DISSERTATION ON

"A STUDY TO SCREEN FOR VARIOUS TYPES OF ANXIETY DISORDERS IN HIGHER SECONDARY SCHOOL STUDENTS IN RURAL AREAS USING SCARED SCALE"

Submitted to

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MEDICAL COLLEGE,

SALEM

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DECLARATION BY THE CANDIDATE

I solemnly declare that this dissertation **"A STUDY TO SCREEN FOR VARIOUS TYPES OF ANXIETY DISORDERS IN HIGHER SECONDARY SCHOOL STUDENTS IN RURAL AREAS USING SCARED SCALE"** was prepared by me at Government Mohan Kumaramangalam Medical College and Hospital, Salem under the guidance and supervision of **DR. P. SAMPATH KUMAR, M.D., D.C.H.,** Professor and HOD of Paediatrics, Govt. Mohan Kumaramangalam Medical College and Hospital, Salem. This dissertation is submitted to the Tamilnadu Dr.M.G.R Medical University, Chennai- 32 in fulfillment of the University regulations for the award of the degree of M.D.Paediatrics (Branch VII).

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LIST OF ABBREVATIONS USED

1.	SCARED	-	Screen for Child Anxiety Related Disorders
2.	GAD	-	Generalized Anxiety Disorder
3.	SAD	-	Separation Anxiety Disorder
4.	GABA	-	Gamma aminobutyric acid
5.	CNS	-	Central Nervous System
6.	DSM – V	–	The Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition
7.	SSRI	–	Selective Serotonin Reuptake Inhibitor
8.	WHO	–	World Health Organization
9.	FDA	–	Food and Drug Administration
10.	MRI	–	Magnetic Resonance Imaging
11.	SPECT	–	Single Photon Emission Computerized Tomography
12.	EEG	–	Electroencephalography
13.	SNRI	–	Serotonin – norepinephrine reuptake inhibitor
14.	RCMAS	–	Revised Children Manifest Anxiety Scale
15.	SCAS	–	Spence Children Anxiety Scale
16.	CBC	–	Child Behaviour Checklist

17.	K–SADS– PL	–	Schedule for Affective Disorder and Schizophrenia for School Age Children- Present and Lifetime Version
18.	SCARED – C	–	Screen for Child Anxiety Related Disorder – Child Version
19.	SCARED – P	–	Screen for Child Anxiety Related Disorder – Parent Version
20.	CBT	–	Cognitive Behaviour Therapy

ABSTRACT

BACKGROUND

One of the most prevalent psychiatric problems among children and adolescence is the anxiety disorder. Adolescence is the peculiar period which exist between a dependent child and an independent adult. In developed countries 5 – 18 % of the total population is comprised by adolescence. In India proportion is even more higher comprising 22.8%. though many adolescences are affected, anxiety disorders are under diagnosed. This is because the early symptoms and signs are ignored by parents, adolescence and the practitioners. These traits can persist through adulthood and may become chronic and serious illness. Those who develop the symptoms early less than 13 years of age may have chronic and permanent course. Though symptoms may appear subtle, it leads to chronic and serious illness. The critical period of anxiety disorder causes academic under achievement in an individual and emotional stress among family members.

AIM OF THE STUDY:

To screen for various types of Anxiety Disorders in Higher Secondary school students in rural areas using SCARED scale

SPECIFIC OBJECTIVES:

- To screen for generalized anxiety disorder in higher secondary school students using SCARED scale

- To screen for panic disorder or significant somatic symptoms in higher secondary school students using SCARED scale
- To screen for social anxiety disorder in higher secondary school students using SCARED scale
- To screen for significant school avoidance in higher secondary school students using SCARED scale
- To screen for separation anxiety disorder in higher secondary school students using SCARED scale

MATERIALS AND METHODS:

This is a descriptive study, done at Government Mohan Kumaramangalam Medical College and Hospital, Department of Paediatrics. Study was done in schools attached to Adolescent Health Programme to the department. Ethical committee approved this study for research studies of Government Mohan Kumaramangalam Medical College and Hospital.

