I. INTRODUCTION

Depression, Anxiety and Stress (DAS) are considered to be the crucial indicators of mental health in the general and adolescent sect of the population in particular (Tee et al., 2021). As per the survey conducted by the National Mental Health Survey of India (2015-2016), the occurrence of overall mental disorders among the 10 to 19 years age group is 7.3%, however, an orderly appraisal indicated that the prevalence of mental disorders among adolescents ranged from 0.48% to 29.40%. On average, when we look into the survey it was seen that every one out of every six children was affected by a mental health condition (Kumar et al., 2017).

Globally, one in six people is aged 10 to 19 years and the Global Health Data Exchange (GHDx) (2022) cautioned that the world witnesses one in every seven (14%) of the 10 to 19 years experience mental health conditions, with the anxiety and depressive disorders as the most common ones. World Health Organization (WHO) in its 2021 report stated that more than 13% of adolescents aged 10 to 19 live with a diagnosed mental disorder with 40% of the disorders being anxiety and depression. United Nations International Children's Emergency Fund (UNICEF) (2021) has also declared that every year almost 46,000 children between the ages of 10 and 19 end their own lives.

Murray and Lopez (2002) as cited by Abdelwahed and Hassan (2017) have reiterated that mental health disorders are one of the leading causes of disability worldwide. The study by Lancet Psychiatry (2020) based on the Global Burden of Disease report (1990-2017), revealed that approximately 200 million Indians suffer from negative mental health state, thereby accounting for 4.7% to be total Disability-Adjusted Life Years (DALYs). On an overall note, Gururaj et al. (2016) have said that the growing attention on negative mental states was not surprising, given the rising burden of disability, disease and deaths due to suicide.

Adolescence is often regarded as a period of great possibilities and opportunities which is characterised by rapid physical, cognitive and psycho-social development. Adolescents at this stage are often seen as being snooping, creative and engaged (Kleinert and Horton, 2016). The reason for such a characterisation is the rapid physical, psychological, and sexual changes. Studies have shown that in entire life, adolescence is the period where an individual needs to develop and establish social and emotional habits

(WHO, 2018). It is also said to be the vulnerable period of being exposed to life transitions, overboard expectations, oversensitivity, and unusual behavioural indicators related to abstract thinking and the need for autonomy.

Maraichelvi (2015) has quoted the study of the Adolescent Self-Regulatory Inventory (ASRI, 2002) in revealing that the adolescent years are among the most stressful times in a person's life. The principle of 'no longer a child, not yet an adult' portrays the transitional personality of adolescent life. It is a period where the adolescent has already shattered with the joyful age of childhood but has not yet found himself/herself in adult life. The adolescents show psychological manifestations that have justified the stage to be called an age of crisis and transition.

Studies have indicated that nearly half of all lifetime cases of mental disorders emerge even before 14 years (Kessler et al., 2005). A significant proportion of early adolescents are affected by mental health conditions, and the studies carried out by Dray et al. (2017) and Hale et al. (2014) confirmed the prevalence of increased anxiety, self-injury and depression among these young people. Manifestation of mental health issues during the early adolescent developmental window marks a hefty price to be paid by young adolescents in terms of shoddier educational and occupational outcomes, relationship complications, and recurring negative emotional states (Costello and Maughan, 2015; Sadler et al., 2018). Sellers et al. (2019) with a thorough analysis of the literature, have also evidently portrayed the worse outcomes among this sect of cohorts, even before the COVID-19 pandemic.

Almost 20% of adolescents had a diagnosable mental health concern. Furthermore, many mental health disorders are first present during early adolescence (Kessler et al., 2005). About 20% to 30% of adolescents had one depressive episode before they reached adulthood. One-fourth of people with depressive episodes first got it during early adolescence. About 50% to 75% of adolescents with anxiety disorders and impulse control disorders develop these during early adolescence (Rushton et al., 2002).

Existing mental disorders become more complex and intense with a child's transition to adolescence (Patel et al., 2007). Untreated mental issues among early adolescents might lead to poor school achievement, strained family relationships, school dropout, substance abuse, and engaging in sexually risky behaviours (Kapphahn et al., 2006). The mental disorders among adolescents are transient and

frequently go unobserved. It is worth noting that adolescents might show these problems in a particular setting and not in another (e.g., home, group of friends, and school). Therefore, behaviours associated with mental disorders were often misinterpreted. Criticism, social exclusion and punishments were the consequences that these young people faced as a result of their inappropriate behaviours, which in turn lowered their self-esteem. Misguided understandings of negative emotional states lead to the deprivation of support needed by adolescents (Kumar et al., 2019)

World Health Organization (2017 and 2018) provides a confirmatory articulation that the physical, emotional, and behavioural changes during the early adolescent period predispose them to numerous mental health issues. Similarly, Caskey et al. (2014) cited the study of Erikson (1968) in mentioning that early adolescent's psycho-social development is branded by the search for autonomy and formation of identity. The identity formation of early adolescents is in two stages: firstly, it is the 'industry versus inferiority' crisis, wherein the 10 to 11-year-olds identify themselves by the tasks and skills they perform well, and secondly, the 'identity versus role confusion' crisis happens, wherein the 12 to 15-year-olds explore and experiment various roles and experiences.

