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### Differences in mental fatigue and their associated factors between teachers and parents of differently abled

**Rathore Sangya and UV Kiran**

#### **Abstract**

Mental fatigue is a complex multi-faceted state difficult to define but which is a common phenomenon in daily life, for example as a syndrome due to a hard day's work, which involves several changes in mood, information processing, behavior and psychological- physiological state Coping strategies are defined as the person's constantly changing cognitive & behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the person's resources. Coping strategies refer to the specific efforts, both behavioral and psychological, that people employ to master, reduce tolerate or minimize stressful events. Stress is not only happens at workplace but students are subjected to different kind of stressors such as the presence of the academic performance. As a result, it is important that individuals develop different strategies in order to manage stressful situations Coping strategies are defined as the person's constantly changing cognitive & behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the person's resources. Coping strategies refer to the specific efforts, both behavioral and psychological, that people employ to master, reduce tolerate or minimize stressful events. Stress is not only happens at workplace but students are subjected to different kind of stressors such as the presence of the academic performance.

**Keywords:** Mental fatigue, coping strategies

#### **Introduction**

Teachers play a vital role in the life of students. A great deal is known about what students need from teachers and how big a difference high quality teaching makes to student learning, achievement, development, and success in school. Teaching is a stressful profession, and those stressors may eventually erode teachers' enthusiasm and engagement in teaching, undermining their capacity to meet students' needs and eventually leading to burnout. In order to help students, reach their full potential, it is imperative to understand how teachers become more effective at dealing with the everyday demands and challenges associated with the teaching profession over time, not only to protect teachers from burnout, but also as a way to promote their engagement, learning, and mastery.

The teaching profession is considered one of the most stressful occupations. Teacher burnout, a common problem that is especially likely during the first three years of a teacher's career, is expensive to all those involved, including students, the teachers themselves, and the institutions that hire and train them. Small adjustments early in a teacher's career may have the potential to set them on a positive course towards greater resilience and more constructive engagement with their students and colleagues. This, in turn, might lead students to become more engaged in the curriculum, thereby increasing their ability and motivation to learn. The purpose of this study is to analyses mental fatigue and coping strategies among teachers and parents of differently abled children, including those potentially linked to the development of resilience. Such information would be useful in order to begin to identify the points in the coping process that can be targeted for interventions designed to promote teacher effectiveness and engagement, thereby increasing the likelihood that teachers would remain in the profession and realize their full potential to mentor, nurture, and teach student.

Stress is a term in psychology and biology, which in the more recent decades, has become a common place of popular parlance, it refers to the organism- human to respond appropriately

to emotional or physical threats, whether are either actual and imagined. The term "stress" was first employed in the 1930's by the endocrinologist Hans Selye defined stress as physiological nonspecific reaction to external and internal demands. While researchers define stress as the adverse reaction people have to excessive pressure or other types of demands placed on them, stress occurs when an individual is confronted by a situation that they perceive as overwhelming and cannot cope up with.

Stress provides the means to express talents and energies and pursue happiness, it can also cause exhaustion and illness, either physical or psychological; heart attack and accidents. The important thing to remember about stress is that certain forms are formal and essential. As the body responds to various forms of physical or psychological stress; certain predictable changes occur. These include increased heart rate, blood pressure (systolic and diastolic) and secretions of stimulatory hormones. These responses to stress will occur whether the stress is positive or negative in nature. In lay term, it is known as the "fight or flight" mechanism. Stress as a positive influence can help compel to compel you to action; it can result in a new awareness and an exciting new perspective and other hand stress as a negative influence can result in feeling of distrust, rejection, anger and depression, which in turn can lead to health problems such as headaches, upset stomach, rashes, insomnia, ulcers, heart disease and stroke. This is where stress management techniques can make a crucial difference to your death and well-being. Indeed, employing effective stress management may become a life or death decision.

Mental stress is a very familiar condition faced by the students when they are unable to bear the risks involved in higher education. The main sources of stress are academic and time concerns, fear to failure, classroom interaction, and economic issues. Apart from this, the parental system also affects a lot of these students. The parents have unlimited expectation from their children and therefore they impose their own desires on them, the impact of these influences results in number of students reporting emotional problems, anxiety, stress and other neurotic problems. They are often found in frightening, abusive, depressing, threatening, competitive, unpredictable and confusing situation. The percentage of students is more among the college students compared to the other ones and these suicides is more among the college students compared to the other ones and these and these suicides under ache are mostly associated with academic failure or under achievement. Academic stress among students have long been researched on, the researchers have identified stressors as too many assignments, competition with other students, failures, lack of pocket money, poor relationships with other students or lectures, family or problems at home institutional (University) level stressors are overcrowded lecture halls, semester system, and inadequate resources to perform academic work.