RESULTS

The tool used in this study is SCARED scale, which is used to screen for child anxiety related disorder

It consists of two versions

1. Child version
2. Parent version

Both version consist of 41 similar questions. Children have to answer the question which explain a situation they are facing in the last three months. Each question has three answers like never, somewhat true and true always. Each answer has a score and the individual score are added to diagnose the presence of anxiety. Specific anxiety disorder is diagnosed by adding the score of specific questions.

Out of 41 questions if the child has scored more than or equal to 25 it indicated the presence of anxiety disorder

Parents of their children are asked to attend the parent – teachers meeting. In the meeting introductory talk about the anxiety disorder in children and adolescence were given. Necessity for screening anxiety disorder, early diagnosis and treatment if needed were discussed. They are also told about the importance of parent's cooperation when the treatment is needed. If needed they were referred to psychiatrist

1. Prevalence of anxiety in our study is 14.8 % in child version and 9.6 % in parent version. Overall prevalence rate of anxiety disorder in our study is 12.2 %

2. Prevalence of panic disorder in our study is 7.8 % in child version and 7.4 % in parent version. Overall prevalence of panic disorder in our study is about 7.6 %

3. Prevalence of generalized anxiety disorder in our study is 7.8 % in child version and 2.8 % in parent version. Overall prevalence of generalized anxiety disorder in our study is about 5.3 %

4. Prevalence of separation anxiety disorder is 6.2 % in child version and 8.8 % in parent version. Overall prevalence if separation anxiety disorder in our study is about 7.5 %

5. Prevalence of social anxiety disorder is 8.4 % in child version and 7.4 % in parent version. Overall prevalence of social anxiety disorder is about 7.9 %

6. Prevalence of social phobia is 5.2 % in child version and 7 % in parent version. Overall prevalence of school avoidance is about 6.1 %

CONCLUSION

- Every child mental health is important
- Many children are affected by mental health problems
- These problems are painful and can be severe
- Mental health problems can be recognised at earlier stage and treated.

KEYWORDS : SCARED scale, Children and adolescence

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INTRODUCTION

One of the most prevalent psychiatric problems among children and adolescence is the anxiety disorder. Adolescence is the peculiar period which exist between a dependent child and an independent adult. In developed countries 5 – 18 % of the total population is comprised by adolescence. In India proportion is even more higher comprising 22.8%. Though much adolescence is affected, anxiety disorders are under diagnosed. This is because the early symptoms and signs are ignored by parents, adolescence and the practitioners. These traits can persist through adulthood and may become chronic and serious illness. Those who develop the symptoms early less than 13 years of age may have chronic and permanent course. Though symptoms may appear subtle, it leads to chronic and serious illness. The critical period of anxiety disorder causes academic under achievement in an individual and emotional stress among family members.

PERSPECTIVE IN HEALTH AND CARE OF ADOLESCENT

Adolescence is a transitional period of development between the childhood and adulthood. Their characteristic change includes psychological, physical, biological and social changes. They also have change in idea, attitude, thinking pattern and relationship with others. It is a critical stage during which ones health and development can be altered either in positive or negative direction. During this period they prepare themselves to face life with confidence. The developmental changes in adolescence have an impact on their behaviour pattern.

Characteristic of adolescence

1. Able to plan and pursue long term goals of life

2. Concern about physical changes and interest in personal attractiveness

3. Experiment in drugs, friends and risk taking behaviour

4. They lack self criticism

5. They lack awareness of consequences

Physical growth and development means Pubescence, whereas psychological growth and development means Adolescence, both are interrelated and occurs simultaneously

Girls attain puberty between 8 – 10 years of age with breast development followed by pubic hair and axillary hair development. Growth spurt, weight gain and menarche usually coincide or follows this development

Boys attain puberty little later than girls between 10 – 12 years with changes like increase in testicular size and darkening of scrotal skin followed by development of pubic hair, axillary hair and enlargement of penis. Growth spurt and weight gain, increase in muscle mass occurs simultaneously

The physical growth in development period has definite pattern of development whereas psychological growth did not have any definite pattern. Physical changes have specific effect on personality, spirituality and emotional pattern. Many factors decide psychological growth mainly environmental which

influences the psychological development, which results in various types of behaviour change. The behaviour changes are considered to be within normal limits, sometimes it is difficult to distinguish between normal and abnormal behaviour

Origin of behaviour problem is related to both home environment and social environment. High technology and industrial growth had lead to various changes in community, many newer advances made the adolescence to face increasing demand for adaptive process. This further adds stress in adolescence, thus results in increased prevalence of depression, anxiety, suicidal tendency and sexual crimes in adolescence.

