Please share your comments/suggestions on this task force separately on an individual page by 20th June 2024 on email Id: umeshkapil@gmail.com.

सत्यमेव जयते

DRAFT

# NATIONAL ACADEMY OF MEDICAL SCIENCES (INDIA)

# ARMED FORCES MEDICAL SERVICES (INDIA)

# DIRECTORATE GENERAL OF HEALTH SERVICES

# MINISTRY OF HEALTH & FAMILY WELFARE
# GOVERNMENT OF INDIA

# REPORT OF TASK FORCE

*ON*

# MENTAL STRESS

2024

NAMS – DGAFMS – DGHS – Govt. of India – Task Force Series No. 12

# NATIONAL ACADEMY OF MEDICAL SCIENCES (INDIA)

# &

# ARMED FORCES MEDICAL SERVICES (INDIA)

# REPORT OF TASK FORCE

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# MENTAL STRESS

## LIST OF ABBREVIATIONS

| | | |
|---|---|---|
| AFMS | – | Armed Forces Medical Services |
| AVP | – | Arginine Vasopressin |
| BMI | – | Body Mass Index |
| CHC | – | Community Health Centre |
| DMHI | – | Digital Mental Health Interventions |
| DMHP | – | District Mental Health Programme |
| GI | – | Gastro-intestinal |
| HPA | – | Hypothalamo-Pituitary Axis |
| IBS | – | Irritable Bowel Syndrome |
| LMIC | – | Low and Middle Income Countries |
| MO | – | Medical Officer |
| MoHFW | – | Ministry of Health and Family Welfare |
| MoSJE | – | Ministry of Social Justice and Empowerment |
| NAMS | – | National Academy of Medical Sciences |
| NK Cell | – | Natural Killer Cell |
| NMHP | – | National Mental Health Programme |
| PHC | – | Primary Health Centre |
| PTSD | – | Post Traumatic Stress Disorder |
| RMP | – | Registered Medical Practitioner |
| SAM | – | Situationally Accessible Memory |
| T-MANAS | – | Tele Mental Health Assistance and Networking Across State |
| T2DM | – | Type 2 Diabetes Mellitus |
| WHO | – | World Health Organisation |
| YLD | – | Years Lived with Disability |

## CONTENTS

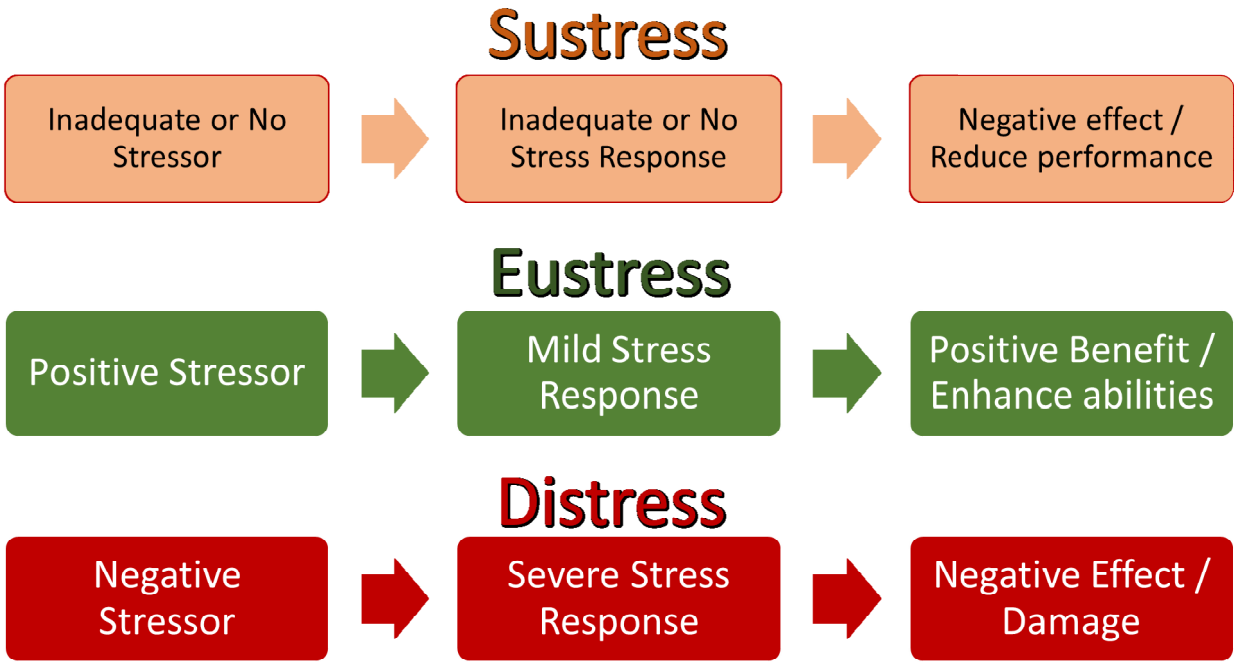
## 1. INTRODUCTION

The World Health Organisation has defined stress as “A state of worry or mental tension caused by a difficult situation” (World Health Organisation, 2023). The “difficult situation’ or the stressor can range from normal day-to-day stressors like missing a bus, or it can be a challenging situation like a job interview, conflict with friends or family or an event that affects a large number of people at a time like natural disasters, disease outbreaks, major economic crises, etc.

Stress affects both the mind and the body. The effect of the stressor on the physical and the mental health of an individual can be either positive or negative depending on the interplay of multiple factors - the severity of the stressor, the controllability of the stressor by the person experiencing the stressor, duration of stressors and the availability of resources to manage the stressors. The resources here include psychological resources (Coping skills, personality traits, attitude, values, etc), social resources, financial resources, as well as physical health related factors, that one can use in responding to the stressor.

While the term ‘stress’ connoting difficulty or challenge made an appearance in the literature as early as the 14th century, it was during World War II that a heightened curiosity emerged surrounding emotional breakdowns triggered by the pressures of combat. It was found that numerous circumstances in everyday life—such as the process of maturing, marriage, or experiencing illness—could evoke effects akin to those seen in combat situations. This resulted in a growing inclination to view stress as a significant contributor to human dysfunction and distress (Lazarus, 1993). However, further studies have expanded the concept further to include not only distress, but also eustress.

Eustress refers to a type of stress where homeostasis is mildly challenged by moderate levels of stressors that are positive in nature and can lead to mild stress response. Sustress refers to the type of stress where homeostasis is either not challenged or inadequately challenged that eventually affects the homeostasis negatively and worsen health. Distress refers to a type of stress where homeostasis is strongly challenged and worsens the health (Lu et al., 2021).




Since the concept of stress is very wide and it is the distress that leads to more negative effect or damage to an individual, it was mutually decided by the members of the task force that the current document will focus only on the "Distress". Hence, in the document, hereafter, the term 'stress' refers to 'distress' unless specified otherwise.

### 1.1. Models of Stress:

**Stimulus based models:**
Stimulus-based models interpret stress as a stimulus, a life-event that evokes physiological and psychological responses, which may increase an individual's vulnerability to develop health issues and dysfunction at various levels. Using this conceptual framework, Holmes and Rahe developed a Stress scale that lists 43 life-events, both positive and negative, that can be considered stressful (Holmes, 1978).

**Response-based models:**
Response-based model developed by Selye conceptualize stress as a "response" (Selye, 1956). Selye proposed the "General Adaptation Syndrome", which suggests that stress triggers a physiological response involving three stages: alarm, resistance, and exhaustion. During the alarm stage, the body reacts with the fight-or-flight response, preparing to confront the stressor. If the stress persists, the body enters the resistance stage, attempting to cope with the ongoing challenge. However, if the stress becomes chronic and overwhelming, the body enters the exhaustion stage, leading to a breakdown of physiological systems and increased vulnerability to illnesses.

**Transactional model:**
Another prominent model of stress is the "Transactional Model," proposed by Richard Lazarus and Susan Folkman in the 1980s. This model emphasizes the dynamic nature of stress, suggesting that it emerges from the transactional process between an individual and their environment. Stress is perceived through an individual's assessment of a situation's potential harm and their ability to cope with it. This appraisal leads to either adaptive or maladaptive responses, influencing the overall impact of stress on well-being (Lazarus & Folkman, 1984).

While Lazarus acknowledged specific environmental conditions as stressors, he also highlighted the variation in how individuals and groups perceive and respond to these stressors due to differences in sensitivity and vulnerability in terms of the cognitive processes that come between a stimulus and the corresponding response.

**Allostatic load model:**
In recent years, the "Allostatic Load Model" has gained traction, considering the cumulative physiological toll of chronic stress. This model focuses on the body's attempts to maintain stability through physiological adaptations, which can become maladaptive when stressors are prolonged or intense. Over time, this can result in "allostatic load," where the wear and tear on bodily systems contribute to various health problems. This model underscores the importance of early intervention and stress management to prevent long-term health consequences (McEwen & Stellar, 1993).

### 1.2. Importance of Stress

Stress is an universal phenomenon. The global prevalence of stress among general population during the COVID-19 pandemic has been observed to be around 36.5% and that of psychological distress has been found to be around 50.0% (Nochaiwong et al., 2021). The available studies before the pandemic have shown the prevalence of psychological distress in the general population to vary from 5% to 27% depending on the screening tool and the methodology used. The prevalence in certain special populations like migrants, workers facing stressful work situations, elderly who have faced neglect or abuse have been found to be even higher (Drapeau et al., 2012).

The stressors can occur from various sources such as environmental stressors, physical pain, circadian disruptions, or substance consumption. Also, stressors can differ significantly in their strength, ranging from mild to severe, and in terms of their duration or timing, spanning acute, chronic, or intermittent periods. It's also essential to acknowledge that not only do stressors come in a wide range, but also, the individuals' response to a stressor can vary significantly based on various factors like socio-demographic factors, personality factors, presence of social support, the prevailing social norms, etc.

Stress has been identified as a factor that can heighten the likelihood of various physical illnesses, and it may also worsen pre-existing physical conditions. Similarly, stress can elevate the risk of mental illnesses, particularly depression, anxiety, and substance use

disorders. Moreover, it has the potential to intensify the severity of pre-existing mental health conditions, contributing to a decline in the overall quality of life and an increased risk of morbidity and mortality.

Given that mental stress is a widespread phenomenon affecting individuals across diverse backgrounds, it becomes imperative to comprehend the current situation of mental stress in our country. This document aims to provide an overview of the existing mental stress scenario, delineate the consequences of mental stress, highlight gaps in current policies and programs, and propose recommendations for enhancing the current situation.

## 2. BACKGROUND

Medical professionals can play an important role in identifying and managing mental stress in the general population, which in turn can help in the prevention of mental illness and in mental health promotion. The National Academy of Medical Sciences (NAMS), India along with the Armed Forces Medical Services (AFMS) have constituted a Joint Task Force on Mental Stress to develop a white paper that can be submitted to the Government of India, to develop guidelines and to improve the interventions addressing the problem of Mental Stress in Indian population. In pursuance of the meeting of NAMS held on 8th August 2023 and the constitution of a Task Force on Mental Stress to develop a white paper to be submitted to the Government of India for improving the health intervention activities in the area of Mental Stress, the objectives of the task force were laid out.

This white paper document discusses the extent of mental stress related problems in India and offers a roadmap for policymakers to address these more effectively with the help of evidence based interventions.

## 3. TERMS OF REFERENCE (TORs) FOR THE TASK FORCE

The main objectives of Task Force were:
3.1. To identify the current status of Mental Stress
3.2. Identify the deficiencies which need to be addressed.
3.3. To recommend measures for management of Mental Stress

## 4. METHODOLOGY

The task force reviewed the current reports and data pertaining to mental stress in India. It then developed a consensus on the key observations and recommendations, taking into consideration the healthcare services and the varied social-cultural-economic contexts across the Indian landscape. The initial working draft was circulated among the task force members, and comments were sought. The working draft was modified based on the suggestions. Subsequently, online meetings were held, in which the experts deliberated on the various aspects of the document. Further modifications were made to the document based on the inputs received from the experts.

## 5. OBSERVATION / CRITICAL REVIEW

### 5.1. Current situation in the country

Since the concept of mental stress has varied across the literature, the scales used to screen for mental stress and the methodology used in the studies have also varied. As a result, the prevalence of psychological stress or distress in the general population has also varied across studies from 5% to 27%. (Drapeau et al., 2012). In India, there have been no nationally representative study to find the prevalence of psychological stress in the general population, even though there are many studies that have tried to assess the prevalence of mental illness in the country.

In India, the total disease burden due to mental disorders has almost doubled since 1990 (Sagar et al, 2020). The National Mental Health Survey conducted in 2016 across 12 states found the weighted prevalence for any mental illness in the lifetime was 13.7% and that for current mental illness was 10.6%. Apart from substance use disorders, mood disorders and neurotic or stress related disorders were found to be the most common mental disorders (Gururaj et al., 2019)

| **Mental illness** | **Prevalence (NMHS, 2016)** |
|---|---|
| Mental and behavioural problems due to psychoactive substance use | 22.4% |
| Schizophrenia and other psychotic disorders | Lifetime prevalence - 1.4%;<br>Current prevalence - 0.4% |
| Mood disorders | Lifetime prevalence - 5.6%<br>Current prevalence - 2.8% |
| Neurotic and stress-related disorders | Lifetime prevalence - 3.7%<br>Current prevalence - 3.5% |

Most studies in India that have tried to assess the prevalence of mental stress or psychological distress have focused on specific populations like adolescents, elderly population, etc. There have been very few studies that have focused on the general population.
Some of the studies conducted in the general population have been listed below:

- A cross-sectional community-based study conducted among 943 participants in a rural community among the adult population in India found the prevalence of psychological distress to be around **42.4 per thousand,** i.e. around 0.04%. Being **illiterate** and being **separated or divorced** was found to be associated with psychological distress (Sathyanath & Kundapur, 2020).
- A meta-analysis of 21 cross-sectional studies during COVID-19 pandemic in India found the overall prevalence of psychological distress among the general population to be around 33%, though there was **significant heterogeneity** across studies with

prevalence ranging from **2.4% to 84%** depending on the scales used and the methodology used (Sharma et al., 2022).