The period of early adolescence, typically, is said to be intense and unpredictable, as they tend to be moody, and restless, and may show inconsistent behaviour including fluctuations, anxiety and audacity between 'superiority' and 'inferiority' (Kellough and Kellough, 2008). They become self-conscious and extremely sensitive to criticism of their inadequacies (Scales, 2010). The increased competition among oneself to perform better than their counterparts in all aspects of life further adds to the risks. Students with mental issues were seen to exhibit signs of phobia, depression, school refusals, augmented irritability and grievances, anxiety, and diminished interest in school-related tasks (Reddy et al., 2017).

The age-related characteristics along with the predisposing factors mentioned above, these young adolescents face numerous psychological problems (Sankar et al., 2017) and need the utmost parental care, guidance, and empathy. Only with effective caregiving, they can be guaranteed to develop as healthy and productive adults contributing to societal development. Keeping the above facts in mind, Zaky (2017) deemed an all-encompassing efficient adolescent health care entailing orderly measures to prevent, detect and treat any mental disorder in them at an earlier stage.

Duggal and Bagasrawala (2019) in their studies have also identified that DAS are the foremost cause of illness as well as disability among young adolescents at present. Spanning the age group of early adolescence, the period of secondary school stage covering the 8^{th} class to 10^{th} class of study based on the Indian Educational system gains significance. Students at this age were put under high pressure to perform well in examinations which were taken as the marker of academic status; and hence a qualification to make their way into further studies or profession.

Students typically experience the weight of a huge syllabus, high levels of competitive situations, and their failure to manage the high expectations of parents. This prompts stress within them which harms their mental well-being and leads to many unwanted reactions such as sleep deprivation, reduced concentration, reduced self-esteem, lack of confidence, an increase in anxiety, manifestations of depressive symptoms, an increase in interpersonal conflict, susceptibility to substance abuse, thoughts on suicidal attempts, etc. (Eller et al., 2006) and the incidence has been slowly and consistently increasing (Ibrahim et al., 2013). All the more the literature, suggesting the context of under-reporting also reveals that the detection rates of stress, anxiety and depression are high and increasing among children and young people (Collishaw, 2015).

On the whole, with this high percentage of the adolescent population, and their sufferings due to physical, psychological, and environmental changes, and the realisation that mental health disorders set in as early as 14 years, how are we going to strengthen the mental health of early adolescents?

Early detection and age-appropriate measures with suitable intervention strategies become the prime solution to promote and maintain better emotional and psychosocial well-being striking a balance with the environmental exposures and expectations that these students face. Shastri (2009), a decade ago emphasised early intervention and prevention as key elements for minimizing the impact of any potentially serious mental health condition. He also cited the recommendation of the WHO on early identification and intervention while examining the extent of the gap between the prevalence and treatment of mental health issues.

World Health Organisation (2022) has mentioned the significance of identifying mental health problems early and intervening at the right time and also indicated that an appropriate intervention will prevent further breakdown and avoid an adult treatment and

rehabilitation programme. Based on such articulations, it is well understood that there is a pressing need to develop intervention models to improve adolescent mental health.

Now the next question arises: i) Where should we implement the intervention models for this sect of young adolescents? Which setting will bring out the best outcome of better mental health?

It is a familiar fact that right after home environment a child spends most of the time in school. As such, school plays a significant part in a child's advancement, from peer relationships, emotional and behavioural expectations, and social interactions to academic achievement and cognitive attainment. Each of these developmental areas has a reciprocal relationship with each other and thereby has a direct association with the mental health of a person.

Moreover, Osher et al. (2012) have stated that the school environment can play a critical role in encouraging the promotion of protective factors for mental health issues among students. Recent policies have also focused on intervention strategies to combat mental disorders in children and young people, with schools at the forefront of implementation (Caldwell et al., 2019). With this context, the researcher perceived schools as ideal settings to implement intervention strategies to foster mental health. All the more school setting is where more student populations of different backgrounds can be captured.