Mental stress can take two parts one is acute stress or short-term stress is the most common form of stress. Acute stress occurs as a result of resent part pressures and near future demands like moving house, changing jobs, traffic delays unexpected problems and just day to day hassles cause acute stress. The second is chronic stress, is a condition which can cause serious health problems. It is a long-term physiological arousal. All of us experience stress on a regular basis.

Having a child with disability often places parents in a stressful condition. Stress exists when environmental and internal demands tax or exceed the individual's resources for

managing them. Anthony *et. al.*, 2005 cited by discussed parenting stress as the difficulty emerging from the demands of being a parent, affecting behavior, well-being and children's adjustment. Parental stress therefore demands extra effort from parents in dealing with the demands of everyday living in raising their children.

As per World Health Organization estimates more than a billion people (15% of world's population) live with some form of disability. Almost 95 million children in the age group of 0- 14 years have some form of disability, of which approximately 13 million suffer from "severe disability". An increasing number of disabled infants are surviving into childhood and adulthood, presenting a unique challenge to country's health, education and social care.

Mental fatigue is a complex multi-faceted state difficult to define but which is a common phenomenon in daily life, for example as a syndrome due to a hard day's work, which involves several changes in mood, information processing, behavior and psychological- physiological state.

Fatigue is associated with impairments comparable to chronic medical conditions, and may affect the individual performance and functioning in the occupational as well as home setting. Mental fatigue is defined and operationalized in various ways for example in terms of increased sleepiness, reduced alertness, reduction in motivation, reduction in activity, and reduction in concentration.

According to the theoretical background of the effort-recovery (ER) model, stress is the change in the psychophysiological control mechanism that regulates task behavior resulting from proceeding mental and / or physical efforts which have become burdensome to such an extent that the individual is not able to adequately meet the demands the job requires; or the individual is able to meet this demands only at the cost of increasing mental effort and mental resistance. This definition principally implies that fatigue in itself is not an adverse effect but rather a physiological adaptation or safety mechanism of the individual confronted with the risk of overstrain or exertion.

Stress among parents and other primary caregivers of individuals with developmental disabilities, intellectual disability, autism spectrum disorder, cerebral palsy, epilepsy and other related conditions) is pervasive and linked to a variety of adverse physical and mental health outcomes. For example, parents of children with down syndrome parents of children with asperger's disorder have worse physical of children without developmental disorders. Finally, parents of children with cerebral palsy report poorer levels of both mental and physical health.

Coping may be an important resource to teachers in dealing with the multiple demands of their profession. Teachers with more access to coping resources reported less burnout than those with less access to coping resources (Before, 2006). There is even evident to suggest that learning effective coping strategies may contribute to mastering orientation toward teaching, which significantly predicts enjoyment of work, participation, and positive career aspirations. Coping likely mitigates the effects of stressors by changing one's emotional state during the encounter or by eliminating the source of the stressor all together. In fact, coping is viewed as one of the most important aspects of interventions designed to buffer the negative effects associated with stress caused by the many demands teachers face daily (Cooper, Dewed, & Driscoll, 2001).

In general, coping can be defined as "constantly changing cognitive and behavioural efforts to manage specific external

and/or internal demands that are appraised as taxing or exceeding the resources of the person". Coping is typically viewed as a process because it involves change over time or across situations. The authors posit that the process begins with an initial appraisal of the event, assessing it as a harm, threat, or challenge. During the next step in the process, secondary appraisal, the individual assesses his or her own ability to deal with the stressor and selects an initial coping strategy. Depending on whether the individual chooses an effective strategy, the stress experienced during the event may be reduced or eliminated altogether. If not, another episode of appraisal and coping may be initiated.

The actual actions used in response to a stressor are referred to as "ways of coping" and typically include problem-focused coping, emotion-focused coping, social support seeking, and avoidance. Problem-focused coping involves attempting to change the stressful event through direct action or active problem solving. Emotion-focused coping involves attempting to alleviate or soothe the emotions associated with the event. Support-seeking usually involves turning to others for advice, help, or comfort. Avoidance typically involves withdrawal or escape from the stressful situation, or failure to take any action at all. Research has demonstrated that teachers use these strategies and a variety of other methods to cope with stress, including keeping things in perspective, avoiding confrontations, trying to relax after work, take action to deal with problems, keeping feelings under control, devoting more time to particular tasks, discussing problems and expressing feelings to others, having a healthy home life, planning ahead and prioritizing, and recognizing one's own limitations.

Teachers may be more susceptible to stress and burnout than more experienced teachers based on the nature of their coping processes. Early career teachers may have heavier or different demands placed upon them, may be more reactive to stressors that do occur, may construct less adaptive appraisals, may show less adaptive coping strategies, or may be less resilient in the face of negative events. To date, however, there is a dearth of research examining the development of coping during one's teaching career and there has been a call for more investigation of the role that successful coping plays in teachers' development as they progress through their respective careers.