- A cross-sectional study to assess the psychological distress among healthcare workers in India during the COVID-19 pandemic found the prevalence to be around 52.9% with the risk being significantly associated with longer hours of work, income, screening of patients or contact tracing. Also, high emotional exhaustion and higher depersonalisation was found to be associated with higher psychological distress (Menon et al., 2022)

**5.1.1. Studies on prevalence of psychological distress from other countries:**

- As majority of studies on psychological distress among general population are from countries outside India, the current document also has reviewed these studies to understand the prevalence and various factors associated with psychological distress.
- The prevalence of psychological distress has varied across studies and across countries from 5% to 27% in the general population depending on the tool used and the methodology used. However, the prevalence among certain populations like migrants, workers facing stressful work situations can go higher (Drapeau et al., 2012).
- A study that analyzed data from 202,922 participants of the Behavioural Risk Factor Surveillance system in the USA found the prevalence of serious psychological distress to be around 2.1% in the total population (Li et al., 2010). Multiple studies that analyzed the data from the 2007 Behavioural Risk Factor Surveillance survey, a nationwide survey conducted in USA found that psychological distress (Assessed using Kessler 6 Questionnaire) was associated with abnormal BMI (either underweight or obese) (Zhao et al., 2009), urban residence (Dhingra et al., 2009), current smokers and former smokers (Dube et al., 2009).
- Another study from Canada which analyzed data from 11,058 participants from the first 12 years of the National Population Health Survey found that nearly 11% of participants experienced at least one episode of psychological stress over the period of 12 years (Orpana et al., 2009).
- In a longitudinal study involving over 400 adults and their children in the USA, it was observed that the occurrence of negative life events and the adoption of avoidance coping strategies were correlated with an increased likelihood of experiencing psychological distress. Similarly, in children, a higher risk of psychological distress was linked to parental emotional and physical distress. At the same time, easygoing disposition, family support and self-confidence was associated with lower risk of psychological distress (Holahan & Moos, 1987).
- A study conducted in Pakistan on 1000 adults aged between 18 to 75 years found the prevalence of psychological distress to be around 41% in women and 19% in men (Scale used: Self-Reporting Questionnaire -SRQ). The study also found that lower educational status, lower income and recent hospitalization (in past 12 months) was associated with higher rates of psychological distress (Husain et al., 2014).

### 5.1.2. Factors affecting mental stress

A large number of factors have been proposed to moderate stress. A stressor can act as a catalyst, presenting a challenge or predicament that compels an individual into action. Whether a situation is perceived as stress-inducing or not, hinges on a multitude of factors and individual variations. Stressors can be categorized into two types: major life stressors and daily hassles. The former are associated with alterations or disruptions related to key aspects of people's lives, e.g., shifting to a new city for a job. On the other hand, the latter involve minor, day-to-day vexations or frustrations, such as waiting in line or dealing with challenging individuals. Despite their seemingly small nature, daily provocations can also result in considerable stress, and the cumulative effect of numerous such issues can be as impactful as significant life changes (Gazzaniga & Halpern, 2011).

Another category of stressors that are of importance are those which are chronic in nature. Wheaton and colleagues (1997) have given seven types of events/situations that may be understood as chronic stressors:

(1) Threat of regular physical abuse or staying in high-crime areas;
(2) Expectations that cannot be met with current resources;
(3) Structural constraint, such as lack of higher education facility near home;
(4) Discrimination in job;
(5) Instability in life arrangements, conflicts of responsibilities across roles, for example, in case of working women;
(6) Uncertainty and
(7) Ongoing conflicts in personal, social, environmental or political scenarios.
(Wheaton et al., 1997)

It is well-known that there is individual variability in a person’s response to stressful situations. While some individuals manage even the most extreme of situations, some individuals get distressed even with apparently minimal demands. Hence, the role of individual factors is paramount in determining whether a person will develop psychological stress. At the same time, there are certain situations / stressors like disasters, war, etc., when many individuals will feel psychological distress. The ability of an individual to come out of these stressful situations, will not only depend on the individual factors, but also the availability of social support and other resources like shelter, clothes, food, security, etc. Hence, mental stress can occur either due to the nature of the stressor or due to individual vulnerability or a combination of both. Hence, while some individuals tend to show stressor responses associated with active coping whereas others tend to show stressor responses associated with aversive vigilance (Llabre, 1998).

While there are a large number of factors that can increase / decrease psychological stress, we have enlisted some of the most important and major factors associated with psychological stress, based on the literature.

**Demographic factors associated with higher risk of mental stress**

- Age: Extremes of age
- Gender: Female gender

- Education status: Lower education
- Marital status: Unmarried or Single status
- Residence: Urban locality
- Economic Status: Lower income
- Work: Unemployment

**Physical health-related Factors associated with higher risk of mental stress**

- Presence of physical disability
- Recent hospitalization
- Chronic physical illness
- Abnormal BMI (Not benign physically fit)
- Less Exercise
- Past history of physical illness

**Social Factors associated with higher risk of mental stress:**

- Uncertainty about current situation (Ex: Refugees)
- Uncertainty about future (Ex: Refugees)
- Minority status (Ex: Ethnic minority, Sexual minority, etc)
- Poor Social support
- Societal Norms → Can act both as protective factors at times and risk factors at times

**Environmental Factors:**

- Daily Life situations
  Ex: Late for work, Missing bus to work, etc., can increase risk
- Positive uplifts in daily life
  Eg. Getting appreciated at work, etc., can decrease the risk
- Major Life events:
  Ex: Marriage, Divorce, birth of a child, death of a loved one, etc., can increase or decrease the risk
- Exposure to trauma / adverse life experiences can increase the risk
  - Exposure to childhood sexual abuse
  - Exposure to bullying or rejection in the form of being ignored, cursed or assaulted
  - Exposure to parental emotional distress or parental physical distress
  - Exposure to physical abuse including intimate violence
  - Exposure to substance use in a family member
  - Being a care giver of a person with mental illness
  - Being a caregiver to a person exposed to disaster
- Acculturation stress
  - Migrating to a new cultural environment, language barriers, etc. can increase risk

- Workplace factors:
    - Risk factors at workplace:
        - Dissatisfaction in job
        - Family-work conflict
        - Long working hours,
        - Non-traditional gender role at work
        - Loneliness
    - Protective factors at workplace:
        - Having active participation in the job,
        - Ability to maintain work and family roles successfully
        - Perceived control in job
- Higher academic stress can increase the risk for students

**Psychological factors:**

- Temperament:
    - Negative affectivity increases the risk
    - Easy going temperament lowers the risk
- Lower Psychological flexibility increases the risk
- Personality factors:
    - Risk factors:
        - Higher Neuroticism
        - Higher conscientiousness
    - Protective factors:
        - Openness to experience
        - Extraversion
        - Agreeableness
- Coping skills:
    - Risk factors:
        - Emotion-focused coping
        - Avoidance or Escape coping
    - Protective factors:
        - Problem-focused coping
- Gratitude, Optimism and Self-compassion have lower risk
- Presence of mental illness symptoms have higher risk
- Past history of mental illness have higher risk

### 5.1.3. Consequences of Mental Stress:

Some amount of stress is necessary to propel an individual to act or deal with the situation. According to Yerkes and Dodson law, proposed in 1908, elucidated that performance increased with stress/arousal only to some extent, beyond which it started declining. It further stressed that not having enough stress would lead to amotivation or boredom and decreased performance (Figure 1).

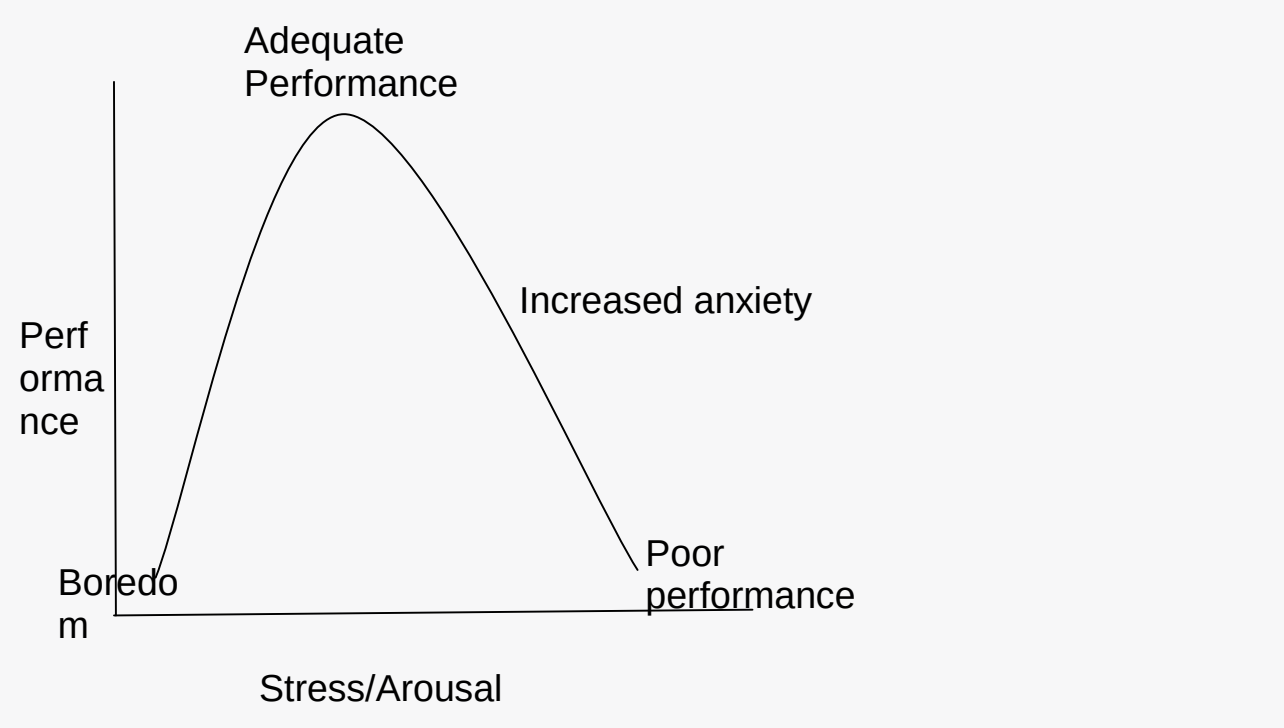



Figure 1: Yerkes-Dodson Law

However, extreme or prolonged stress can have physiological, psychological as well as social ramifications. A systematic review comprising 47 studies revealed that elevated stress reactivity in both the SAM system and HPA axis was predictive of a heightened risk of cardiovascular diseases. Conversely, blunted stress reactivity was associated with an increased likelihood of future obesity, depression, anxiety, higher illness frequency, pains/aches, diminished cognitive ability, poorer self-reported health, and disability (Turner et al., 2020).

**Physiological effects:**

The hypothalamus is affected in the same manner by our internalized anger at any of these circumstances as well as our guilt and resentment toward other people and ourselves. But we trap this tension inside where its consequences compound rather than letting it go. Research indicates that nearly every bodily system can be impacted by chronic stress. When chronic stress is not relieved, it hampers the immune system, leading to the development of illnesses. Fortunately, in typical situations, three minutes after the cessation of a threatening scenario and the elimination of real or perceived danger, the fight-or-flight response diminishes. Consequently, the body relaxes and reverts to its usual state. During this period, various physiological functions such as heart rate, blood pressure, breathing, muscle tension, digestion, metabolism, and the immune system normalize. If stress persists beyond the initial fight-or-flight reaction, the body's response progresses to a second stage.

**Effect on Physical Health:**

Psychological distress is well-known to lead to an increase in the risk of physical illness, as well as worsen the course of physical illness.

**Stress and immune system:** The deleterious effects of chronic stress again lead to dysfunction of the HPA axis leading to impaired immune system, reduction in activity of T lymphocytes and NK cells and predisposition to malignancies.

**Stress and cardiovascular system:** Stress, both acute and chronic, has a deleterious effect on the cardiovascular system, as it causes chronic activation of the autonomic nervous system leading to vasoconstriction, atherogenesis, increase in blood pressure etc. A systematic review of 24 prospective studies found that psychological distress was associated with significantly increased risk of recurrent cardiac events in patients with coronary artery disease (Park & Bae, 2011).

**Stress and GI system:** Stress not only affects appetite, but also affects the absorption process, intestinal permeability, mucus and stomach acid secretion, function of ion channels, and GI inflammation. Stress can also alter the functional physiology of the intestine. Many inflammatory diseases, such as Crohn's disease and other ulcerative-based diseases of the GI tract, are associated with stress. Irritable bowel syndrome is considered as a functional disorder related to stress.

**Diabetes:** Higher levels of chronic psychological stress and more importantly a decreased stress coping ability measured as sense of Coherence (SOC) (Madhu et al., 2019)was associated with a greater risk of T2DM among Indians. A dysregulated HPA axis (Siddiqui et al., 2015) driven primarily by AVP (Madhu et al., 2020)was observed to be the possible link in this association. A significant association of psychological stress with oxidative stress and inflammatory markers in the context of type 2 diabetes was also documented (Siddiqui et al., 2019). All these findings were novel and hitherto unreported in Indians.

**Mortality:** An individual participant pooled analysis of 10 prospective cohort studies among 68222 individuals found a higher risk of all-cause mortality, deaths due to cardiovascular diseases and death due to external causes (Russ et al., 2012).

**Effect on mental health:**

Stressful living circumstances increase the risk of mental illnesses including depression and anxiety. Psychological stress has been associated with increased risk of psychiatric disorders, especially depression, anxiety disorders and substance use disorders. Apart from psychiatric disorders, psychological distress is also associated with increased risk of sleep disorders, dementia, memory disturbances, eating problems, etc.

**Memory disturbances:** Chronic stress leads to impairment of the hypothalamo-pituitary-adrenal axis leading to changes in the hippocampus that has a high density of cortisol receptors. This leads to impairment in memory and learning.

**Depression:** Depression is one of the most common mental health issues with a prevalence rate of 5% (WHO, 2023) Relationship between stress and depression has long been studied. Initially believed to be unidirectional, recent studies on the stress-diathesis model indicate a

bi-directional relationship. Focus, recently, has shifted to the awareness that stressors during early developmental years, such as loss of parent, bullying etc as well as enduring/chronic stress such as marital or occupational circumstances are strong indicators for depression (Hammen, 2005; McLaughlin et al., 2010). A recent key pursuit has been investigation of accumulated stress (measured though allostatic load) and its influence on depression and other psychological issues. Biological components such as increased cortisol levels and dysregulation in HPA-axis ha ve been implicated in both stress as well as depression (Frodl &O'Keane, 2013). In comparison to age- and gender-matched controls, a study of 13,006 Danish patients with initial psychiatric admissions diagnosed with depression showed higher instances of recent divorces, unemployment, and relative suicides. A serious medical diagnosis is often considered a severe life stressor and is frequently linked with elevated rates of depression. For instance, a review indicated that approximately 24% of individuals diagnosed with cancer experience major depression (McDaniel et al., 1995). Future research should enhance the specific factors influencing relationship between stress and depression by employing reliable and consistent methodologies.