More children belong to nuclear family as a result of urbanisation, media, parents and peer groups play a role in changing the attitude of adolescence. Changes in culture and technology – increases the stress of adolescence. In this critical period they have to make choice of their carrier. Hence adolescence is in a state of confusion thus frustrated, irritated or depressed.

DEFINITION OF ANXIETY:

According to DSM – V criteria Anxiety is defined as the apprehensive anticipation of future danger or misfortune accompanied by a feeling of dysphoria or somatic symptoms of tension. The focus of anticipated danger may be internal or external[6.]

Anxiety is also described as a negative affective state predicated on preoccupation with the future and the feeling of helplessness to control future events in a desirable manner[7]

Anxiety disorders are a group of mental health disorders, characterized by excessive feelings of anxiety and fear[8].

ANXIETY VERSUS FEAR

Worry about future events is anxiety. It is a response to unknown, vague, internal or conflictual threat

Fear is a reaction to current events which causes symptoms like shakiness, racing heart. It is a response to known, definite, external or non – conflictual threat.

EPIDEMIOLOGY

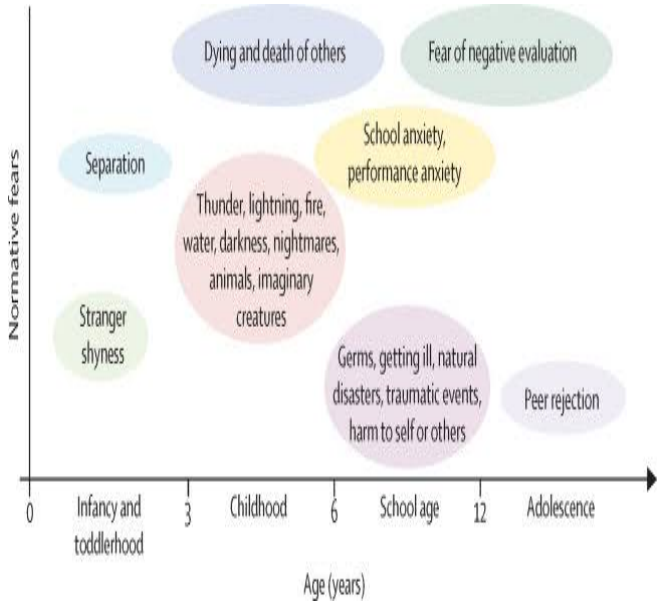
The prevalence of anxiety disorder in adolescence in worldwide is approximately 5 – 18 % with female affected higher than the males in the ratio of 2: 1[9]. The prevalence in adulthood increases to 17.7%.

As per WHO report serious emotional disturbances in children ranges to about 15%. [10]. In children more than 5 years of age about 5 to 10 leading cause for disability is by the mental disorders worldwide[10]. ICMR shows prevalence of mental and behaviour disorder in Indian children about 12.5%[11]. A study was done in south India using standard criteria which revealed the prevalence of 14.4%.

Prevalence of the anxiety disorder was specific to age and gender[12]. The most common symptom encountered in anxiety disorders are anxious mood 12.6%, cognitive symptom 9.94% and physical symptoms 9.22%. 23.7% of persons with anxiety disorder have comorbidities most commonly they are associated with depression and 14.2% of persons will have another anxiety disorder. (13)

The prevalence of behaviour problem is increasing in children. 4 or more risk factors increases the chances of developing mental health problems in children to 20%. Thus early and proper identification of behaviour and mental health problem is necessary in all the schools. Prevention is better than cure. It is possible to prevent the majority of behaviour disorder in preschool and school environment itself. Hence mental health programmes should be initiated in school (14).

FIG 1: AGE WISE PREVALENCE OF ANXIETY DISORDER



ETIOPATHOGENESIS

1. Psychological
2. Genetic
3. Biological
4. Medical
5. Environment
6. Child – parent relationship
7. Peer influences

PSYCHOLOGICAL

Inability of an individual to adapt themselves in stressful situation leads to anxiety. It is expressed as

a. Psychodynamic: The conflict arises due to internal competing mental process which leads to distress. The goal of therapy is to increase the anxiety tolerance and not to eliminate all anxiety.