Various researchers have confirmed that evidence-based treatments can be provided in school settings, where group models are effective with an increased rate of engagement and participation. Jones and Bouffard (2012) mentioned in their studies that schools are seen as the crucial ecosystem for the promotion of a child's mental health, as they have a structured setting with prevailing school curricula, regulation protocols, policies, resources, etc. The school-based intervention programmes also have the advantage of reaching out to a large number of children from various family backgrounds. Furthermore, the school context represents a natural and interactive set of environments comprising both direct (e.g. family, peers, class, school) and more distal (e.g. cultural, political) settings.

Paulus et al. (2016) have stated that school-based interventions are deep-rooted and are proven to be effective treatments for enhancing the mental health of children. Weare and Nind (2011) also stated that school-based interventions are most effective if they are

absolutely and precisely implemented. The characteristics of effective school-based interventions as listed by Weare and Nind (2011) are:

- focussed strategies on positive mental health
- mix of universal as well as targeted approaches when delivered
- starting as early as possible
- interventions implanted within the whole school's structure and in the long run, encompassing changes in the curriculum as well as the teaching-learning process. On the whole, interventions need to be linked with academic learning and
- Community involvement as well as coordinated work with outside agencies.

The study by Durlak et al. (2011), has stated the academic benefits of mental health promotion in schools. Suldo et al. (2014) also expressed their credence that the interventions conducted in school settings enhance the development of social interactions as well as socio-emotional competencies, and learning outcomes while at the same time reducing disturbing behaviour. Overcoming barriers such as area, time, and stigma is found to be nullified in a school setting as it provides access to every child in the school (Stephan et al., 2007). There is an emerging evidence-base supporting mental health interventions in schools, focused on several conditions and encompassing mental health well-being, prevention, early intervention, and treatment. These include:

- Cognitive Behavioural Therapy (CBT) for anxiety (Stallard et al., 2013)
- Counselling services for mild depression (Cooper, 2013)
- Stress Inoculation Training (SIT) to combat stress (Maraichelvi, 2016)
- Skills development for social and emotional literacy, such as the Promoting Alternative Thinking Strategies (PATHS) programme aimed at primary-age children and the Incredible Years programmes for children under 12 (Evidence for Impact, 2017) and
- Life Skills Training, an educational programme aimed at preventing substance misuse and violence (Evidence for Impact, 2017).

Loon et al. (2020) confirmed that school-based mental health promotion intervention could reach a larger number of people when compared to primary-care settings. Altogether, schools provide an ideal setting to address mental health issues

in two ways, firstly to determine the prevalence and identify the students at risk of negative emotional states, and secondly, to implement preventive strategies to foster mental health.

In total, early adolescents, a period detrimental to mental health need to be provided appropriate preventive intervention within the school-based settings to foster a positive emotional state in them. Now, the third question ascends; what type of intervention will serve the purpose?

Prevention of academic, socio-emotional, and behavioural problems in schools is seen as achievable through the implementation of evidence-based practices in which resources are allocated based on the needs of the child (Walker and Shinn, 2002). Lamontagne et al. (2007), in general, have organized the prevention into three categories namely primary, secondary, and tertiary. Primary prevention is defined as the action taken before the onset of disease before it ever occurs. This is done by preventing exposures or altering unsafe behaviours that can lead to disease and increasing disease resistance; Secondary prevention is defined as 'action' which halts to reduce the progressing of a disease that has already occurred. It is done by detecting and treating disease as soon as possible to slow its progress, encouraging personal strategies to prevent recurrence, and implementing programmes to return people to their original health and function to prevent long-term problems. Tertiary prevention is used when the impact of an ongoing illness has advanced beyond its early stage and has lasting effects on health.

Mass (2016) in his study cited the Dutch National Institute for Public Health and the Environment Report (2010) where the prevention strategies are classified into three types i.e., Primary prevention includes general strategies preventing healthy people from any health issue/illness/disorder; Secondary prevention includes abnormalities that are diagnosed in its primitive stages. Secondary prevention applies to people who have an increased risk/genetic predisposition towards an abnormality with the assumption that an early deduction provides a better chance of recovery from the abnormality; Tertiary prevention includes a targeted group, (including patients) with the focus on preventing complications of the abnormality and to promote the overall well-being of the individual. Also promoting the empowerment of individuals is included.

However, health-related interventions are broadly classified into two categories, firstly, preventive intervention and secondly, therapeutic intervention. Preventive interventions are those that prevent disease from occurring and thus reduce the incidence (new cases) of disease, and Therapeutic interventions are those that treat, mitigate, or postpone the effects of a disease, once it is underway, and thus reduce the case fatality rate or reduce the disability or morbidity associated with a disease (Smith et al., 2015).