**Anxiety and Stress-related Disorders**: Anxiety serves as the physiological and psychological indicators that the body's stress response has been activated. Unmitigated stress has been shown to precipitate the development of anxiety disorders as well as stress-related disorders such as Acute Stress Disorder and Post-traumatic Disorders (PTSD). Roughly 4.05% of the worldwide population, corresponding to around 301 million individuals suffer from any anxiety disorder. (Javaid et al., 2023) According to the National Mental Health Survey conducted in India, prevalence of any anxiety disorder was found to be 3.6% and that of PTSD was found to be about 0.2%. (Gururaj et al., 2019). Prevalence of Acute Stress Disorder has been put between 5-20% following a traumatic or stressful event. Stress-induced changes in brain regions such as shrinkage in Hippocampal volume have been implicated in ASD as well as PTSD.

**Sleep Disorders:** Sleep disorders have been reported in 25-30% globally. (Ramaswamy et al., 2020). Relationship between stress and sleep problems is a commonplace phenomenon. Recent research has shed light on the presence of a sleep-specific aspect of stress reactivity and the phenomenon has been termed as "Sleep reactivity". Sleep reactivity has been understood as the individual variation in sleep disturbances in response to exposure to stress. Sleep disorders have been implicated in various physical and mental health issues including cardiovascular disease and depression. A recent meta-analysis indicated moderate association between sleep quality, insomnia and stress in undergraduate students. (Gardani et al., 2022) On the other hand, sleep disorders also affect one's capacity to tolerate stress as well as stress reactions.

**Eating Habits:** Eating has frequently been associated with stress. Studies examining the relationship between stress and eating habits have predominantly evaluated stress through methods such as tallying life events, evaluating ongoing stress factors or concentrating on daily hassles. It has been reported that high cortisol levels are associated with increased consumption of calories. Moreover, when stressed, people decrease their consumption of

healthy foods. Evidence also points towards an association between stress and eating disorders especially Binge eating disorder. Research in understanding stress and eating has primarily been conducted in the adult population. Only a few studies have studied young children and adolescents and have found a positive correlation. Potential mechanisms that explain the association between stress and eating have been mood, negative automatic thoughts, coping and hormonal changes (Araiza & Lobel, 2018).

**Substance Use and Substance use disorders:** Stress has been implicated in initiation as well as maintenance of substance use disorders. However, most studies have been cross-sectional in nature, not allowing to infer cause-effect relationship. Longitudinal studies have reported that other factors like poor family support, poor coping styles, stressful life events, migration and gender mediated the relationship between the two. (Cerbone & Larison, 2000).
Studies have found that populations that live in highly stressful environments tend to smoke heavily and experience higher mortality from lung cancers and COPD. Chronically stressful conditions have also been linked to higher consumption of alcohol. Alcohol may also be used as self-medication for stress-related disorders. The correlation between acute and chronic stress and the desire to use addictive drugs is well documented in the literature. Many of the major theories of addiction also identify an important role of stress in addiction processes. These range from psychological models of addiction that view drug use and abuse as a coping strategy to deal with stress, to reduce tension, to self-medicate, and to decrease withdrawal-related distress.

Numerous population-based and clinical investigations have found strong evidence for a link between psychosocial adversity, negative affect, chronic distress, and predisposition to addiction. Negative life experiences including parent death, parental conflict and divorce, limited parental support, physical and emotional abuse and neglect, social isolation, and deviant affiliations have all been linked to an increased likelihood of drug dependence. Additionally, there is overwhelming evidence linking childhood maltreatment, misuse of drugs, and abuse of sexual and physical abuse. After taking into consideration a variety of control factors, including race/ethnicity, gender, socioeconomic level, past drug misuse, the incidence of mental illnesses, family history of substance use, behavioral and conduct issues, and lifetime exposure to stressors, researchers have recently looked at the effect of cumulative adversity on addiction vulnerability. Even after taking into account control variables, the results show that the total number of stressful episodes was a dose-dependently significant predictor of alcohol and drug dependency. Addiction susceptibility was strongly and independently impacted by both proximal and distal events. Even though there are many effective behavioral and pharmaceutical therapies for the treatment of addiction, recurrence rates in addiction are still very high. Exposure to stress can reinstate drug-seeking behavior in animals and increase relapse susceptibility in addicted individuals.

**Stress and psychosomatic disorders:** Many studies have indicated the strong link with stressful life events in irritable bowel syndrome (IBS). In general, psychosocial factors are followed by the onset or exacerbation of gastro-intestinal symptoms(Lee OY, 2006). Irritable bowel syndrome (IBS) is a functional disorder with an etiology that has been linked to both

psychological stress and infection.IBS is characterized by an overactivation of the HPA axis and a proinflammatory cytokine increase. (Dinan TG et al., 2006)Acute mental stress has a significant effect on coronary artery blood flow that may be significant in patients with pre-existing coronary disease.

Mental stress induces arterial endothelial dysfunction, with impaired vasodilatation and paradoxical vasoconstriction.

### 5.1.4. Special Populations:

**Children and Adolescents:**

Stress can be triggered in children and adolescents when they experience something new or unexpected. Whereas work-related stress is common among adults, most children and adolescents experience stress when they cannot cope with threatening, difficult or painful situations. It is important to remember that children are like 'sponges'; absorbing what's going on around them, noticing stress in their parents and reacting to that emotional state.

Children don't always experience stress the way adults do. Specifically, the younger children may lack an understanding of what is truly happening because of their age and level of development. To them, a new or different situation just feels different, uncomfortable, unpredictable, even scary. Also, they may not always have the emotional intelligence or vocabulary to express. themselves fully. On the other hand, the older children and adolescents experiencing stress, may refrain from discussing about their worries with peers, parents and teachers as they perceive that acceptance of stress is a sign of psychological vulnerability; which usually is not be in consonance with their evolving autonomy and self-esteem.

For young children, tensions at home such as domestic abuse, separation of parents or the death of a loved one are common causes of stress. School is another common reason; making new friends or taking exams can make children feel overwhelmed. As children grow older, their sources of stress can increase as they experience bigger life changes, such as new groups of friends, more schoolwork and increased access to social media and wider news in the world. Many teens are stressed by social issues such as climate change and discrimination.

The common causes of stress in children and adolescents include the following:

- Negative thoughts or feelings about themselves
- Changes in their bodies like the beginning of puberty
- The demands of school like exams and more homework as they get older
- Problems with friends at school and socializing
- Changes like moving homes, changing schools or separation of parents
- Chronic illness, financial problems in the family or the death of a loved one
- Unsafe environments at home or in the neighborhood.

**Specific factors contributing to mental stress in children:**

**Family:** Both children and adolescents report severe illness, sickness, death family member as a significant stressor. However, children are more likely to identify such events as significant problems than adolescents. Interpersonal conflicts between parents and separation or divorce are other major contributory factors for stress in younger population. Sibling rivalry, arising partly due to perceived differential treatment by parents may not be limited to childhood and can be present in adolescents too, and can cause stress. The family dynamics involving the structural and systemic aspects, the roles and responsibilities and the expectations and accommodation puts an additional burden on the developmental trajectory of an adolescent. Stressors arising due to parent–child interaction are reported with increased frequency among adolescents (George & van den Berg, 2011). Most common sources of parent–adolescent conflict include issues related to adolescent's autonomy and academic performance.

**Peer group:** The most commonly reported stress in the peer group interaction is the phenomenon of peer rejection (George & van den Berg, 2011). For both children and adolescents, peer rejection may occur through exclusion by a peer group or bullying. As approval of peers is intertwined with the self-image concept, especially among adolescents, such rejections may act as anchor for negative thought about self. For adolescents, peer rejection can also occur in the context of romantic relationships (Low et al., 2012). Stressors associated with navigating relationships, particularly at the beginning and ending phases are also, reported by adolescents (Washburn-Ormachea et al., 2004).

**School:** School serves as an evaluative playground not only in the cognitive domain but also, in the socio-emotional field. Childhood encompasses transitions related to school, including first experiences with attending school away from parental and familial figures, and salient transitions to middle school and high school. The school itself can become a stressful place for the youth in case of barriers to smooth transitions; often manifesting in the form of avoidance of school. School refusal behaviour is a common problem across all ages and though the function precipitating and maintaining may be varied; it causes significant distress to the child-parent dyad.

**Academic:** Academic stressors commonly affect children and adolescents (Landstedt & Gådin, 2012). In Indian settings, where the parameters of success is measured in terms of grades or marks, a child is always under constant stress of performance to meet the expectations of self and significant others including parents and teachers. Adolescents report academic stressors related to challenging coursework which may not be in consonance to their interest and aptitude.

Various studies carried out after the year 2000 revealed that the prevalence of stress among Indian adolescents varied between 13% and 45% (Kumar & Talwar, 2014). A study of high school students (Deb et al., 2015), revealed that nearly two-thirds (63.5%) of the Indian students reported stress due to academic pressure.

A cross-sectional survey of 632 MBBS students during COVID-19 lockdown. 6.48% reported marked to severe level of anxiety and 0.92% experienced extreme levels of anxiety. Females more vulnerable as compared to males and maximum anxiety found in MBBS 1st year students, i.e., late teens(Miriam et al., 2022) . Another study of 612 MBBS students from Karnataka reported the most frequent stressors to be vastness of academic curriculum, high parental expectations, adjusting to new environment and moving away from home and staying in the hostel and adjusting to a room-mate. Eating was found to be most commonly employed coping mechanism (Pai et al., 2023).

A cross-sectional study of 52 college students in New Delhi found high levels of academic stress, but low levels of social and psychological stress. No association found with age. Stressors usually include new environment, lack of structure in curriculum, high need for achievement, balancing newly found freedom and studies, peer pressures and intimate relationships (Sunjeja& Sinha, 2023).

**Gender:** There is a long history of valuing boys above girls and therefore, female gender experience overt and/or covert discrimination. Further, girls are prone to be at higher risk for specific stressful life experiences like sexual harassment and sexual abuse. Girls have been valued based on their physical appearance, and they continue to report greater stressors and pressures associated with meeting societal expectations for female beauty. Girls place greater stock in interpersonal relationships and to report more emotionally intimate relationships than boys. As a result, they are also, more likely to experience more interpersonal burdens; stressors that have been experienced by others in their social networks (Bakker et al., 2010). Although both boys and girls have the same level of worry regarding academics and economics, girls are much more vulnerable to increased stress when it comes to issues related to future events, classmates, and personal health. Adolescent girls are found to perceive negative interpersonal events as more stressful than boys. Studies further revealed that adolescent girls experience more stress than boys. (Anniko et al., 2019). Women, with multiple roles to play, may have an increased level of stress. A study examined the relationship between perceived stress and psychological health among working women vs housewives in Jammu (n=150). A significant difference was seen in both groups in terms of perceived stress, which was found to be higher in former probably due to multiple role demands. A negative association was seen between perceived stress and psychological well-being in both groups (V. Yadav et al., 2023).

There is also, evidence that in certain contexts, some forms of stress may be more commonly experienced by boys. A study conducted by Carlson and Grant (2008) on stressors affecting low-income urban adolescents found that boys in their sample, especially boys who were in gangs, reported more stressors than girls including exposure to violence and sexual stressors (Carlson & Grant, 2008). Alarmingly, there has been an increase in number of deaths due to suicide in males and the common stressors or risk factors have been young age (18-29 years), unemployment, being a daily wage earner, being educated between 9-12th, which could be leading to less job opportunities or financial issues and family issues (S. Yadav et al., 2023).

**Bias and Discrimination:** Children and adolescents who differ from the majority based on ethnicity, socioeconomic status, sexual orientation, or disability status are more likely to experience stressors related to prejudice and discrimination. Similarly, discrimination based on language differences has been documented (Nair et al., 2013). Further, children whose primary language differs from that of the dominant language may also experience academic and social stressors related to language.

**Acculturation:** The international studies report that children and adolescents whose families have immigrated from other countries may experience various types of acculturation stressors (Lashley, 2000). The stressors may range from stressful interactions with parents who may not wish to acculturate as quickly (or at all) in comparison to their children to experiencing heightened tension between peer cultural groups. Since India is a country of cultural diversity, the construct of such stressors related to cultural differences arising due to region can be extrapolated within the national boundaries as there is a rapid movement of people from one state to another in search of better employment opportunities.

**Poverty:** When poverty is experienced on a regular basis, it has a significant impact on a variety of child and adolescent outcomes. It has an effect on both proximal and distal stressor variables. At the family level, it is linked to an increased risk of marital conflict, separation, divorce, and negative parent-child interactions. Furthermore, children and adolescents living in urban areas with persistent poverty are more likely to be victims of community violence and crime. Similarly, children who live in poverty are more likely to have limited resources at school, poor school functioning, and/or problematic school and peer climates (Bennett & Miller, 2006).

**Psychosocial adversity:** Apart from poverty discussed, above some other factors responsible for psychosocial adversity are exposure to physical and sexual abuse, neglect, physical illness and natural disaster. Also, cyberbullying, dating violence, intimate partner violence and drug abuse can result in environment of stress older adolescents. Such stressors may be less common and they are more severe and are associated with higher level of psychopathology.

**Geriatric Population:**

Over the past two centuries, there has been a consistent upward trend in human life expectancy, contributing to a worldwide phenomenon of population aging. (Lavretsky & Irwin, 2007) This natural process of growing older is accompanied by a range of challenges, including various forms of loss such as financial security, psychosocial connections, personal identity, as well as diminishing health, independence, and cognitive functioning. Moreover, loss of spouse or friends, caregiving responsibilities, retirement, and “empty nest” and elderly abuse can further exacerbate the issues.

While it's widely acknowledged that stress influences the aging process, there isn't a unanimous agreement on the specific dynamics of this relationship or the mechanisms at play. Interaction between stress and aging are contingent upon various factors like type of stress, its duration and intensity. Over years, studies have tried to answer questions related to

whether age affects resilience to deal with stress, whether stress accelerates ageing as well as individual differences in coping. (Tsolaki et al., 2009)

Research has explored the impact of persistent stress on the mental well-being of older individuals through various studies involving different populations. These populations include individuals dealing with chronic medical conditions, those who have experienced the loss of a spouse, and caregivers tending to family members with dementia.

**Risk Factors specific to geriatric population:**

**Elder abuse:** A cross-sectional study conducted among 9589 older adults aged 60 years and above in India across seven states namely Himachal Pradesh, Punjab, Odisha, Tamil Nadu, Kerala and Maharashtra found the prevalence of psychological distress to be around 40.6%. The study also found that elder abuse was found to be associated with higher risk of psychological distress (Evandrou et al., 2017)

**Financial dependence:** A cross-sectional study in Dharan, Nepal reported that majority of elderly experienced some kind of stress with 9% reporting severe stress. Increased stress was associated with advanced age, less educational levels and high financial dependence (Sapkota & Pandey, 2013). Similar findings have been reported in studies conducted in India. (Regmi & Poudel, 2022). Elderly persons also showed evidence of a connection between long-term financial stress and health; more specifically, they showed evidence that perceived long-term financial pressures throughout the course of a person's life were strongly correlated with certain health-related outcomes in later life, such as self-rated health status, depressive symptoms, and functional impairment.