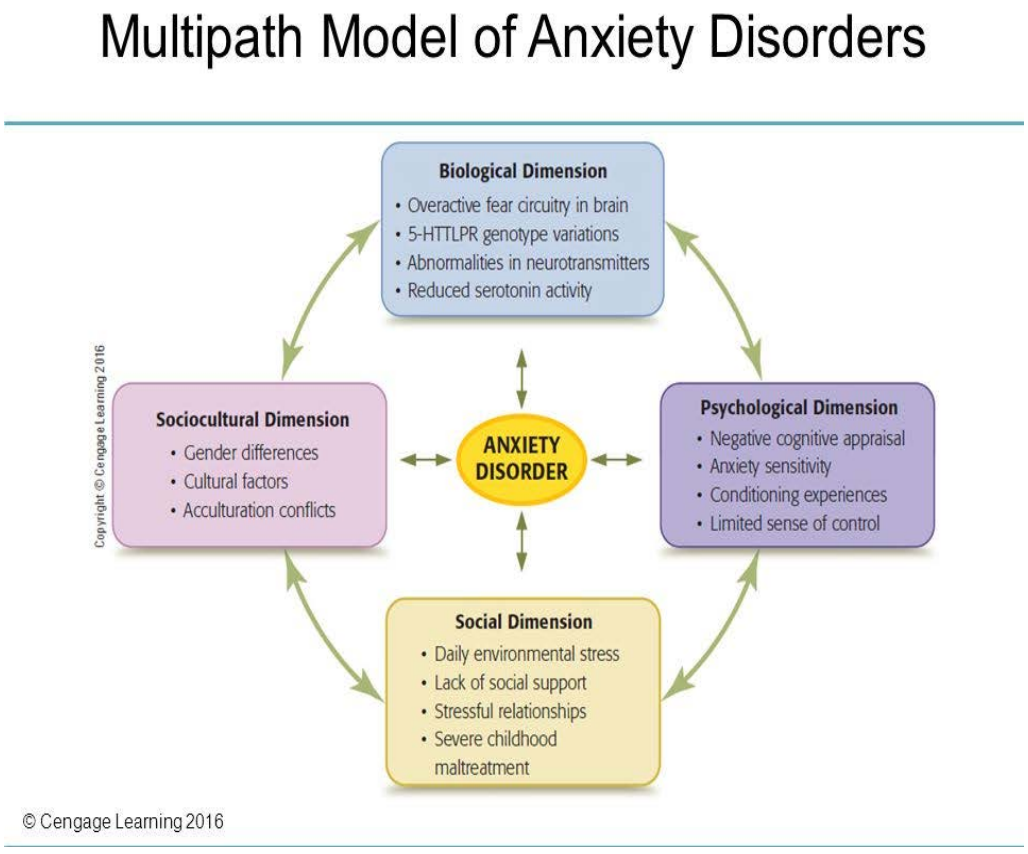
b. Behaviour: Previous unpleasant experience has lead the person to have maladaptive response in future to similar situation.

c. Spiritual: Feeling of unworthiness and emptiness leads to distress in life.

GENETIC

Family history of anxiety disorder is positive for 40 to 50 of affected individuals. Frequency of anxiety disorder is higher in first degree relatives of affected individuals than the non affected persons. One of the study reported that there is genetic variability of the gene for serotonin transporter. A gene code for stathmin – a protein is critical to form fear memories in amygdala. Less anxiety was showed by stathminknockout mice, its role in humans yet to be confirmed. Twin studies have revealed that importance of genetic factors in adolescence with anxiety disorder [15].

FIG 2: MULTIPATH MODEL OF ANXIETY DISORDER



BIOLOGICAL:

There are three major neurotransmitters which are associated with anxiety disorder includes malfunctioning of nor-epinephrine, serotonin and GABA. Nor-adrenergic and serotonergic neural system improper functioning also causes anxiety.

