educational institution;
- Sensitize students towards self care and self discipline and self management;
- Establishing yoga and rejuvenation therapy centre;
- Inter personal skill development;



- Constitution of health monitoring committee;
- Organizing open parent teacher interaction meeting and assessing feedback;
- Engaging students in recreational activities and indoor/outdoor sports;
- Guidance and counseling on career planning and mapping;
- Regulating screen time and use of digital resources;
- Avoid cognitive overloading of students

In summary, mental health problems among students can be addressed by practicing and adopting the above suggestion in routine life of students. Further, engagement in unnat bhart abhiyan, community work and social interaction; connectivity with nature; participation in sports and physical exercise; strengthening real life and analytical problem solving skill; self assessment and organization; setting realistic life goal; intermittent connectivity with virtual world and social media; sharing and helping parents in day to routine activities play a significant role in mental health illness management. No doubt, students counseling centers, student health committee and mentor mentee programme and assimilation of above recommendation plays a significant role to enlighten the bright future of young ones and to keep away from stress, anxiety and depression. No doubt, sensitization of students through on campus counseling and organizing various seminar/conference/workshop/webinar on the above issues plays a vital role in this direction.

#### **4 CONCLUSION, IMPLICATIONS AND FINDING OF STUDY**

Each and every student in this world is unique and proceeds through life's journey in different ways and face different technological, individuals, domestic, community and institutional barriers in COVID-19 pandemic. Social isolation and prevalent use of digital device is one of vital concern of digital era in building mental stress and depression. Every individual experiences requires unique solution and no doubt, yoga and mediation is an effective and vital tool in this direction. Indeed, commonly discussed strategies in this investigation are preliminary solution to address the mental health problems of students. Remedial measure, strategies and future course of actions need to be initiated by educational institution before fully functioning of institution play a significant role in combating stress, anxiety and depression.

- The finding of this study reveals that assimilation of discussed remedial measure, strategies and adoption of above suggestion, recommendation and regular practice of yoga mediation play a significant role in reducing mental health problems.
- It is also true that almost two third of Indian population reside in rural and majorly depends on agriculture, dairy farming, agro based activities, self-employment, services, construction sector, etc to name only a few. It is true that students residing in rural areas mainly prefer government institution for study due financial constraint, other issues and challenges. Nationwide digital learning is practically impossible in government institutions mainly in schools in era of COVID-19 pandemic due lack of power supply, interruption in power supply, poor digital knowledge and skills, internet connectivity issues, lack of e-library and technological barriers. Therefore, it is evident that the impact of distance e-learning was more severe for disadvantaged children due to lack of e-resource availability. Lack of ICT support and internet connectivity problem; affordability of e-resource and lack of family support due to financial constraint is a major hindrance in delivery of online education especially in rural India. It results in digital divide in rural India.
- The study also reveals that mental health illness is the negative outcome of digital and modern life style as well as excessive pressure resulting due to simultaneous preparation

of course of studies and competitive examination by students through online mode. It is therefore essentials to optimally balance the use of ICT technology and digital resource with other routine activities that promote relationships, creativity and over development of youth. Undoubtedly, excessive use of e-resource and technology can negatively impact the physical, mental, emotional and social development of youth.

- The study also reveals that long hours online classes results into late night sleep, irregular sleep cycle and insomnia due to the sudden increased usage of screen time and reduced physical activity. Therefore, online classes had increased the mental stress in the students.
- It is also obvious that not only online classes but financial uncertainty and inter & intra family conflict also result into mental health illness. The inter & intra family conflict needs to be understand and managed by students as well as parents.
- The study also reveals that it is the need of hour to introduce mental wellness program into undergraduate curriculum and moreover to create and start mental health cell in educational institutions for offering solution in this direction.
- It is also the need of hour to assess existing technological resource and barriers in educational institutions; future technical requirement and devising a road map to meet the future requirements and finalizing the same for sustaining online education.
- Essentially, there is need to learn a lesson from the COVID-19 era and efforts should be made to create skilled digital workforce having sound digital knowledge. Moreover, efforts should be made to impart training to the staff and faculty on online content creation, management and delivery for sustaining online education, curriculum in future. Therefore, it is the need of hour to invest in improvement of instructor skills in digital knowledge and skills, cyber safety awareness, e-study material development.
- Institute level initiatives need to be taken for student's welfare by offering tuition fee waivers, scholarship to economically deprived students to address the financial problems of students originated as a result of pandemic economic impact.

To summarize, adoption of yoga and meditation certainly play an indispensable role to reduce stress levels; relieve anxiety; manage depression; in controlling lower back pain; improve quality of life; stimulate brain function; prevent heart disease; improve sleeping pattern to name only a few.

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