Coping strategies are defined as the person's constantly changing cognitive & behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the person's resources. Coping strategies refer to the specific efforts, both behavioral and psychological, that people employ to master, reduce tolerate or minimize stressful events. Stress is not only happens at workplace but students are subjected to different kind of stressors such as the presence of the academic performance. As a result, it is important that individuals develop different strategies in order to manage stressful situations. Higgins and Ender (1995) grouped coping strategies into three main classes:

1. Task-oriented: The task-oriented strategy is problem focused. It involves taking direct action to alter the situation itself to reduce to alter the situation itself to reduce the amount of stress it evokes.
2. Emotion oriented: In the emotion-oriented strategy, efforts are directed at altering emotional responses to stressors. It also includes attempts to reframe the problem in such a way that it no longer evokes as negative emotional response and elicits less stress.
3. Avoidance-oriented: avoidance – oriented coping includes strategies such as avoiding the situation, denying

its existence, or losing hope.

The use of indirect efforts to adjust to stressors by distancing oneself, evading the problem, or engaging in unrelated activities for the purpose of reducing feelings of stress in general, research has shown that problem focused coping strategies are the most effective way for dealing with stress. Coping strategies refers to specific effort, both behavioral and psychological, that people employ to master, tolerate, reduce, or minimize stressful event. Two general coping strategies have been distinguished: problem solving strategies are effort, both behavioral, and psychological that, the people employ to master, tolerate, reduce, or minimize stressful event. Two general coping strategies have been distinguished: problem strategies are efforts to do something active to alleviate stressful circumstances, whereas emotional focused- coping strategies involve effort to regulate the emotional consequences of stressful event. People mostly employ problem focused coping to deal with the potential controllable, such as certain kinds of physical health problems, prompt more emotional- focused coping.

In terms of stress management, Lazarus and Folkman defined eight separate coping strategies that they believed individuals employed in stressful situations. These are confrontation, seeking social support, planned problem- solving, self-control, accepting responsibility, distancing, positive reappraisal, and escape avoidance.

Parents experiencing stress often adapt coping strategies in handling stressful situations, Lazarus & Folkman (1984) In Judge (1998) defined coping as "constantly changing cognitive and behavioral efforts to manage specific external and or internal demands that are appraised as taxing or exceeding the resources of the person." Thus, coping involves efforts and strategies of aimed to manage stress regardless of how it works. Coping strategies involve efforts to face the stressful situations. Walsh (2003) in Fielder, Simpson & Clark (2007) indicated that stress may be manifested biologically (fatigue, exhaustion, cardiovascular strain, reduced immune response, headaches, gastrointestinal upset, decreased appetite, and vulnerability of illness), psychologically (cognitive and emotional effects such as shock, terror, irritability, anger, guilt, grief, helplessness, impaired concentration confusion, decreased self- esteem, and decreased self- efficacy) and socially the disruption of a social unit such as a family). Shin & Nan, (2009) in a study of parents in Vietnam, posited that the presence of a child with cognitive delay is a predictor of stress among parents. In fact, lack of economic resources strains the mothers in raising their children, and a father in ill health threatens the financial status of the family when the latter is the main source of income similarly, mothers with less education have been found to have fewer strategies in raising children with cognitive delay. The study placed a significant importance on the health of fathers as they are often considered the main source of income, while the Shin & Nan (2009) study recognized the presence of a child with cognitive delay as a major cause of stress, Phelps, Mc Common, Wrench & Golden (2009) emphasized the importance of family dynamics in handling stress due to having a child with developmental disabilities. Accordingly, families of children with developmental disabilities participate in less family interactions and recreational activities than families who do not have a member with developmental delay The same study also revealed that high level of stress was attributed to the relationship with the partner, as such feelings of fear, different responses to the stress of disability, and the lack of positive affirmations have



been linked to marital strain, and most importantly differences in parental tools used in coping with the situation may have been attributed to marital discord. The importance of family coping with the stress they experience in having a member with disability often relies on the parents. Hence, how the parents cope with the stressful situations will dictate how the child with disability will be provided services needed for his or her development.

### **Mental fatigue among parents and teachers of differently abled**

A study had conducted on “Marital adjustment, stress and depression among working and non-working married women” The purpose of the research is aimed at exploring the relationship between marital adjustment, stress and depression. Sample of the study consisted of 150 working and non-working married women (=75). Their age ranged between 18 to 50 years. Their education was at least graduation and above They belong to middle and high socio-economic status. Urdu translation of dyadic adjustment scale (1991) was used. Result indicated highly significant relationship between marital adjustment, depression and stress. The findings of the results also show that working married women have to face more problems in their married women. The results further show that highly educated working and non working married women can perform well in their married life and they are free from depression as compared to educated working and non working married women.