Hence, the literature iterates that the intervention models on both physical and mental health aiming to decrease risk factors and increase protective factors to alleviate a disorder is based on the first type of intervention, referred to as primary intervention with prevention as its focus. The early adolescents either on the verge of onset or in the beginning stage of exposure need to be intervened with the primary model emphasising prevention.

Moreover, studies conducted in school settings revealed that a three-tiered approach model is followed to prevent students from developing psychiatric problems. The three components of the model are: 'Universal', 'Selective' and 'Indicated' interventions. Universal interventions target the whole school or classroom; Selective interventions target population subgroups who are at threat of developing a mental disorder significantly higher than average and Indicated interventions target young people already exhibiting clinical symptoms (Riglin et al., 2013). Studies also showed that evidence-based treatments can be delivered in school settings, and group models tend to be effective with high engagement and participation rates (McMillan and Jarvis, 2013).

As a whole, the collated literature confirms that early adolescence is at the realm of the onset of negative emotional states, and its consequences have immediate effects on behaviour and loss of productivity in the long run. Altogether, prevention and early detection become crucial elements for minimizing the effect of any potentially serious health or behavioural issues. Considering the theoretical facts about the types of prevention available, the researcher views that primary intervention focussing on prevention of the onset and prevalence of signs and symptoms experienced due to negative emotional states is beneficial.

Moreover, within the three components of a primary preventive intervention as discussed above, the researcher viewed focusing on the 'Universal intervention' as the intervention is to be carried out within a classroom setting. So, to summarize, early

adolescents in the preparatory stage of facing board exams (8th and 9th classes) are to be identified for the presence of negative emotional states in terms of Depression, Anxiety and Stress (DAS), if yes, preventive intervention to combat DAS in them are to be formulated and implemented within the study context. The intervention will not be a clinical trial as the main focus of the researcher is to master the children overcoming the negative emotional state by building a repertoire of skills to combat DAS at an early stage which will help them to achieve a positive life in the future.

As such wide range of preventive interventions with a universal intervention model has been tried in school settings. This model is found to be efficacious among children of various age groups as well as with several therapeutic models like CBT and stress-relieving exercises. Other innovative programme features, such as Anti-bullying programme, Peer support, Social skills development, Emotional skills development (wellatschool.org), Interpersonal Psychotherapy (IPT), Mindfulness-Based Cognitive Therapy (MBCT), Wellbeing Therapy (WBT), Psycho-educational approaches, Movement and physical education (Olive et al., 2019), Student-family-school triads (Singh et al., 2019), Hatha yoga sessions (Quach et al., 2016), Promoting alternative thinking strategies (Sawyer et al., 2010) and stress management programmes such as Meichenbaum's (1985, 1993) model of Stress Inoculation Training (SIT) (Yahav and Cohen, 2008; Maraichelvi, 2016) are also tested in the school setting.

As the present study focuses on early adolescents who are already into the period of onset of mental issues, added up with the environmental exposures and developmental concerns, the researcher had a prime objective of formulating a preventive intervention to combat the three major negative emotional states – DAS as these three are the prime mental issues leading to the other and is strongly interrelated with each other (Gasman et al., 2008; Brown, 2000; Byrne et al., 2007 and Bouma et al., 2008).

This objective further brings in the necessity of formulating a conceptual model of preventive intervention to combat DAS based on the theoretical constructs. DAS are psychological responses that an individual experiences as a result of their coping strategies (Gasman et al., 2008). The literature suggests various risk factors are associated with the development of DAS (Eisenbarth et al., 2013). High levels of perceived stress increase the risk for an individual to develop anxiety and depression (Brown, 2000). The research conducted by Izadinia et al. (2010), showed that DAS correlate positively and significantly

with thoughts of suicide. In addition, Lew et al. (2019) indicated that DAS are the major risk factors for suicidal behaviour. Grant et al. (2004) also found a bidirectional relationship between exposures to DAS among adolescents. Thus, stressful experiences predicted depression and anxiety; depression and anxiety in turn predicted increases in stressful experiences. Adolescent stress has been linked to negative mental health outcomes such as anxiety (Byrne et al., 2007) and depression (Bouma et al., 2008). The relationship between DAS is much elucidated in the existing literature on cognitive models which emphasize negative or maladaptive belief systems (Hankin and Abela, 2005).

Hence the primary intervention to be formulated by the present study has to conceptualize cognitive models inoculating triggers and thereby learning to resist the present and future triggers with a repertoire of coping skills. Accordingly, with a detailed exploration of the existing mental health care models, the investigator finds it imperative to redesign and merge the two major interventions namely Cognitive Behaviour Therapy (CBT) and Stress Inoculation Training (SIT).