**Social and familial support:** In another study from India on elderly living in old-age homes, it was found that as high as 30% individuals reported severe stress highlighting lack of social and familial support to be high indices of stress in this population. (Varghese et al., 2020)These investigations have helped establish connections between stress, coping mechanisms, and the development of mental health disorders in older adults. (Lavretsky & Newhouse, 2012)

**Functional Limitations:** A study conducted in Australia among 626 Australians aged 60 years and above found that older age, higher functional limitations, lower social support and more time spent sleeping was found to be associated with higher risk of psychological distress (Atkins et al., 2013)

**Consequences of mental stress specific to elderly:**

Chronic stress has been found to be associated with inflammation, which have been implicated in various mental and neurological issues in elderly like insomnia, late-life depression, anxiety and dementia, specifically Alzheimer's. According to the World Health Organization, more than 20% of people above 60-years of age suffer from a mental or neurological disorder, accounting to 17.4% of Years Lived with Disability (YLDs) (WHO,

2017). Most common mental illnesses seen in elderly is depression, followed by anxiety disorders, substance use and death due to suicide.

Various indicators of stress in the geriatric population are evident in form of sleep disturbances, mood instability and irritability, changes in appetite, somatic complaints, withdrawal from others or clingy behaviour and difficulty making decisions.

Despite high rates of physical and psychological ramification of stress in the elderly, this area has been consistently neglected especially in LMICs.

**Working Population:**

The World Health Organization defines workplace stress as the response individuals may have when confronted with job demands and pressures that do not align with their knowledge and abilities, posing a challenge to their coping abilities. It can stem from inadequate work organization (such as the design of jobs and work systems, and their management), suboptimal work design (for example, a lack of control over work processes), ineffective management, unsatisfactory working conditions, and insufficient support from colleagues and supervisors.

The workplace encompasses a multitude of elements that converge to shape the overall employee experience. These elements encompass physical aspects such as office infrastructure, layout, ergonomic considerations, as well as cultural components including communication norms, organizational support, trust levels, decentralization practices, employee engagement, and the established policies and procedures governing work processes. Furthermore, technological dimensions, including digitalization and the tools facilitating work activities, play a pivotal role in this comprehensive work environment (Morgan, 2017).

The presence of robust social support, both from colleagues and supervisors, has the potential to alleviate the adverse effects of stress and enhance the overall well-being of employees. Additionally, research has demonstrated that fostering a positive social support network can not only bolster job satisfaction but also diminish employees' intentions to leave their positions, thereby promoting retention within the organization. A conducive work environment plays a pivotal role in elevating employee happiness, engagement, and productivity. Conversely, an unfavorable work environment can result in disengagement, diminished loyalty, and increased turnover rates among employees (Seppälä & Cameron, 2015).

The survey by The7th Fold (2020) with 509 working people across metros cities and diverse sectors from India revealed that 36% of employees were suffering from one or other types of mental health issues. The situation of mental health has been exacerbated due to the COVID-19 pandemic, making it a more serious concern. India ranks first among 18 nations in terms of worry in a survey done by Deloitte during the second wave of the epidemic. According to a recent PwC survey on employee financial wellness for 2021, 63% of workers have been

under financial stress since the COVID-19 epidemic started. These studies suggest that workplace mental health requires immediate attention.

Employee well-being and organizational success are paramount concerns in the field of human resource management. In today's dynamic work landscape, addressing work-related stress, bolstering job satisfaction, and mitigating job insecurity have taken center stage.

The prevalence of work-related stress has made it an integral part of the modern workplace. Concurrently, the Indian workforce has experienced heightened levels of job insecurity. Various studies from India involving engineers, blue collar workers have found that high job stress and levels of job satisfaction are negatively correlated and the differences were stable across gender (Singh, 2023).

Stress is common among mental health professionals and subsequent treatment-seeking is quite low, which not only affects their well-being but also their ability to provide services to others. A cross-sectional study of mental health professionals working in a tertiary care neuropsychiatric centre (n=101) found low work-life balance, higher perceived stress, higher level of psychological distress, higher secondary trauma and high levels of burnout. Increasing age, belonging to a department, staying with family and better monthly income were found to be protective factors (Savarimalai et al., 2023).

**Specific factors leading to stress among workers:**

**Discrimination at workplace:** According to a cross-sectional study by Brouwers et al. that included 35 nations, including India, almost two-thirds of employees who had experienced depression faced discrimination at work or while seeking for new positions.

**Sexual harassment and bullying:** Another work-related stress that can occur in any business is sexual harassment and bullying. Both sexes may be impacted, although women and people at the bottom of the social order are frequently more vulnerable.

**Family-Work balance:** A study conducted that included 34,468 Finnish people currently engaged in active work, found that loneliness, job dissatisfaction and family-work conflict were associated with high risk of psychological distress, while having children being actively involved in work, able to successfully combine family and work roles and presence of social support was associated with lower risk of psychological distress (Viertiö et al., 2021). A cross-sectional study on 217 teachers working in Kerala was done with the objective of understanding relationship between workplace factors and employee indifference and burnout. Results indicated a negative relationship between workplace factors and employee indifference, which further increased with burnout (Joseph et al., 2023).

**Consequences of stress at workplace:** A variety of physical ailments, including hypertension, diabetes, and cardiovascular disorders, among others, can be exacerbated by poor mental health at work. According to recent research, employee productivity is influenced by their mental health and is correlated with their effectiveness. Consequently, it is critical to give employees' mental health first priority.

**Other special populations:**

**Care-givers of person with mental illness :** A cross-sectional study conducted among 240 individuals living with a person with mental illness and 240 individuals who were not living with person with mental illness found that the prevalence of psychological distress to be around 50% in those living with mentally ill compared to those not living with mentally ill (Kj, 2017). Very few Indian studies exist on stress of parents with children having neurodevelopmental disorders despite it being consistently shown that this group reported higher stress as compared to other parents with of typically developing children. 130 parents, from Northern India, of preschool children diagnosed with autistic spectrum disorders were assessed for their stress levels. It was found that parental stress was strongly associated with poor attention span and behavioral issues in the children (Choudhury et al., 2023).

**Females:** A prospective cohort of 1500 females found that neuroticism traits or antisocial behaviour in adolescence, past history of psychiatric or physical illness. divorce among parents has been found to have an increased risk of psychological distress among females in midlife (Kuh et al., 2002).

**Refugees / Migrants:** A cross-sectional study conducted among 75 migratory construction workers in India found the prevalence of psychological distress to be around 64.0% with females having more distress compared to males (Sriramalu et al., 2023)

A study conducted among 2639 adult refugees in Germany found that females, older age, those at risk of deportation, those in refugee housing facilities and not in private housing had greater risk of psychological distress (Walther et al., 2020). Another study conducted among 1062 Russian born immigrant to Israel found that compared to males, females had higher psychological distress. And the factors namely, family problems, inappropriate climate conditions, anxiety about future, uncertainty in current situation and poor health were associated with this higher risk among females compared to males (Ritsner et al., 2001)

**Survivors of trauma / disaster:** The average person experiences several traumatic incidents during their lifetime, particularly in developing nations like our own. Following life-threatening traumatic events, both acute stress response and post-traumatic stress disorder (PTSD) are frequent. According to many studies (Shalev, 2001), trauma and disasters are linked to PTSD as well as concomitant depression, other anxiety disorders, cognitive impairment, and drug addiction. A study conducted among 527 trauma survivors found that PTSD symptom severity was associated with younger age, ethnic minority status, unemployment, low income, unmarried and type of trauma with assaultive trauma showing higher risk (Chiu et al., 2011).

### 5.2. Current Infrastructure, facilities, technologies, policies, programs, etc. in the country in context of the problem / health issue

#### 5.2.1. Current Infrastructure and Facilities:

Both the government and other organizations have been providing community mental health

services, since the National Mental Health Program (NMHP) was established in 1981. The major aim of the NMHP is to deliver basic psychological health care at the grassroots level, as well as to ensure that services are available and accessible to the most vulnerable and underprivileged people. In India, government spending on mental health accounts for only 0.06% of the total health expenditure, which accounts for barely 4% of the national gross national product (GNP). In India, only 43 mental hospitals with 1.469/100,000 beds and 0.047/100,000 psychologists and 0.301/100,000 psychiatrists exist. Qualified personnel is scarce; the availability of mental health nurses is 0.166/100,000, and that of social workers is 0.033/100,000. Mental health infrastructure is mostly restricted to huge, semi-permanent facilities that serve a small number of people. We are still in the early stages of completely allowing patients, families, and communities to fulfill mental health's three goals of promotion, prevention, and treatment. The objectives of the DMHP as envisaged in the $12^{th}$ 5 yr plan were: To reduce mental illness-related distress, disability, and premature mortality, as well as to improve rehabilitation from a mental condition, by assuring that psychiatric care is available and accessible to all, specifically the most marginalized and poor members of society. Other objectives were as follows: reduce stigmas, encourage community engagement, increase accessibility to preventative care for at-risk groups, safeguard persons with mental illness (PWMI) rights, and integrate mental health services with other programs such as rural and child health, motivate and empower employees, build administration, regulations, and accountability procedures to strengthen mental health service delivery infrastructure, develop awareness and information, and develop leadership, organizational, and accountability mechanisms. These goals are now being pursued through extending community services and improving community-based programs (satellite clinics, school counseling, workplace stress management, and suicide prevention), organizing community awareness camps with the assistance of local groups, increasing national involvement (through collaboration with conscience and caretaker organizations), forming public-private partnerships with designated financial cooperation, establishing a special 24-hour hotline number (to notify the public about urgent mental health services, for example), assisting national and state mental health agencies in obtaining public funding, and so on. Hence, now the concept of mental distress alleviation is being dealt not only by the psychiatrists, but team of mental health professionals including psychiatry social workers, mental health nurses, occupational therapists, psychologists and even the primary care physicians, AASHA workers and volunteers from the community.

**Application of Technology in alleviation of stress and mental health intervention:**

Technology creates opportunities for extending mental health services to remote areas. There has been use of technology in the field of mental health and it has given impetus at multiple levels (Rodríguez-Rivas et al., 2021).Information and communication technologies have yielded positive results in mitigating the stress. Innovative technology-based interventions have helped in reaching across various age groups and reducing stigma (Fonseca & Osma, 2021).

**Digital mental health interventions and Technology Interface**

Digital Mental Health interventions (DMHI) have been categorised as “e-Health” through telemedicine or internet based interventions, “m-Health” through mobile digital interventions such as smartphones or virtual augmented reality applications (Miralles et al., 2020; Ritterband et al., 2006).

a. Internet Based Interventions (IBIs) can be effective for promoting healthy behaviors
b. Smartphone Apps:Efficacy was examined by the meta-analysis done by Linardon and colleagues (Linardon et al., 2019). It was noted that apps can be low-intensity, cost-effective, and easily accessible interventions for those who are unable to receive standard psychological treatment.
c. Virtual and Augmented Reality: Virtual Reality can be defined as “a collection of technologies that allow people to interact efficiently with 3D computerized databases in real time using their natural senses and skills’’ (Botella et al., 2017). It has been helpful for relaxation as well as for treatment for social phobia, etc.
d. Artificial Intelligence based technologies (e.g. machine learning, deep learning), may bring phenomenal change in understanding and preventing the occurrence of stress related psychological disorders (Bickman, 2020).

With respect to mental health concerns and stress related disorders, availability and access of trained human resource remains a challenge (Thyloth et al., 2016). Stigma of seeking help, availability of trained human resource and geographic and economic challenges are some of the issues which supplement and advocate implementation of digital mental health interventions (Harvey & Gumport, 2015). Systematic review and meta-analysis of digital mental health interventions to quantify effectiveness of DMHIs interventions revealed that they may be helpful if delivered under supervision and with active support (Garrido et al., 2019). Some of the challenges are adaptations of the psychological interventions in to digital formats.

Digital mental health interventions (e.g., Internet-based interventions, smartphone apps, mixed realities -virtual and augmented reality) provide an opportunity to improve accessibility to the intervention in stress related disorders. Systematic reviews and meta-analyses found effectiveness of digital mental health interventions in mild mental disorders however in-person professional consultation is associated with greater effectiveness and lower dropout than fully automatized or self-administered interventions (Lehtimaki et al., 2021).

**Tele - mental health:**

Tele - mental health involves technologies such as video-conferencing to deliver mental health services and education, and to connect individuals and communities for healing and health. Tele - mental health is effective and increases access to care (Gibson et al., 2011). Future directions suggest the need for more research on service models, specific disorders, the issues relevant to culture and language, and cost. Technology adoption for combating stress during pandemic has opened many options of interventions. Information dissemination

and tele mental health interventions attained momentum during this period. It involved dissemination of authentic information through reliable resources of Government aided platforms. Technology-based solutions, information management, and use of technologies (Sein, 2020) were widely tried for alleviating distress. The stress mitigation initiatives through telework and online educational interventions are the key factors of entirely new era of technology based interventions in the field of mental health. Some of the advantages are primarily connectivity to remote locations where mental health interventions are not available for mitigating the stress.

**Tele MANAS: National Tele - Mental Health Program**

Current National Tele-Mental Health Programme (Tele MANAS) has been envisioned as thedigital arm of the DMHP as further extension of the mental healthcare service in the country.

The Government of India announced the introduction of the National Tele Mental Health Programme (T-MANAS) during the Union Budget 2022–23. The programme was officially launched in October 2022. T-MANAS is a two-tier system comprising of State Tele-MANAS cells, includes trained counsellors as first-line service providers at Tier 1 and mental health professionals at District Mental Health Programmes (DMHP) at Tier 2 to provide secondary-level specialist care. Referral services are also available for in-person consultations or audio-visual consultations through e-Sanjeevani, which is the national telemedicine initiative under the MoHFW. The inclusion of tele mental health services as a pat of mental health care deliverables is an expansion of digital mental health in the country (Ranade et al., 2022). Following are the objectives of Tele MANAS:

a. To enhance health service capacity in order to deliver accessible and timely mental healthcare through a tele-mental health network support system.

b. To ensure a continuum of services in the community, including tele-mental health counselling.

c. To facilitate timely referral for specialist care and follow-up as appropriate.

d. To enhance mental healthcare capacity and networking at primary healthcare/health and wellness centres/district/state/apex institution levels.