A study had conducted on “personality and occupational stress differentials of female school teachers in Haryana” The present study is an attempt to understand personality and occupational stress differentials of high school female school female teachers were tested with maslach burnout inventory. The subjects were categorized into high and low burnout groups on the basis of test scores and that 128 subjects scored below P30 and 117 subjects scored above p70 thus constituted low and high burnout groups, respectively. Selected subjects were further tested with EPQ-R, Jenkins activity survey and occupational stress index. The results differentiated the two groups. The high burnout group scored significantly high on psychotics, neuroticism, lie scale, type- A behavior, emotional exhaustion, depersonalization but low on extraversion, occupational stress and personal accomplishments. The low burnout group scored low on psychotics, neuroticism, lie scale, type- A behavior and all the tress dimensions of burnout viz. emotional exhaustion, depersonalization and reduced personal accomplishment, but high on extraversion and occupational stress.

“Mental fatigue impairs *physical performance in humans*” Mental fatigue is a psychobiological state caused by prolonged periods of demanding cognitive activity. Although the impact of mental fatigue on cognitive and skilled performance is well known, its effect on physical performance has not been thoroughly investigated. In this randomized crossover study, 16 subjects cycled to exhaustion at 80% of their peak power output after 90 min of a demanding cognitive task (mental fatigue) or 90 min of watching emotionally neutral documentaries(control). After experimental treatment, a mood questionnaire revealed a state of mental fatigue ( $P = 0.005$ ) that significantly reduced time to exhaustion (640  $\pm$  316 s) compared with the control condition (754  $\pm$  339 s) ( $P = 0.003$ ). This negative effect was not mediated by cardio respiratory and musculoenergetic factors as physiological responses to intense exercise remained largely unaffected. Self-reported success and

intrinsic motivation related to the physical task were also unaffected by prior cognitive activity. However, mentally fatigued subjects rated perception of effort during exercise to be significantly higher compared with the control condition ( $P = 0.007$ ). As ratings of perceived exertion increased similarly over time in both conditions ( $P = 0.001$ ), mentally fatigued subjects reached their maximal level of perceived exertion and disengaged from the physical task earlier than in the control condition. In this study provides experimental evidence that mental fatigue limits exercise tolerance in humans through higher perception of effort rather than cardio respiratory and musculoenergetic mechanisms.

A study had conducted on “Fatigue working under the influence” Fatigue is a significant cause of accidents, harm, and hazard in all industries such as transportation (road, aviation, and rail), mining, manufacturing, construction and healthcare. Fatigue is a mental or physical description of how people feel in their daily life when they are tired and depressed. This can be notice by observing or actions. When of the lack of the energy and motivation. Fatigue can cause forgetfulness, lots of remembrance or the ability to not think of something that will happen in a short or long term. Furthermore, fatigue can cost poor communication and lack of alertness. For example, a worker and a boss working on a project and they are not in the same page or underside tending each other. This can lead to confusion, contributing to larger disaster or loss to the company. Communication is very important and is a basic requirement for any daily activity and mostly universal and complex for all people in the world, but when people are feeling fatigue, it's hard to have a good communication. The examples of accidents due to fatigues are the Chernobyl nucleate meltdown (lack of action by shift workers), the Exxon Valdez oil spill (workers' fatigue due to excessive workload), and the waterfall train derailment in NSW (the train crew's inability to respond due to fatigue). This paper reviewer 1) factors that cause fatigue. And 2) signs and symptoms of fatigue and, in discussion, the paper attempts to communicate the impacts of fatigue at work as fatigue mimic alcohol intoxication.

“Physiological assessment of driving mental fatigue using wavelet packet energy and random forests” to measured multiple physiological parameters of mental fatigue induced by the simulated driving task. The subjects' mannerisms and driving performance reveal that the driving mental fatigue is induced after long- simulated driving. The wavelet packet et energy (WPE) of EEG were used to extract the features of brain activity in the normal and the mental fatigue states, then random forests (RF) was employed to select key features for differentiating the two states. The experimental results show that the WPE of EEG and the amplitude of P300 are strongly related with driving mental fatigue. The power spectral indices of heart rate variability (HRV) indicate that the sympathetic nervous system may Play a leading role and the parasympathetic nervous system is retrained at the end of driving task. Furthermore, RF method can select features effectively, reduce the dimensionality of the feature vectors significantly, and then achieve a recognition accuracy of 97%The WPE-RF method could be a potential way of assessment of driving mental fatigue.