Cognitive Behavioural therapy (CBT) is always one of the identified suitable treatment methods for individuals with anxiety and depression. According to Serfaty et al. (2009), CBT is an operative treatment for depressive disorder among all ages and is related to incessant improvement over time; it is one of the most systematically researched psychosocial management for depression and anxiety. Miller et al. (2012) also stated that several methodical reviews of CBT-based interventions in the school setting have been done, with the main focus on the prevention of anxiety disorders and depression. CBT has proved its effectiveness in alleviating anxiety and depression through the psychotherapy technique, wherein the individual can recognise and change the incorrect and/or negative thoughts that have been influencing their behaviour.

Stress Inoculation Training (SIT) is a set of Cognitive Behavioural Techniques developed as a treatment by Donald Meichenbaum to help a person cope with the magnitude of facing stressful events. SIT works on a preventative basis in terms of inoculating the person to present and future stressors. The uniqueness of SIT is that it is ready to be tailored to the patron’s needs. The SIT was pilot-tested among 588 middle school students as per the local needs by Maraichelvi (2016) and the intervention is named School Stress Inoculation Training (SSIT) and was found to be effective in reducing the stress levels of the experimental group of students. As the term inoculation implies, SIT is

designed to impart skills to enhance stress resistance. Moreover, though SIT has found a domineering place in clinical settings to reduce stress, it has been customised for the normal population by preparing an individual to quickly defend against stress triggers by exposing them to a milder form of stress (just like vaccination).

Put together, adolescence is a transitional period and they are overloaded with multiple things. Hence, the prevalence of mental disorders is common among them. With the realisation of the facts namely, as age increases, the prevalence of DAS is also found to be increasing; the prevalence of DAS is said to have an onset during the early adolescent period and peaks during emerging adulthood with the signs and symptoms getting intensified with age, an individual has to be intervened in earlier years of life, to guarantee the raising of adolescents to be healthy and productive adults. The relationship between the development of DAS among adolescents is also a promising area of inquiry. Hence, identification of the best preventive measure to combat DAS among school-going adolescents at the initial stage has become essential.

Accordingly, a preventive intervention model (merging CBT and SIT) is to be formulated to combat DAS. The outcome of the intervention is to build a repertoire of coping skills that can improve their adaptability to physical, mental, and psycho-social changes as it is directly linked with their overall well-being.

OBJECTIVES

With the rationale specified above, certain primary and secondary objectives of the study are framed as mentioned below:

Primary Objective

- To formulate, and analyse the effectiveness of a suitable preventive intervention to alleviate Depression, Anxiety and Stress (DAS) in school-going adolescents

Secondary Objectives

- Explore the level of Depression, Anxiety and Stress (DAS) and its interrelationship among the selected school-going adolescents
- Assess the influence of socio-demographic factors on Depression, Anxiety and Stress (DAS) of the selected school-going adolescents

- Identify the potential determinants triggering Depression, Anxiety and Stress (DAS) among the selected school-going adolescents
- Identify and customize a suitable preventive intervention to alleviate Depression, Anxiety and Stress (DAS) among school-going adolescents and
- Analyze the effectiveness and the sustainability of the formulated preventive intervention.

Based on the objectives framed, certain null hypotheses are formulated as given below:

- H_o 1- There is no relationship between Depression, Anxiety and Stress (DAS)
- H_o 2 - There is no difference in the levels of Depression, Anxiety and Stress (DAS) based on gender
- H_o 3- There is no difference in the levels of Depression, Anxiety and Stress (DAS) based on class of study
- H_o 4 - There is no difference in the levels of Depression, Anxiety and Stress (DAS) based on Area of Residence
- H_o 5 - There is no difference in the levels of Depression, Anxiety and Stress (DAS) based on Family type
- H_o 6 - There is no difference in the levels of Depression, Anxiety and Stress (DAS) based on the education status of the father
- H_o 7 - There is no difference in the levels of Depression, Anxiety and Stress (DAS) based on the education status of the mother
- H_o 8 - There is no relationship between Depression and its potential determinants
- H_o 9 - There is no relationship between Anxiety and its potential determinants
- H_o 10 - There is no relationship between Stress and its potential determinants
- H_o 11 - The formulated preventive intervention shows no difference in the levels of Depression, Anxiety and Stress (DAS) among the experimental group of respondents based on gender and
- H_o 12 - The formulated preventive intervention does not decrease the level of Depression, Anxiety and Stress (DAS) among the experimental group of participants.