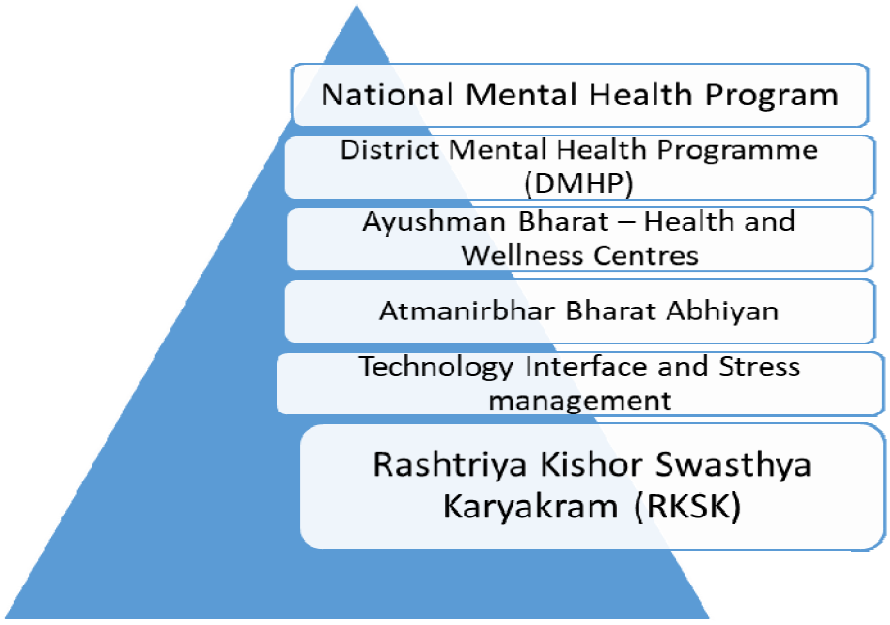
Ministry of social justice and Empowerment launched a helpline to offer mental health rehabilitation services with the objective of early screening, first-aid, psychological support, distress management, promoting positive behaviours, etc. It is available in 13 languages and has 660 clinical/rehabilitation psychologists and 668 psychiatrists as volunteers. It is being coordinated by the National Institute for the Empowerment of Persons with Multiple Disabilities (NIEPMD), Chennai (Tamil Nadu) and National Institute. It aims to cater to - people in distress, pandemic induced psychological issues and Mental Health Emergency.

**Mental well-being Apps:**

There are many apps available commercially but lack scientific validity. Under the mental health augmentation strategies, Sleep App, Mindfulness Appand Relaxation Apps are available. There is a strong need to regulate practice of referring these Apps for practice

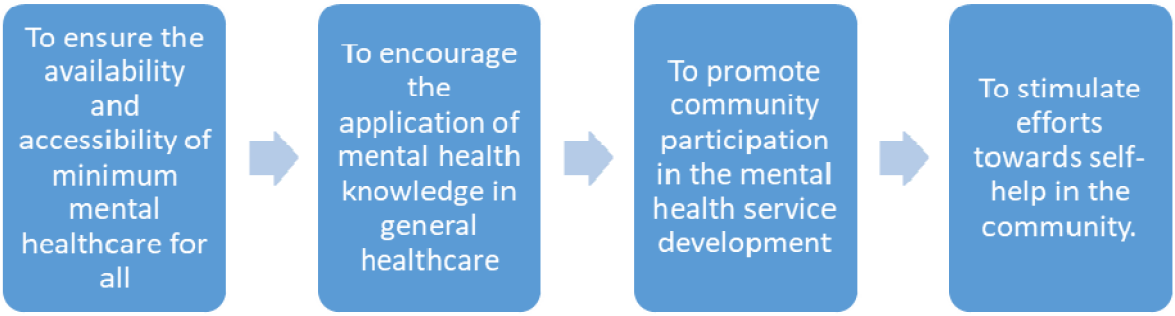
purpose, content regulation and standardization needs regulation and approval of App to use in the mental health field for mitigating stress. In the pursuit of enhancement of positive mental health, scientific and evidence-based information is required to be curated for wellbeing apps. Mental Health and Normalcy Augmentation System Positive mental health App was developed based on robust scientific evidence in collaboration with NIMHANS, AFMC and CDAC Bengaluru, under the Prime Minister Science and Technology Advisory Committee, Office of Principal Scientific advisor to Government of India. The App focuses on promotion of Positive Mental Health.

### 5.2.2 Current Programs:




#### a. National Mental Health Program

The Government of India has launched the National Mental Health Programme (NMHP) in 1982, with the following objectives. NMHP had defined objectives to create the environment of awareness. It helped in promoting community participation in the mental health services and also to make minimum health care available for all.



### b. District Mental Health Programme (DMHP)

The District Mental Health Programme (DMHP) is a government scheme launched in 1996 with the aim of providing mental health services at the district level and integrating mental health services into primary healthcare.

The District Mental Health Program (DMHP) was initiated under NMHP in 1996 (during the IX Five Year Plan). Modeled after the 'Bellary Model,' DMHP encompasses the following components:

- Early detection and treatment.
- Training: Providing short-term training to general physicians for the diagnosis and treatment of common mental illnesses, utilizing a limited range of drugs under specialist guidance. Health workers are also trained to identify individuals with mental illnesses.
- IEC (Information, Education, and Communication): Creating public awareness.
- Monitoring: Primarily for straightforward record-keeping purposes.

DMHP addressed the work place stress management, life skill training, counselling in schools and colleges, community awareness prevention and promotion at district level of health care delivery system.

### c. Ayushman Bharat - Health and Wellness Centres (AB-HWC)

Ayushman Bharat – Health and Wellness Centres (AB-HWC) is a flagship program of the Indian government launched in 2018 with the objective of providing comprehensive primary healthcare services to all individuals. The program aims to establish 150,000 health and wellness centres across the country by 2022.

### d. Atmanirbhar Bharat Abhiyan:

The Atmanirbhar Bharat Abhiyan, launched in 2020, is a self-reliance program aimed at promoting economic growth and development in India. The program also focuses on addressing the impact of the COVID-19 pandemic on the mental health of individuals. The schemes have focused on integrating mental health services into the general healthcare system and promoting community-based mental health care. This further was envisaged to help reduce stigma and improving mental health.

### e. Rashtriya Kishor Swasthya Karyakram (RKSK):

Rashtriya Kishor Swasthya Karyakram (RKSK) is a national program launched in 2014 with the objective of improving the health and well-being of adolescents in India, including their mental health.

**Mental Health Programs in Schools in India:**

a. The ‘Mental Health Justice’ program by Mental Health Innovation Network [4] was started to bring mental health services to school spaces. This program aimed to pilot a replicable mental health justice program in schools in Mumbai that included sensitising stakeholders in schools about mental health issues and building their capacity to support the cause.

b. Yuva Mitr in Goa- is a community based program for youth health promotion which included peer to peer learning, teachers training and awareness programs on youth health subjects like mental health, reproductive health, etc. On evaluating its impact, the program piloted in rural and urban area showed more openness towards seeking help for mental health issues like substance abuse, sexual abuse and suicidal thoughts.

c. SAATHI in Sikkim- 'SAATHI' stands for Sikkim Against Addiction Towards Health India'. It recognises that mental health issues (especially in a context like Sikkim, India) is intricately linked with substance abuse and thus uses a 'peer education' model to advocate against drug use among school students, parents and school staff.

**5.3. Budget Allocation:**

The optimum level of training of mental health professionals will take decades of reaching the ideal number of Mental health care professionals training in the country.

Out of the total ₹86,200 allocated last year, the budget for mental health was ₹791 crores, 0.92% of the total health budget. This year it marginally increased to 1.03% for the upcoming FY with ₹919 crores out of ₹89,165 crores allocated towards mental health related line-items. In this year's budget, the line-item of National Mental Health Programme (NMHP), under Tertiary Activities has been used as Tertiary Care Programme. The tertiary components of the NMHP are mandated for strengthening Post Graduate Training Departments of mental health specialties, establishing Centres of Excellence and modernizing state-run mental health hospitals.

| BUDGET HEAD | (IN CRORES) |
|---|---|
| a. TOTAL GOI BUDGET FOR 2022–2023 | ₹ 45,03,097 |
| b. TOTAL BUDGET FOR HEA LTH (MoHFW) | ₹ 89,155 |
| c. TOTAL BUDGET FOR SOCIAL JUSTICE & EMPOWERMENT (MoSJE) | ₹ 14,072 |
| d. DIRECT EXPENDITURE FOR MENTAL HEA LTH (from MoHFW) | ₹ 919 |
| e. INDIRECT EXPENDITURE FOR MENTAL HEA LTH (from MoSJE) | ₹ 280 |
| f. TOTAL BUDGET FOR MENTAL HEA LTH | ₹ 1,199 |

https://cmhlp.org/wp-content/uploads/2023/02/Budget-Brief-2023-v3.pdf (Centre for mental health law and policy)

## 6. KEY ISSUES AND GAPS IDENTIFIED IN THE CURRENT SITUATION IN THE COUNTRY IN CONTEXT OF THE PROBLEM / HEALTH ISSUES

Mental health awareness and stress management have been subjects of concern in India, as in many other countries of the world. While there have been significant advances and modifications, there are still numerous gaps in mental stress intervention. A mental health care deficit is defined as a large and persistent absence of necessary resources, amenities, and support for those living with mental health concerns or in mental stress. This weakness can present itself in a variety of ways, with major ramifications for individuals as well as the community as a whole. In the context of the problem, there are key issues that require close consideration for impactful mental stress management. These issues are discussed below.

### 1. Stigma

The stigma attached to mental health concerns has been one of India's greatest obstacles. As they are afraid of being judged or misunderstood, many people are reluctant to ask for assistance. It is vital to promote awareness about mental health and lessen stigma.

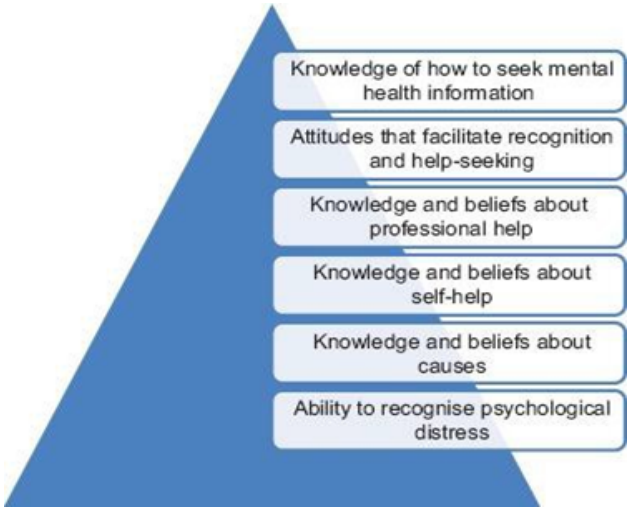
Stigma encompasses a negative or derogatory belief, perception, or stereotype associated with a specific characteristic, attribute, identity, or group of individuals. This often results in social exclusion, discrimination, and a sense of shame or disgrace for those possessing the stigmatized attribute. Public stigma consists of three main components: stereotypes, prejudice, and discrimination. These negative perceptions contribute to the fear of and social distancing from individuals with mental illnesses. Similarly, self-stigma prompts an individual to socially distance themselves. Stigma serves as a hindrance to recovery; epidemiological research indicates that over half of the individuals who could benefit from mental health services do not access them.

The comprehensive survey, National Mental Health Survey of India, 2015-16 found that nearly 80% of people with mental health disorders did not seek any form of treatment due to stigma and the fear of social discrimination. Venkatraman et al. assessed the stigma toward mental health issues among higher secondary school teachers in Puducherry, South India which showed that around 70% had stigma toward mental health symptoms (Venkataraman et al., 2019). Stigma against mental illness is prevalent not only among the general population but also among healthcare professionals in India. The stigma among professionals can affect the quality of care offered to individuals experiencing mental health issues. In a tertiary care center (medical college) in North India, nearly three-fourths of the 442 residents considered that they had significant mental stress; however, only about 13% sought help from mental health professionals. The two main barriers reported for not seeking help included the stigma of being labeled as mentally ill (54.6%) and being labeled as weak amongst their peers (58.1%). A systematic review revealing that less than one out of six medical students with depression sought psychiatric help demarcated the most common factor for this as stigma. Further, many of these people adopted social stigma and experienced a loss of self-esteem and self-efficacy. They were also worried about repercussions and being judged by supervisors (Rotenstein et al., 2016).

Thus, the paucity of mental health literacy among the Indian population is aggravating stigma, myths, and misconceptions related to mental illness. Hence, stigma gets all the more strengthened due to a lack of proper education methods and improper information dissemination. Stigma associated with mental health is a complex issue influenced by cultural, social, and economic factors, and efforts to combat it often involve public education, awareness campaigns, and de-stigmatization efforts by both the government and non-governmental organizations.

2. **Lack of Public Education –'Mental health literacy'**

People are generally unaware of mental health concerns, including how to identify symptoms or seek help. This lack of information leads to delayed action and the perpetuation of stigma. Most of us are aware of the necessary professional support available for the treatment of major physical ailments, as well as some of the medical or complementary therapies. This knowledge also underlies substantial support for community resources to deal with these bodily ailments. This is in contrast to mental health issues, where, largely, people are unaware that they are suffering and that help for substantial improvement is available. Similarly, community resources are not, relatively, aligned to deal with mental illness.




**'**Mental health literacy' is defined as "knowledge and beliefs about mental health issues that aid their recognition, management, or prevention." So it is limited not only to knowledge but also an awareness of appropriate actions and behaviours to prevent and manage mental health issues. This term is useful as it targets community awareness, which has been neglected at the cost of the focus on mental health at primary care levels and the training of RMPs.

This frivolous mental health literacy was highlighted by Ogorchukwu et al, wherein his study showed that, percentage of mental health literacy among adolescents in south India was very low, at 29.04% for depressive symptoms and 1.31% for psychotic symptoms, both of which also have implications for mental stress. The study also showed that informal sources (including family members) were preferred sources for information over formal

sources, highlighting widely ingrained stigmatizing attitudes regarding mental health conditions (Ogorchukwu et al., 2016).

This is in contrast to the study by Lauber *et al*., in the Swiss population, which showed that 40% identified depression and 75% schizophrenia appropriately (Lauber et al., 2003). As this stark difference underscores the urgent need for enhanced mental health literacy. This limit in mental health literacy is not limited to the general public alone but is also seen among health providers. This deprived literacy, caused by a lack of poor community awareness programs, is further deteriorated by the depiction of mental stress and its ramifications in movies and other sources of media, which stands far from legitimacy. Thus, such depictions are a source of misinformation among the general public.