“Impact of work rest period on mental fatigue in inspection task with microscope: case study of hard disk drive component manufacturing company” in this study inspection has declined as importance as statistical process control has assumed a more prominent role in the quality function. However, product quality inspection is still an important task

in the prohibition of hard disk drive component manufacturing, in this case Study Company, which produces hard disk drive component, inspection occurs at many points in a process. Inspectors perform 100% inspection using microscope for many hours without adequate break. After continually monitoring the performance of inspectors, it was found that certain nonconformities were more difficult to find, the number of nonconformities were more difficult to find, the number of nonconformities were more difficult to find, the number of nonconformities reported was unusual, and inspectors varied in their abilities turnover rate of the quality inspection division in this company is high, therefore, this research aims at determining the impact of working duration and resulting time on reducing the mental fatigue in inspection task with microscope in the hard disk drive component manufacturing. Five types of working condition and resulting time were studied and compared using randomized complete block design of experiment with two replicates. A variety of data collection tools used to assist in the data collection tools used included bipolar questionnaire, reaction time, and critical flicker frequency (CFF) The analysis of variance (ANOVA) was conducted. The results showed that, the work rest period type significantly affects the mental fatigue. However, the rest period type significantly does not affect the mental fatigue reduction as measured CFF. "Gender differences in stressors and reactions to stressors among Jordan university students". He reported that there were statistical differences between male and female students regarding their perception and reactions to stressors. Female students reported a higher perception of stressors in frustrations, conflicts pressures and changes as well as emotional reaction to stressors. Male reported higher behavioral and cognitive reactions to stressors than female students. Participation in stress workshops, perception of general health and perception of stress level in general were found to predict stressors among male students while mother's educational level perception of general health and perception of stress level in general were found to predict stressors among female students.

"Perceived stress, sources and severity of stress among medical undergraduates in a Pakistani medical school." The result revealed that a higher level of perceived stress was reported by students. The overall mean perceived stress was 30.84 and was significantly higher among female students. The most common sources of stress were related to academic and psychosocial concerns.

"The sources of stress among college going students in Taiwan" A questionnaire survey was conducted to collect research data, a total of 230 questionnaires were distributed, action 201 valid responses were obtained. Research findings suggested that male student feel stronger stress from family factor than female ones; students in higher grades feel more stress from physical/ mental, school and emotional factors students who take a student loan also feel more stress from physical/ mental, school, and emotional factors than those who do not.

"work stress experienced by the Teaching staff of university of the Punjab Pakistan: antecedents and consequences" The purpose of the study tends to examine the relationship between role conflict, role ambiguity and attitudinal outcomes of the job satisfaction and organizational commitment of teaching staff in the largest and most populated university of Pakistan university of Punjab. The data were collected from 160 teachers teaching in five different faculties of the university by using personally questionnaires. The findings of

the study suggest that there is a positive and significant relationship between role stress ex- role conflict and role ambiguity and work stress is negatively and significantly associated with job satisfaction and organizational commitment of the teaching staff of the university under examination. Future research is needed in terms of what strategies teachers may use to cope with the work-related stress in the university set up of Pakistan with a larger sample size and with examination of other causes and effects of works stress as well.

"Work stress experienced by the teaching staff of university of the Punjab, Pakistan: antecedents and consequences" work stress is one of the most widely researched areas in organizations worldwide. Work stress in any profession is likely to be experienced by the employs there and university teachers and is no expectations in this regard. The purpose of the study tends to examine the relationship between role conflict, role ambiguity and attitudinal outcomes of the job. Job satisfaction and organizational commitment of reaching staff in the largest and most populated university of Pakistan. University of the Punjab. The data was collected from 160 teachers teaching in five different faculties of the university by using personality administered questionnaires, the university has 5 campuses, 13 faculties, 63 departments, 9 colleges and over 620 permanent faculty members. To limit the scope of the study and due to the time constraints, they have selected faculty members by using multi- stage sampling technique which comes under the head of probability sampling technique. At the first stage of sampling, they have selected one campus (quad-e- Asam campus) out of five and this campus was mainly selected it has the main strength of departments, students, employees and teachers in it. In the second stage of sampling, they have selected 5 out of 13 faculties, the faculty of the commerce, faculty of the economics and management sciences, faculty of engineering and technology, faculty of law and faculty of science by using simple random sampling. In third and last stage of sampling, they have selected 200 faculty members on the basis of stratified sampling technique a total of 200 questionnaires were distributed among the selected faculty members and out of which 160 questionnaires (which constitute the sample of the study) were returned directly to the researchers having a response rate of 80% out of 160 members, there were 67 females The findings of the study suggests that there is a positive and significant relationship between role stress, role conflict and role ambiguity and work stress however work stress is negatively and significantly associated with job satisfaction and organizational commitment of the teaching staff of the university under examination.

"The determinants of teachers' well- being, the mediating role of mental fatigue". This study examines one process – namely the energetic process – which supposes that high job demands exhaust employees' mental and physical resources and therefore cause ill health. Particularly, this study examines the mediating role of mental fatigue between three job demands of teachers (workload, inequity and work/family conflict) and three consequences of stress: psychological and physical symptoms and work satisfaction. An Italian version of the self-report Questionnaire for Psychosocial Work Environment and Stress (PWSQ) was administered to 697 teachers belonging to a random sample of 17 school organizations. The results showed that mental fatigue has a mediating role in the relationship between work/family conflict and the three outcomes considered, namely psychological and physical symptoms, and work satisfaction. This study had an important

implication for intervention strategy because mental fatigue is a pre-strain condition which arises before more intense outcomes, such as stress-related diseases occur. Identification of this condition allows prevention of the consequences of stress.

“Mindfulness based stress reduction (MBSR) for parents and caregivers of individuals with developmental disabilities: A Community- based approach” stress among parents and other primary caregivers of children with developmental disabilities is pervasive and linked to lower quality of life, unhealthy family functioning, and negative psychological consequences. However, few programs address the needs of parents or caregivers of children with developmental disabilities. A mindfulness- based stress reduction (MBSR) program is a well-suited approach for these parents and caregivers, who may be overwhelmed by their children’s situation, anticipating future challenges and reliving past traumas. They aimed to develop, implement and evaluate the feasibility of an MBSR program designed for this population in a community-based participatory setting. Parents and caregivers were equal partners with researchers in curriculum development, recruitment, implementation and evaluation. Two concurrent classes, morning and evening, were conducted weekly in English with simultaneous Spanish translation over 8- weeks. Classes consisted of meditation practice, supported discussion of stressors affecting parents/ caregivers, and gentle stretching. of 76 participants recruited, 66 (87%) completed the program. All participants experienced a significant reduction (33%) in perceived stress ( $p < 0.001$ ) and teachers ( $n=59$ ) experienced a 22% reduction ( $p < 0.001$ ) in parental stress, parents/ caregivers also reported significantly increased mindfulness, self- compassion, and well- being ( $p < 0.05$ ). participants continued to report significant reduction in stress 2 months after the program. Our study suggests that a community- based MBSR program can be an effective intervention to reduce stress and improve psychological well-being for parents and caregivers of child of cultural or socioeconomic factors on the outcomes of the interventions and further expand MBSR programs to include community-based participatory settings.

### Rationale of the study

Mental fatigue is a common phenomenon in our daily life, and is defined as a state of cortical deactivation, which reduces mental performance and decreases alertness. The major symptom of mental fatigue is a general sensation of weariness, feelings of inhibition, and impaired activity. Mental fatigue is a main cause of some series operating errors. And disabled places a set of extra demands or challenges on the family system. Friends, neighbors, and peoples in the community may react negatively to the disability by avoidance, disappearing remarks or looks or overt effort to exclude people with disabilities and their families overall, stress from these added demands of disability in families overall, stress from these added demand of disability in family life can negatively affect the health and functioning of family members in addition to type of impairment, there is impairment, there is variability in the severity of important. The degree to which a person with disability is limited in doing activities or functions no daily living can be assessed and is called functional status. The lower the persons functional status, the more assistance. Providing this assistance providing this assistance can create a burden for family caregivers, who may result in physical or

psychological symptoms of health children with disabilities more into school environmental where they interact with teachers and peers, they may experience difficulties mastering task and developing social skills and competencies. Although school are mandated to provide special education programmers for children in the least restrictive environment and to maximize integration, there is still considerable variability in how effectively schools do this. Barriers include inadequate financing for special education, inadequately trained school personnel, and very often, attitudinal varies of other children and staff that compromise full inclusion for students with disabilities. Parents of children with disabilities may experience a whole set of added challenges in assuring their children’s educational right. In some instances, conflict with schools and other services provides can become a major source of strain for families.

**Objective:** To determine the differences in mental fatigue and their associated factors between teachers and parents of the differently abled.

**Hypothesis:** There will be no significant difference in mental fatigue and their associated factors between teachers and parents of the differently abled.

### Methodology

**The study sample:** The present research was carried out by following systematic procedures under the following sections.

#### Selection of respondents

**Stage 1:** Schools catering to differently abled children located at Lucknow were identified and listed. Two institutions were selected randomly using random sample technique

**Stage 2: Selection of parents:** Children belonging to various categories (VI, HI, OI, MI) of disability were identified and 10 children from each category were selected randomly. Addresses of their sample were collected and the parents (mother and father of the identified children were taken as sample

**Note:** The children who had both the parents only were selected for the study

**Selection of teachers:** Five teachers, teaching each category of students were selected randomly as sample  
A total of 40 mothers, 40 fathers and twenty teachers were selected to conduct the study

**Variables of the study:** Variables are characteristics or conditions that are manipulated controlled and observed by the researcher. The variables were selected according to the objectives of the study. The selected variables were categorized into two categories namely Independent variables and dependent variables. The present study was conducted to study the relationship between identified Independent and dependent variables.