These low levels of mental health literacy are critical factors in the low perceived need among the general public for mental health services and also in the modest use of these services. Both of these are significant barriers to treatment. Further, low levels of literacy result in attitudinal barriers like wanting to handle issues on their own, perceived ineffectiveness, the belief that mental stress would get better on its own, problems are not severe, and, as stated above, stigma.

3. **Cultural Factors**

Cultural norms and expectations can sometimes hinder open discussions about mental health. Traditional beliefs and practices may discourage seeking professional help for mental health issues. Societal norms often promote the idea of enduring challenges without seeking help (cultural endurance). People might consider mental stress as a normal part of life and not recognize the need for preventive measures. The belief in black magic, many other superstitions etc, cannot be over-emphasized as a reason of poor felt need for psychiatric help.

4. **Access to Mental Health Services**

For those well-informed individuals actively seeking mental health improvement to alleviate mental stress, their efforts are hindered by limited access to help. The uneven and scattered distribution of mental health services, coupled with a shortage of public health resources and limited manpower, along with inconsistent availability of medications, contribute to the restricted accessibility of mental health services. This, in turn, contributes to the increased prevalence of mental stress in society. The National Mental Health Survey of India has emphasized the treatment gap and the deficiency of mental health services in various regions of the country. A 2017 survey on mental health in India, published in the Lancet medical journal, revealed a doubling in the diagnoses of psychological disorders from 1990 to 2017.

A cross-sectional study within a mental health camp conducted in the east-central tribal district of Madhya Pradesh showed that among 113 patients who sought help, the treatment deficit was 85%. Common mental illnesses were far greater than severe mental illnesses,

and anxiety disorders were most common. The diagnosis of the severe mental illnesses came late in the course of the illness.

**a. Shortage of Mental Health Professionals:**

There has been a perpetual shortage of mental health professionals, including psychiatrists, psychologists, and counsellors, not only in rural but also urban India. India has 0.75 Psychiatrists per 100,000 population, while the desired number is above 3 Psychiatrists per 100,000. To achieve this goal, 36,000 psychiatrists are required. Number of Psychiatry PG seats per year is only 1234, approximately. A crude calculation will show that more than 30 years will be required to reach anywhere near the desired ratio. Further, there are only 0.07 psychologists, 0.07 social workers, and 0.12 nurses with mental health training per 100,000 people (Garg et al., 2019a).

This glaring gap is further compounded by the nominal undergraduate training in mental health, Psychiatry and Psychology. This is true of medical or para-medical training. This scarce training schedule allotted to the MBBS curriculum and a fortnight of Internship for Psychiatry makes it almost impossible for the graduates at PHC and other general OPDs to identify mental stress or complaints regarding mental stress.

The scarcity of mental health professionals thus constitutes a significant healthcare challenge. It stems from limited training opportunities, a prevailing stigma around mental health, inadequate infrastructure, urban-rural disparities, increasing patient demand, the emigration of skilled professionals, low government investment, and insufficient awareness. This issue is compounded by a lack of, and enrollment in, specialized training programs, with a concentration of these in selected urban areas, leaving rural populations, further underserved. This shortage leads to long wait times, limited availability, and increased strain on existing professionals.

**b. Lack of Early Intervention**

Early intervention is a crucial factor for managing mental stress and can reduce the progression to mental disorders. However, due to the reasons discussed earlier, like the unavailability of expert care and minimal training of medical staff at primary care centres, poor identification of mental stress and its complications leads to delays in intervention at all levels. This, in turn, prolongs the suffering and deteriorates the quality of life of an individual. The ramifications of this are an increased prevalence of mental stress, reduced productivity at societal levels, and a silent economic burden and deterioration.

**c. Affordability**

Even when they are offered, mental health services are frequently out of reach for a huge segment of the population, especially those from lower socioeconomic backgrounds. Public mental health facilities are dispersed unevenly, and thus the care shifts to private set-ups which are out of the pocket for the majority of the population.

A study about out-of-pocket expenditure (OOPE), and poverty impact due to mental illness in India found that among the studied six and half thousand people, with mental illness, 18.1% of the household's monthly consumption expenditure was spent on healthcare for mental

illness, and about 20.7% of the households were forced to become poor from non-poor due to treatment care expenditure on mental illness (J. Yadav et al., 2023).

There is conditional insurance coverage, limited psychiatry public services, and almost negligent therapy/counselling services in the country, although, all are part of the MHCA 2017 directions within a defined time.

**d. Rural-Urban Disparities**

While urban areas may have relatively better access to mental health services, rural areas often lack adequate infrastructure and awareness about mental health. The cultural beliefs and practices also make it difficult to implement the same ideas and service themes as practised in urban areas. Various issues discussed above, reduce the availability of expert mental healthcare in rural areas. Thus, people living in the most disadvantageous places are also likely to have compromised access to specialized mental health services. The disparity also continues among migrants from rural areas, as demonstrated by the poor mental health found in this population.

**e. Fragmented Care**

Mental health care is often fragmented, with individuals receiving treatment from various providers who may not communicate effectively with each other. Further, there is often a lack of coordination between primary care providers, mental health professionals, and other stakeholders in the mental health care system. Thus, the concerns and requirements from the grass-root levels dissipate before they reach any executive ear. This results in a lack of coordination and continuity of care. Delayed identification of mental distress, ineffective treatment, and repeated relapses are all consequences of a lack of continuity in care at different levels.

**f. Emergency Mental Health Services:**

The emergency mental health care services were tested in the COVID times. There is a need for improved crisis intervention and emergency mental health services to prevent suicides and address acute psychotic episodes effectively. Even day-to-day mental stress can cause acute behavioural change or be an indication of urgent psychiatric intervention. These are also important for crisis-intervention and disaster management issues. Timely psychiatric interventions are known to prevent the development of an Acute stress reaction and post-traumatic stress disorder later. However, the knowledge, awareness, and promptness to visit these centers are lacking. The lack of such facilities and awareness of such facilities increase the prevalence of mental stress.

Suicide attempts are serious mental health emergency, and the suicide rate among Indian girls and women is twice the global rate. It is the cause of most deaths in the 15–39 age group compared with other causes of death (Vijayakumar et al., 2015). The absence of a national suicide prevention strategy is a concerning lacuna and will be discussed in the next section. The Mental Health Care Act of 2017 decriminalized suicide, and various actions the Government has already taken in the social and health fields. The establishment of toll-free

helplines for domestic abuse and psychosocial assistance during the COVID-19 epidemic implicitly addresses suicide prevention.

5. **Lack of Focus on Prevention**

In recent years, discussions around mental health have gained significant attention, shedding light on the pervasive impact of mental stress on individuals and societies. While strides have been made in acknowledging and addressing mental health issues, a critical aspect that often remains in the shadows is the lack of focus on preventing mental stress from escalating into more severe conditions. Factors such as work pressures, societal expectations, financial burdens, and personal challenges contribute to an environment ripe for the onset of mental stress. Ignoring the early signs and failing to address mental stress can potentially lead to conditions such as anxiety disorders, depression, and even suicidal tendencies.

Prevention strategies have long remained a lost battlefield for mental health promotion, for the simple reason of a lack of training in this area. The prevention strategies need to bud from the primary health care settings, for any program to be a success. However, the lack of awareness of psychiatric issues among medical and para-medical students is a roadblock for such measures. Even the curriculum for PG in Preventive medicine is not explicit about mental health care measures. Thus, this remains an elusive area for both of these sections of health workers, who are otherwise geared toward preventive measures.

**The Consequences of Neglect:**

a. **Individual Suffering**: The most immediate consequence is the continued suffering of individuals. Many may bear the burden of stress silently; unaware of the strategies that can help them cope effectively. This not only deteriorates their quality of life but can also impact their physical health.
b. **Overburdened Healthcare System**: By not addressing stress at an early stage, individuals are more likely to require intensive medical and psychological interventions when their conditions worsen. This strains healthcare resources and limits their availability for those in critical need.
c. **Economic Impact**: Mental stress affects work productivity and absenteeism, ultimately impacting economic productivity. Failing to prevent mental stress contributes to a vicious cycle, where individuals mental health issues exacerbate their financial worries, and vice versa.
d. **Social and Family Dynamics**: Unmanaged mental stress can strain relationships, disrupt family dynamics, and isolate individuals from their social networks. The consequences ripple through communities, affecting the overall social fabric.

6. **Lack of Holistic Approaches**

Mental health is influenced by various factors, including genetics, environment, lifestyle, and social support. Focusing solely on one aspect can result in incomplete treatment.

a. **Lack of Integration**: Mental health services are often not well integrated into the primary healthcare system. This leads to mental health concerns being neglected or

not addressed in a timely manner. The treatment gap for all mental health problems is as high as 91% in some states. As compared to other physical illness or issues only one half to one-fifth of the population with mental health issues receive medical attention.

b. **Combination Approaches**: Mental health is complex, and individuals often experience a combination of issues. Finding effective ways to address multiple factors simultaneously, such as stress, anxiety, and depression, is an ongoing challenge.
c. **Integration with Physical Health:** Mental health is often treated separately from physical health, despite the strong connection between the two. Integrated care models are essential to address the holistic well-being of individuals.
d. **Overemphasis on Medication:** While medications can be helpful, there's sometimes an overemphasis on pharmacological treatments at the expense of psychotherapy and other non-pharmacological interventions.
e. **Personalization:** While there are numerous stress-management techniques available, there is a lack of personalized approaches that consider an individual's unique stressors, triggers, and coping mechanisms. Tailoring interventions to an individual's specific needs could improve the effectiveness of stress management strategies.

7. **Integration of Technology**

While technology has made some inroads into the field of mental health and stress management, there's still room for innovation. Developing user-friendly and evidence-based digital tools and apps can help individuals manage stress in a more engaging and accessible manner. The digital divide in India can limit access to these resources, especially for marginalized communities. These issues are discussed in detail in the next section.

8. **Workplace Stress**:

Many workplaces in India do not have adequate provisions for managing stress and promoting mental well-being among employees. Long working hours, excessive workload, and a lack of work-life balance contribute to stress-related issues.

According to a comprehensive study conducted by Deloitte, a management consulting firm, almost half (47%) of the professionals surveyed consider work-related stress to be the most significant factor affecting their mental health, followed by financial challenges. The report estimated that mental health problems cost Indian employers approximately $14 billion annually due to lower productivity, absenteeism, and attrition.

9. **Educational Stress**

The education system in India places significant pressure on students to excel academically. This pressure can lead to high levels of stress and anxiety among students, and there is a need for more comprehensive support mechanisms in schools and colleges. Some of the key issues causing mental stress in educational sphere are as follows.

a. **Competitive Environment**: The pursuit of limited seats in prestigious institutions and the emphasis on securing high grades create a competitive atmosphere leading to stress.

b. **Parental and Peer Pressure**: Peer pressure to perform well and parental pressure to secure top grades can significantly impact a student's mental well-being.
c. **Lack of Mental Health Support**: Mental health education and support services are not uniformly available in schools and colleges. Many students might lack resources to cope with stress effectively.
d. **Lifestyle Factors**: Long hours of studying, sleep deprivation, and neglect of physical health can contribute to stress-related issues.
e. **Examinations**: Board examinations, are considered crucial milestones and the significance attached to these exams contributes to stress among students. Competitive entrance exams for medical, engineering and other professional courses are notorious for their difficulty and the pressure they place. These have also caused mushrooming of coaching institutes and in turn have had tragedies for families beyond repair.
f. **Rote Learning and Memorization**: The education system's emphasis on rote learning and memorization rather than critical thinking and practical application can lead to monotonous and high-pressure study routines.
g. **Lack of Holistic Education**: The focus on academic achievement often overshadows the importance of holistic education, including extracurricular activities, sports, and personality development.

These highlight that school-based interventions is largely lacking. Knowledge is the basis of help-seeking behaviour and how we look at things changes with awareness.

10. **Evidence-Based Practices:**

While there are many stress management techniques available, not all of them have strong scientific evidence supporting their efficacy. It's important to continue refining and expanding the pool of evidence-based practices. There is a pooling of resources via the internet and social media, which are vehemently advertised for stress management. Many of these have a poor scientific or medical basis or evidence and, contrary to popular belief, serve to deteriorate mental health. The lack of control by the government on these platforms is a significant lacuna that needs to be addressed urgently.

a. **Research and Data**: Comprehensive data on the prevalence of mental health issues and their specific impacts in different regions of India are often lacking. This hampers the development of targeted interventions and policies.
b. **Measurement and Assessment:** Objective and standardized methods for assessing stress levels are still being developed. Accurate assessment is essential for both understanding the effectiveness of interventions and providing personalized recommendations.

11. **Government Support and lack of funding**:

While there have been some efforts by the government to address mental health issues, more sustained and comprehensive policies and funding are needed to create a robust mental health support system. This is being dealt with in the next section.

12. **Long-Term Maintenance**

Many stress management techniques offer short-term relief, but sustaining positive effects over the long term remains a challenge. Developing strategies that help individuals maintain their stress reduction efforts is crucial.

## 6.1. RECOMMENDATIONS MADE TO BRIDGE THE CRITICAL GAPS AND DEFICIENCIES IN THIS ASPECT

Bridging the critical gaps in mental health services in India requires a comprehensive and multi-faceted approach that addresses various challenges.

1. **Increased Funding and Resource Allocation**

The first step to improvement is having money for it. Most of the above issues require the allocation of funds by the government. Presently, mental health gets a meagre share of the budget, compared to the DALYs and YLDs it is relatively responsible for. The effects of mental health disorders are not as overtly visible as those of physical disorders. Perhaps this reduces the urgency for it in the minds of decision makers. Also, awareness of this silent epidemic, which is making its way, is poor at all levels.

Allocation of a higher proportion of the healthcare budget to mental health services to address resource shortages and enhance the quality of care, is of paramount importance. The funds are required for enhancing the medical services, training of primary and community health center staff, procurement of ample amounts of medications, increasing community awareness, school mental health literacy, de-addiction campaigns, research, etc. The list is too long as most of these areas are still poorly addressed. For the financial year 2023-24 BE for mental health is just above 1% of the BE of the MoHFW. The government has increased its budget for T-MANAS, showing its commitment to digital mental health programs. However, elsewhere there is a substantial lack of funds.

WHO's mental health atlas also reiterates the above allocation and additionally shows that most of the allotted budget is used in in-patient treatment, leaving even lower financial aid for community psychiatry, literacy, etc.

**2. Workforce Development**:

The second step after the allocation of funds is to have trained manpower to address the issues. Thus, the government should aim to train and increase the number of mental health professionals, including psychiatrists, psychologists, counselors, and psychiatric nurses, to ensure adequate coverage. As stated above, the national averages of the above are far below the international standards, which cause an increased prevalence of mental health issues and are an economic burden. At the current pace of training, we are not looking at less than three decades to fill our cup.

Thus, the way forward is to increase the training of the existing medical workforce until we are able to increase our infrastructure.

a. **Increase psychiatry training at graduate level -** Since the training in psychiatry at MBBS and equivalent levels is poor, the MOs manning the health centres are unaware of how to recognise and manage basic mental health issues. Thus, Psychiatry should be taught as a full, separate subject in MBBS, in the final professional examination, and simultaneously, the Internship in Psychiatry should increase from 2 weeks to 4 weeks. This amount of exposure in both theoretical and practical training is vital for improved knowledge and skill development. This training will also assist the specialist doctors in recognizing mental health issues in their clinics, as these issues, although having a very high prevalence in almost all chronic illnesses, go undetected. Thus, include mental health components in the training of primary care physicians and other healthcare professionals.
b. **Increase Training Programs and Capacity:** Medical and para-medical staff already employed can undergo short capsules of training in mental health with a refresher after every five years. This will ensure that the staff is sensitised to mental stress recognition and management. These capsules can be run by the district hospitals/ medical colleges.
**c. Increase trained Psychologist:** Increase in the seats for Psychology training needs to increase to fulfill the gaps as stated above. Further, training of medical and nursing undergraduates should include psychology as a subject which would increase the mental health workforce.
d. **Provide Supervision and Mentorship -** Establish mentorship programs for new mental health professionals, allowing them to learn from experienced practitioners. Regular supervision can help professionals improve their skills and ensure high-quality care. These can be arranged between CHC and tertiary care centres, like medical colleges.
e. **Incentives and Scholarships –** Offer scholarships, grants, and financial incentives to attract individuals to mental health professions. Create initiatives to support mental health professionals working in underserved areas or with vulnerable populations.
f. **Enhance Tele-health Training -** particularly useful for covering the remote areas, with geographical difficulties and also has an advantage of real-time assistance.
g. Develop a cadre of mental health professionals trained to work within the primary care system.

**3. Awareness and Stigma Reduction**: **improving Mental health literacy**

Reducing stigma against mental health in India requires a multi-faceted approach that involves raising awareness, education, advocacy, and fostering open conversations about mental health.

a. **Public Awareness Campaigns:** Launch nationwide campaigns that provide accurate information about mental health, debunk myths, and challenge stereotypes. Various media platforms, including TV, radio, social media, and print, to reach a wide audience are required. Success of Polio immunisation and TB / HIV awareness are evidences of the power of awareness and reducing stigma respectively.

b. **Education in Schools and Colleges:** Integrate mental health education into school curricula to promote understanding and empathy from a young age. Conduct workshops and seminars in colleges to address stigma and promote mental health literacy. School-based awareness programs have been shown to reduce suicide attempts and suicidal ideation. The universal school program has an effect on both the recognition of mental disorders, prejudice, and knowledge about where to seek help, and consequently on the mental health literacy of adolescents. One such program that deserves a mention is the Young Mental Health First Aid Program, conducted in Australia, with the aim of helping young adults learn the skills required to recognize early signs of mental illness in adolescents and provide help as and when required.

c. **Promote Positive Portrayals in Media**: Media has the most powerful effect on changing attitudes and images. It has been shown time and again that the portrayal on the screen is almost the truth for the public at large. Thus, it is recommended to collaborate with media outlets to portray mental health issues in a sensitive and accurate manner. There should be strict laws against the incorrect or deceptive portrayal of mental health issues in the media. Highlight stories of recovery and resilience to inspire hope and reduce fear.

   The Schizophrenia Research Foundation [SCARF] in Chennai, India, has been sponsoring a film festival called "Frame of Mind," which includes various films depicting mental illness as well as an international competition for short films on mental health and stigma. This approach has been a big success, with three editions published so far. Similar celebrations have subsequently taken place in places such as Kolkata. Many non-governmental organizations (NGOs) employ short videos to raise awareness about their work or cause. Though the effectiveness of such initiatives have not been studied.

d. **Celebrities and Influencers:** The psychology of advertisements teaches us that the source of information to the public influences how well that information is accepted. Engage celebrities and influencers to share their own experiences with mental health challenges, thereby normalizing the conversation. Encourage influential figures to use their platforms to spread awareness and advocate for mental health.

e. **Support Groups and Peer Networks:** Create safe spaces where individuals can share their experiences and find support from others who have faced similar challenges. Peer support networks can play a crucial role in reducing isolation and combating stigma.

f. **Training for Healthcare Professionals**: Provide training for healthcare professionals to deliver culturally sensitive and stigma-free care to individuals with mental health issues. Equip healthcare providers with communication skills to address mental health concerns without judgment.

g. **Engage Religious and Community Leaders:** Collaborate with religious leaders and community figures to promote understanding of mental health and challenge harmful beliefs. Religious institutions can be influential in spreading positive messages about mental well-being.

h. **Legal and Policy Measures:** MHCA 2017 is been beneficial to people with mental health disorders, and is right based. However for people who are suffering from

mental stress, and are not diagnosed as any mental disorder, another set of policies and advocates might be required. This includes a smooth path for obtaining help as required without being marginalised due to the prevailing stigma.

i. **Mental Health Days and Events**: Organize events like World Mental Health Day to draw attention to mental health issues and foster open discussions. Use these occasions to launch awareness campaigns and educational initiatives. These can also be used by government to launch schemes to facilitate help for mental stress.
j. **Corporate Initiatives**: Encourage workplaces to prioritize employee well-being and promote mental health awareness. Provide resources for employees to seek help and create a supportive environment.
k. **Open Conversations**: Encourage individuals to openly share their experiences with mental health, helping to break down walls of stigma. Engage in conversations with family, friends, and colleagues to normalize discussions about mental well-being.
l. **Empowerment and Advocacy:** Empower individuals with lived experience to become mental health advocates, sharing their stories to inspire change. Support advocacy organizations that work to reduce stigma and improve mental health services.

It has to be remembered that changing deeply ingrained societal attitudes takes time and consistent effort. By implementing these steps and fostering a culture of understanding and empathy, India can make significant progress in reducing stigma against mental health and creating a more supportive environment for individuals facing mental health challenges.

4. **Integration of Mental Health Services**

It is crucial to integrate mental health services seamlessly into the broader healthcare system in India, ensuring individuals receive well-rounded care encompassing both their physical and mental well-being. The integration of mental health services into primary care settings facilitates early detection, timely intervention, and an all-encompassing approach to healthcare. Achieving this goal necessitates collaborative efforts among mental health professionals, general physicians, and community health workers, fostering a coordinated response to address mental health needs.

a. **Policy and Legislative Support**: Develop policies and guidelines that mandate the integration of mental health services into primary care. Ensure that existing mental health legislation, such as the Mental Healthcare Act, supports integration efforts.
b. **Health Workforce Training**: as stated above.
c. **Screening and Assessment:** Integrate mental health screening tools into routine primary care assessments to identify individuals at risk of mental health problems. Apart from this, more research is required to develop culturally sensitive assessment protocols that consider local beliefs and practices. This will ensure valid and reliable assessment and increase sensitivity of these assessment.
d. **Referral Pathways** - Establish clear referral pathways between primary care and specialized mental health services for complex cases. This ensures continued level of care, starting from the primary level and instils not only confidence in the staff at

primary level but also trust in the clienteles. Develop mechanisms for prompt and seamless communication between different levels of care.

e. **Collaborative Care Model:** Implement a collaborative care model where mental health specialists work closely with primary care providers to deliver integrated care. Facilitate regular case discussions and joint treatment planning.
f. **Telemedicine and Technology:** Utilize telemedicine platforms to connect primary care providers with mental health specialists for consultation and guidance. Develop mobile applications for mental health education, self-assessment, and support.
g. **Community-Based Initiatives:** Establish mental health clinics or centers within community health centers to provide accessible mental health services. Train community health workers to deliver basic mental health support and education.
h. **Health Information Systems:** Develop electronic health records that include mental health assessments and treatment plans, this will ensure continuity of care and this could be further elaborated to implement data-sharing mechanisms between primary care and mental health services.
i. **Establish Cross-sectoral Partnerships** (Legislative, Executive branches of Government, Medical infrastructure, NGOs etc) to address social determinants of mental health. This will collectively focus their expertise and resources on this issue. This will help the various parties bridge the gaps that exist in their solo operations.
   Integration of mental health services in India requires a concerted effort involving policymakers, healthcare providers, mental health professionals, and communities. By building a strong foundation of policies, training, and support mechanisms, India can enhance access to mental health care and improve the overall well-being of its population.
j. **Telemedicine and Technology**: Expand telemedicine initiatives to increase access to mental health services, especially in remote and underserved areas. Develop mental health apps and digital platforms for psycho-education, self-help, and remote counselling. The technology will be discussed in detail in the next section.

5. **Culturally Adapted Interventions**

Develop evidence-based interventions that are culturally sensitive and contextually relevant to the diverse population in India. Involve community leaders and local organizations in designing and implementing mental health programs. The adaptation of policies and programs to the local culture of the target population will go a long way in terms of acceptance, implementation, and benefits. India is a culture driven nation, and congruency with culture should be the foremost criteria of any policy. Similarly, campaign programs that include *Nukkad Natak*, puppet shows, and talks by local teachers/leaders are far more acceptable than a lecture behind the dais. Similarly Art therapies, like dance, theater, and folklore, apart from providing entertainment, have their origins in India for decades and are one of the means of imparting health education in rural India.

Many of the screening schedules are not culture sensitive and thus do not give the correct information to the health workers. More research into these areas is required to formulate scales sensitive to our diverse culture.

6. **Strengthening Policies**

Revise mental health policies to align with international standards and emphasize prevention, early intervention, and community-based care. This is dealt in detail in the next section.

7. **Support for Families and Caregivers**:

Offer counselling and support services for families and caregivers of individuals with mental health conditions to empower them to provide effective care and reduce stigma.

8. **Research and Data Collection**

Invest in research to generate local evidence on effective interventions, prevalence rates, and factors affecting mental health. Establish a comprehensive mental health database to track trends, evaluate interventions, and inform policy decisions. Conduct research to assess the effectiveness of integrated mental health services and identify areas for improvement.

9. **NGO Collaboration**

This will assist in the reach of mental health services and community-based support programs. Foster partnerships between the government, NGOs, and private sector to leverage resources and expertise for mental health initiatives

10. **Front-line workers to support the persons affected by mental stress**

The various recommendations as above require consistent efforts, which is expected to take time. Although the above is essential for quality care, as a stop-gap measure, short-course of training in mental health needs to be initiated for all the health workers in PHC and CHC levels. Workshops for sensitizing these first line health workers can be easily done at tertiary care centers by Psychiatrists and Psychologists which will enable them, for early detection of mental stress or mental health issues. This will further increase the level of mental health care in the area and in turn increase the mental health awareness. The extent of services that can be provided and the population that can be handled by such centers will off course depend on the available man-power and also will be a learning as this process come into effect.

11. **Monitoring and Evaluation**

To improve anything, the best way is to measure it continuously. So regular monitoring and evaluation of the implemented programs, policies/procedures etc. need to be done. This should be followed by informed adjustments and improvements. This continuous effort will ensure that the procedures in place are functional, improving, and being updated to meet the required and felt needs. The reports and returns need to be stringent in concept and format and should be evaluated strictly.

## 6.2. KEY ISSUES / GAPS IDENTIFIED IN THE CURRENT INFRASTRUCTURE, FACILITIES, TECHNOLOGIES, POLICIES, PROGRAMS, ETC. IN THE COUNTRY IN CONTEXT OF THE PROBLEM / HEALTH ISSUE

Government of India is implementing the National Mental Health Program which also helps in mitigating mental stress to some extent. However, there are several focused areas that needs further improvement in the execution and implementation. Currently there is a huge gap in this domain as identified below.

**Huge Treatment Gap for all Mental Disorders**

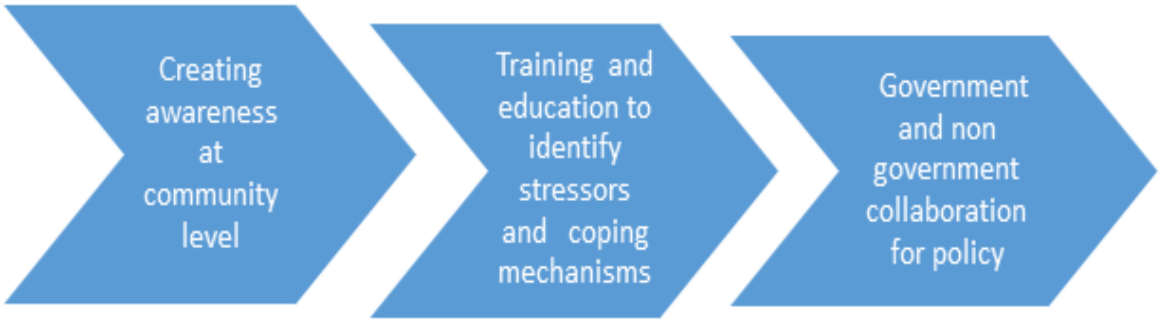
There is a huge treatment gap for all mental disorders due to various reasons like deficit in the number of trained human resources, need for standardized delivery of care, need to address the specific needs for special Populations like Women, Pediatric, Geriatric population, etc., as well as due to lack of awareness related to mental illness among general public.

**Less Availability of Mental Health Professionals**

According to the Indian Psychiatric Society, there are around 9,000 psychiatrists currently practicing in India. Every year, about 700 more psychiatrists graduate from various medical institutions across the country. However, the number of psychiatrists available in India is quite low, with only 0.75 psychiatrists per 100,000 people, which is much less than the recommended minimum of three psychiatrists for every 100,000 inhabitants. Clinical psychologists also are very less in numbers (Garg et al., 2019b), There is a significant deficit in the availability of human resources trained in mental health who can cater to the mental stress. Hence, there is a need for training in mental health field at different tiers as discussed below.

**Need for Training at different tiers of health care services**

Mental Health Awareness Training (MHAT) is important to cater for community level interventions and prepare individuals to identify early signs of distress before the breakdown occurs. Identification of stressors and skills to handle these stressors can be achieved through training. Training can be imparted to provide support at community level by primary level care providers and equipping them to cope with levels of stressors involving adjustments and coping during stressful periods. This can be achieved by three tier level approach as given below. Further trained human resource can be generated by introducing these skills at education levels both graduate level of Psychiatry and Clinical Psychology/Psychology .



**Mental Health Awareness Strategic Approach**

Enhancing mental health awareness in the country will lead to its promulgation, creating its own demand. Additionally, as awareness expands in a democratic society, there will be emergence of advocacy efforts, the utilization of political will, increased funding, and the development of cross-synergies. It is envisaged that a significant portion of the contributions to awareness shall flow from the following six platforms.