**Tools and Techniques:** To carry out the present study following tools were used

**Mental fatigue scale:** To study the mental fatigue Scale developed by Rodham (2001) was used.

**Results and Discussion****Table 1:** No significant Difference exists in mental fatigue among mothers of various categories of differently abled children

S. No.	Statement	Orthopedic impairment	Hearing impairment	Visual impairment	Cognitive impairment	“f”	“p”
1)	Fatigue	1.50±.548	1.88±.568	1.60±.699	1.60±.699	1.985	.134
2)	Lack of initiative	1.50±.548	1.49±.669	1.49±.669	1.60±.699	.059	.981
3)	Mental fatigue	1.50±.049	1.51±.697	1.51±.697	1.49±.669	.765	.521
4)	Mental recovery	1.17±.753	1.59±.798	1.59±.798	1.51±.697	4.482	.009
5)	Concentration difficulties	2.00±.894	1.74±.655	1.74±.655	1.59±.798	1.561	.216
6)	Memory problems	1.33±.516	1.49±.775	1.49±.775	1.74±.655	1.41	.255.
7)	Slowness of thinking	2.17±.753	1.91±.838	1.91±.838	1.49±.775	1.832	.159
8)	Sensitivity to stress	2.00±.89	1.75±.757	1.75±.757	1.91±.838	.251	.200
9)	Increased tendency to become emotional	2.00±.632	1.74±.858	1.74±.858	1.75±.757	.108	.600
10)	Irritability or “a short fuse”	2.00±.632	2.00±.920	2.00±.920	1.74±.858	.297	.860
11)	Sensitivity to light	2.19±.921	2.06±.795	2.06±.795	2.00±.920	.519	.370
12)	Sensitivity to noise	1.67±.516	2.38±3.93	2.38±3.93	2.06±.795	.497	.841
13)	Decreased sleep at night	1.83±.983	2.00±.832	2.00±.832	2.38±3.93	.196	.214

**Table 2:** No significant Difference exists in mental fatigue among fathers of various categories of differently abled children

S. No.	Statement	Orthopedic impairment	Hearing impairment	Visual impairment	Cognitive impairment	“f”	“p”
1)	Fatigue	1.50±.548	1.88±.568	1.60±.699	1.60±.699	1.985	.134
2)	Lack of initiative	1.50±.548	1.49±.669	1.49±.669	1.60±.699	.059	.981
3)	Mental fatigue	1.50±.049	1.51±.697	1.51±.697	1.49±.669	.765	.521
4)	Mental recovery	1.17±.753	1.59±.798	1.59±.798	1.51±.697	4.482	.009
5)	Concentration difficulties	2.00±.894	1.74±.655	1.74±.655	1.59±.798	1.561	.216
6)	Memory problems	1.33±.516	1.49±.775	1.49±.775	1.74±.655	1.41	.255.
7)	Slowness of thinking	2.17±.753	1.91±.838	1.91±.838	1.49±.775	1.832	.159
8)	Sensitivity to stress	2.00±.89	1.75±.757	1.75±.757	1.91±.838	.251	.200
9)	Increased tendency to become emotional	2.00±.632	1.74±.858	1.74±.858	1.75±.757	.108	.600
10)	Irritability or “a short fuse”	2.00±.632	2.00±.920	2.00±.920	1.74±.858	.297	.860
11)	Sensitivity to light	2.19±.921	2.06±.795	2.06±.795	2.00±.920	.519	.370
12)	Sensitivity to noise	1.67±.516	2.38±3.93	2.38±3.93	2.06±.795	.497	.841
13)	Decreased sleep at night	1.83±.983	2.00±.832	2.00±.832	2.38±3.93	.196	.214

**Table 3:** No significant Difference exists in mental fatigue among Teachers of various categories of differently abled children

S. No.	Statement	Orthopedic impairment	Hearing impairment	Visual impairment	Cognitive impairment	“f”	“p”
1)	Fatigue	1.50±.548	1.88±.568	1.60±.699	1.60±.699	1.985	.134
2)	Lack of initiative	1.50±.548	1.49±.669	1.49±.669	1.60±.699	.059	.981
3)	Mental fatigue	1.50±.049	1.51±.697	1.51±.697	1.49±.669	.765	.521
4)	Mental recovery	1.17±.753	1.59±.798	1.59±.798	1.51±.697	4.482	.009
5)	Concentration difficulties	2.00±.894	1.74±.655	1.74±.655	1.59±.798	1.561	.216
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7)	Slowness of thinking	2.17±.753	1.91±.838	1.91±.838	1.49±.775	1.832	.159
8)	Sensitivity to stress	2.00±.89	1.75±.757	1.75±.757	1.91±.838	.251	.200
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10)	Irritability or “a short fuse”	2.00±.632	2.00±.920	2.00±.920	1.74±.858	.297	.860
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12)	Sensitivity to noise	1.67±.516	2.38±3.93	2.38±3.93	2.06±.795	.497	.841
13)	Decreased sleep at night	1.83±.983	2.00±.832	2.00±.832	2.38±3.93	.196	.214