Adapted from: (Srivastava et al., 2016)

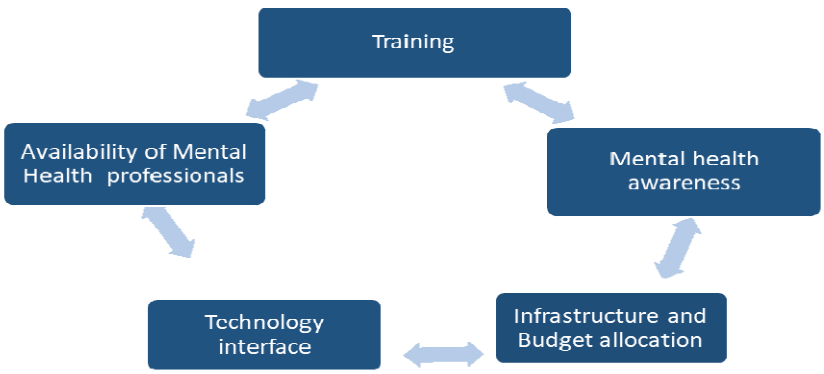
**Need to incorporate technological advances to increase reach**

There is a need to incorporate Government initiatives of digital India mission as an add on arm to mental health initiatives.

**Very low budget allocation and lack of adequate Infrastructure**

There is a pressing need to rationalize the budget allocation for mental health programs, as it is less than 1% of the total budget allocation currently, which hinders expansion of services for mental health promotion as well as to develop services that can cater to the huge prevalence of mental stress among the general population. Also, there is a need to allocate adequate budget for research in the field of mental health.

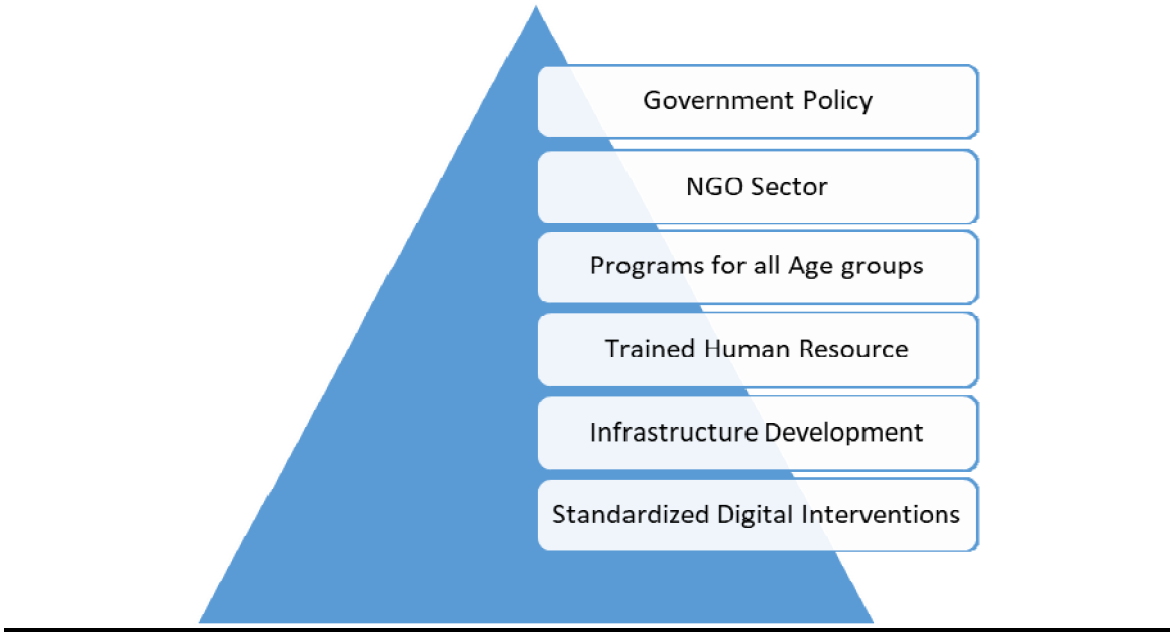
These are five important components essentially required to mitigate the stress.



## 6.2.1. RECOMMENDATIONS MADE TO BRIDGE THE CRITICAL GAPS / DEFICIENCIES IN THIS ASPECT

Addressing the critical gaps in mental health services in India requires a concerted effort from governments, healthcare organizations, NGOs, mental health professionals, communities, and individuals. By adopting a comprehensive and collaborative approach, it is possible to create a more accessible, effective, and stigma-free mental health support system for all citizens. The failure to focus on reducing mental stress creates a cycle of suffering that affects people, families, communities, and society as a whole. Recognizing the significance of preventive measures and adopting comprehensive techniques is vital to preventing mental stress from escalating into more severe problems. We can create a healthier and more psychologically robust society by developing resilience, raising awareness, and encouraging early intervention. It is time to handle mental stress not only when it reaches crisis proportions, but also while it is still manageable; this is the genuine way to a psychologically better future.

**Infrastructure development:**




**Recommendations for current financial inputs etc. in the country in context of the problem/health issue**

Currently, no specific budget has been allotted to prevention or management of stress and related issues. Some financial support is allocated for mental health issues; however, it is imperative to shift our focus towards a more comprehensive approach, which would include:

- Prioritizing budget-allocation for evidence-based prevention instead of solely concentrating on treatment.
- Increasing government investment in public services to ensure sustainability and accessibility of services in the government sector.
- Recognizing the importance of telemedicine in modern healthcare and establishing a budget for stress management through telemedicine. This can significantly enhance access to care.

- Encouraging non-government sector to provide mental health care by incentivizing them.
- Dedicated budget for manpower development can help in training primary care professionals, lay counselors, nurses and other health care professionals.
- Separate funds should be kept for research to find and implement prevention and management strategies that are efficacious as well as cost-effective.
- Increased Resource and Funding Allocation: Increase the percentage of the healthcare budget designated for mental health treatments.
- Use the funds for enhancing healthcare, educating the public, acquiring medicine, raising community awareness, promoting mental health literacy in schools, de-addiction programmes, and research.

## 7. WAY FORWARD

To effectively tackle the challenges posed by stress, our way forward should encompass both preventive and therapeutic dimensions. It is very important to adopt strategies that are proven and implementable. A multifacted approach may be the most effective way to address the issue, ensuring that we cater to the unique needs of different regions and communities.

### 7.1. Suggested Policy activities and advocacy for policy makers

- Sensitive Public Healthcare approach, which is person centered, culturally sensitive, collaborative and trans-disciplinary. It should be able to adequately address bio-psycho-social determinants, especially for vulnerable groups and promote community engagement.
- Policy convergence with aim of aligning all government departments, NGOs, integration of stress-mitigation and public mental health policies with primary care, establishing implementation units at national, state, district levels and mobilizing existing community resources.
- Implementation strategy for program development, building up human resources, setting up service delivery standards and aligning those to needs of the community.
- Sensitizing important stakeholders like community leaders, teachers, employers, parents for early identification of stress and its manifestations.
- Formulation of telepsychiatry and tele psychotherapy guidelines.
- Implement a collaborative care paradigm with primary care professionals and mental health professionals.

### 7.2. Recommendations for health/ Medical professionals

- Develop effective pathways to care by training of lay counselors, ASHA workers, community leaders etc, screening of vulnerable population and development of systems for triaging, referrals, service contract and delivery of services.
- Have a basic understanding of stress, its manifestations and identification of common mental disorders.
- Greater utilization of basic counseling skills to deal with issues at primary care level and knowing when and where to make a referral.

- Undertaking offline or online courses imparted by government agencies such as project ECHO for training of medical professionals and lay counselors.
- Integrate psychosocial rehabilitation along with treatment of mental health issue.
- Launch public awareness initiatives around the country to dispel myths and factual information.
- Bring mental health education into the classroom and run awareness campaigns at school, college and universities

**7.3. Suggestions to create awareness among public, NGOs, Community stakeholders**

- Community awareness and engagement through IEC activities to de-stigmatize impact of stress, build capacity for information dissemination, sensitization, experiential learning, and peer support.
- Provide support for vulnerable groups - prioritize children, adolescent and youth development, Empowerment of women, elderly care, and outreach to vulnerable groups.
- Initiate workplace interventions to tackle stress at workplace.
- Sensitizing teachers in educational institutes to carry out stress prevention activities, engage in life-skill training, identify early signs of stress in students and understand where to make referrals.

**7.4. Any other**

- Inputs would include:
    - Increased numbers and dispersion of mental health personnel
    - Training of all medical/ nursing personnel and community health workers in assessing and addressing stress
    - Streamlining of access to care and referral processes
    - Coordination of stress mitigation policies across all departments/ arms of government
    - Increased use of force multipliers through technology e.g. websites, apps, etc.
- Workforce Development in dealing with stress management
    - Psychiatric nurses, psychologists, counsellors, and psychiatrists should all receive more training in this area.
    - Improve graduate-level psychiatry education for family practitioners and other medical specialists.
    - Provide rewards, scholarships, and financial aid to draw people to jobs in mental health.
    - Create telehealth training for reaching remote places.
    - Create peer networks and support systems.
    - Teach medical staff or other concerned trainers to deliver treatment without judgement.

- Outcomes would be assessed by:
    - Screening for stress in community to track trends in schools/ Colleges; PHCs, workplace (Formal/ Informal sector) and Community through surveys.
    - Measures of change of awareness in community
    - Tracking of NGO/ Community support group activities

- Impact would be measured by:
    - Improved/ Increased identification of Stress and consequences
    - Shortened pathway to care
    - Reductions in delay of treatment, cost of treatment and outcome.
    - Reduction in mental health gap
    - Increased care-seeking in community/ population
    - Reductions in surrogate markers of stress like substance use, suicide, depression, anxiety and physical illness.
    - Reduction in stigma
    - Increased integration of those with stress-related illnesses

The plan for implementation requires comprehensive discussions involving not only medical professionals but also a diverse array of stakeholders. This multi-stakeholder approach should encompass individuals with mental health issues, those with programmatic and administrative expertise, financial specialists, and others. The selection of prioritized strategies should be informed by both empirical evidence and a nuanced understanding of the country's distinctive cultural, social, economic, and political context.

These chosen strategies must be closely tied to quantifiable outcomes, assessed within appropriate timeframes. Defining objectives that are specific, measurable, achievable, reliable, and time-bound (SMART objectives) is essential to gauge the effectiveness of these strategies. Such a framework will be instrumental in directing resources effectively and optimizing inputs for the intended outcomes.

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## 9. ANNEXURE

### 9.1. Details of Task Force Members

| Name of the Expert | Email address |
|---|---|
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## 9.2. Important data, statistics related to the issue

Prevalence of Mental Disorders in India according to the National Mental Health Survey (2016):

| **Mental illness** | **Prevalence (NMHS, 2016)** |
|---|---|
| Mental and behavioural problems due to psychoactive substance use | 22.4 % |
| Schizophrenia and other psychotic disorders | Lifetime prevalence - 1.4%;<br>Current prevalence - 0.4% |
| Mood disorders | Lifetime prevalence - 5.6%<br>Current prevalence - 2.8% |
| Neurotic and stress-related disorders | Lifetime prevalence - 3.7%<br>Current prevalence - 3.5% |

*Source: Gururaj, G., Varghese, M., Benegal, V., Rao, G. N., Pathak, K., Singh, L. K., Mehta, R. Y., Ram, D., Shibukumar, T. M., & Kokane, A. (2019). National Mental Health Survey of India, 2015-16: Prevalence, patterns and outcomes. Bengaluru, National Institute of Mental Health and Neuro Sciences.*

**Prevalence of Mental Disorders in India according to the Global Burden of Disease Study 1990 – 2017**

| | **Both sexes** | **Males** | **Females** |
|---|---|---|---|
| All mental disorders | 14·3% (12·9–15·7) | 14·2% (12·8–15·6) | 14·4% (13·1–15·8) |
| Idiopathic developmental intellectual disability | 4·5% (3·0–6·0) | 4·7% (3·1–6·3) | 4·3% (2·9–5·7) |
| Depressive disorders | 3·3% (3·1–3·6) | 2·7% (2·5–3·0) | 3·9% (3·6–4·3) |
| Anxiety disorders | 3·3% (3·0–3·5) | 2·7% (2·4–2·9) | 3·9% (3·6–4·3) |
| Conduct disorder | 0·8% (0·6–1·0) | 1·0% (0·8–1·3) | 0·6% (0·4–0·7) |
| Bipolar disorder | 0·6% (0·5–0·7) | 0·6% (0·5–0·7) | 0·6% (0·5–0·7) |
| Attention-deficit hyperactivity disorder | 0·4% (0·3–0·5) | 0·6% (0·5–0·7) | 0·2% (0·2–0·3) |
| Autism spectrum disorders | 0·4% (0·3–0·4) | 0·5% (0·5–0·6) | 0·2% (0·2–0·2) |
| Schizophrenia | 0·3% (0·2–0·3) | 0·3% (0·2–0·3) | 0·2% (0·2–0·3) |
| Eating disorders | 0·2% (0·1–0·2) | 0·1% (0·9–1·4) | 0·3% (0·2–0·3) |
| Other mental disorders | 1·8% (1·5–2·0) | 2·1% (1·8–2·4) | 1·4% (1·2–1·7) |

*Source: India State-Level Disease Burden Initiative Mental Disorders Collaborators. The burden of mental disorders across the states of India: the Global Burden of Disease Study 1990-2017. Lancet Psychiatry. 2020 Feb;7(2):148-161. doi: 10.1016/S2215-0366(19)30475-4. Epub 2019 Dec 23. PMID: 31879245; PMCID: PMC7029418.*

**Current Mental Health Budget**

| | BUDGET HEAD | (IN CRORES) |
|---|---|---|
| a. | TOTAL GOI BUDGET FOR 2022–2023 | ₹ 45,03,097 |
| b. | TOTAL BUDGET FOR HEA LTH (MoHFW) | ₹ 89,155 |
| c. | TOTAL BUDGET FOR SOCIAL JUSTICE & EMPOWERMENT (MoSJE) | ₹ 14,072 |
| d. | DIRECT EXPENDITURE FOR MENTAL HEALTH (from MoHFW) | ₹ 919 |
| e. | INDIRECT EXPENDITURE FOR MENTAL HEALTH (from MoSJE) | ₹ 280 |
| f. | TOTAL BUDGET FOR MENTAL HEALTH | ₹ 1,199 |

*Source: https://cmhlp.org/wp-content/uploads/2023/02/Budget-Brief-2023-v3.pdf (Centre for Mental Health Law and Policy)*