**Table 4:** No significant Difference exists in mental fatigue among Teachers of various categories of differently abled children

S. No.	Statement	Orthopedic impairment	Hearing impairment	Visual impairment	Cognitive impairment	“f”	“p”
1)	Fatigue	1.50±.548	1.88±.568	1.60±.699	1.60±.699	1.985	.134
2)	Lack of initiative	1.50±.548	1.49±.669	1.49±.669	1.60±.699	.059	.981
3)	Mental fatigue	1.50±.049	1.51±.697	1.51±.697	1.49±.669	.765	.521
4)	Mental recovery	1.17±.753	1.59±.798	1.59±.798	1.51±.697	4.482	.009
5)	Concentration difficulties	2.00±.894	1.74±.655	1.74±.655	1.59±.798	1.561	.216
6)	Memory problems	1.33±.516	1.49±.775	1.49±.775	1.74±.655	1.41	.255.
7)	Slowness of thinking	2.17±.753	1.91±.838	1.91±.838	1.49±.775	1.832	.159
8)	Sensitivity to stress	2.00±.89	1.75±.757	1.75±.757	1.91±.838	.251	.200
9)	Increased tendency to become emotional	2.00±.632	1.74±.858	1.74±.858	1.75±.757	.108	.600
10)	Irritability or “a short fuse”	2.00±.632	2.00±.920	2.00±.920	1.74±.858	.297	.860
11)	Sensitivity to light	2.19±.921	2.06±.795	2.06±.795	2.00±.920	.519	.370
12)	Sensitivity to noise	1.67±.516	2.38±3.93	2.38±3.93	2.06±.795	.497	.841
13)	Decreased sleep at night	1.83±.983	2.00±.832	2.00±.832	2.38±3.93	.196	.214



## Summary and Conclusion

The present study was conducted to mental fatigue and coping strategies among teachers and parents of differently baled children mental fatigue is a temporary inability to maintain optimal cognitive performance. The onset of mental fatigue during any cognitive activity is gradual, and depends upon an individual's cognitive ability, and also upon other factors, such as sleep deprivation and overall health. Mental fatigue has also been shown to decrease physical performance. It can manifest as somnolence, lethargy, or directed attention fatigue. Decreased attention is known as ego depletion and occurs when the limited 'self-regulatory capacity' is depleted. It may also be described as a more or less decreased level of consciousness. In any case, this can be dangerous when performing tasks that require constant concentration, such as operating large vehicles. For instance, a person who is sufficiently somnolent may experience micro sleep. However, objective cognitive testing can be used to differentiate the neuro cognitive deficits of brain disease from those attributable to tiredness.

Teachers play a vital role in the life of students. A great deal is known about what students need from teachers and how big a difference high quality teaching makes to student learning, achievement, development, and success in school Teaching is a stressful profession, and those stressors may eventually erode teachers' enthusiasm and engagement in teaching, undermining their capacity to meet students' needs and eventually leading to burnout. In order to help students, reach their full potential, it is imperative to understand how teachers become more effective at dealing with the everyday demands and challenges associated with the teaching profession over time, not only to protect teachers from burnout, but also as a way to promote their engagement, learning, and mastery.

Mental fatigue is a complex multi-faceted state difficult to define but which is a common phenomenon in daily life, for example as a syndrome due to a hard day's work, which involves several changes in mood, information processing, behavior and psychological- physiological state

Fatigue is associated with impairments comparable to chronic medical conditions, and may affect the individual performance and functioning in the occupational as well as home setting Mental fatigue is defined and operationalised in various ways for example in terms of increased sleepiness, reduced alertness, reduction in motivation, reduction in activity, and reduction in concentration

According to the theoretical background of the effort-recovery (ER) model stress is the change in the psycho-physiological control mechanism that regulates task behavior resulting from proceeding mental and / or physical efforts which have become burdensome to such an extent that the individual is not able to adequately meet the demands the job requires; or the individual is able to meet this demands only at the cost of increasing mental effort and mental resistance. This definition principally implies that figure in itself is not an adverse effect but rather a physiological adaptation or safety mechanism of the individual confronted with the risk of overstrain or exaction.

Coping strategies are defined as the person's constantly changing cognitive & behavioral efforts to manage specific external or internal demands that are appraised as taxing or exceeding the person's resources. Coping strategies refer to the specific efforts, both behavioral and psychological, that people employ to master, reduce tolerate or minimize stressful events. Stress is not only happens at workplace but students are subjected to different kind of stressors such as the

presence of the academic performance.

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