NOREPINEPHRINE

Increased noradrenergic function causes panic attack and autonomic hyperarousal. Cell bodies of noradrenergic system located in locus ceruleustheir stimulation produces fear response

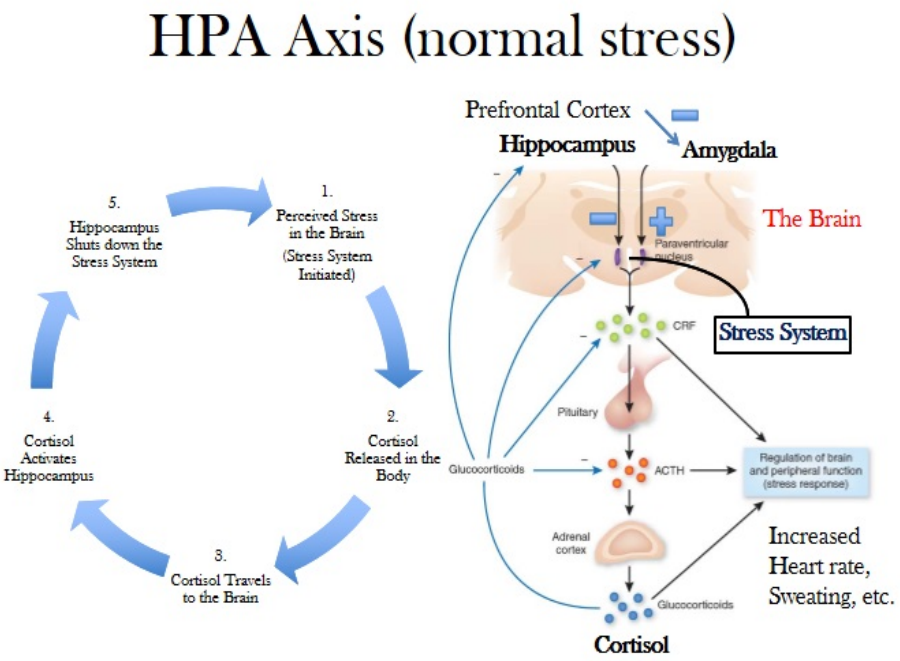
CORTISOL

Stress increases the production of cortisol, which in turn causes hypertension, immunosuppression, atherosclerosis and cardiovascular disease.

CORTICOTROPHIN RELEASING HORMONE

Psychological stress increases corticotrophin releasing hormone in hypothalamus level which activates HPA axis to release cortisol.

FIG 3: HYPOTHALAMIC PITUITARY AXIS – NORMAL STRESS



NEUROANATOMY CONSIDERATIONS:

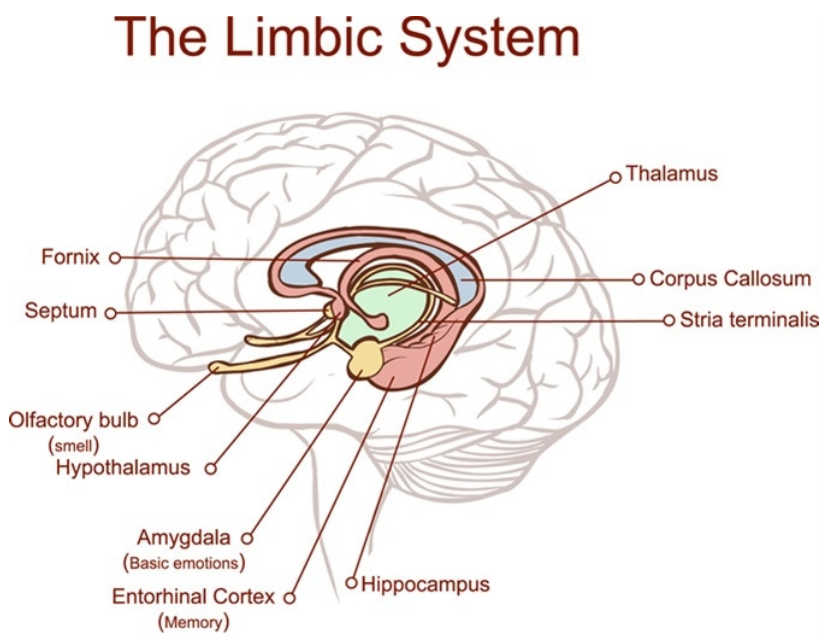
LIMBIC SYSTEM:

Limbic system receives noradrenergic and serotonin innervation and also has higher concentrations of GABA receptor, studies in non human primates showed that stimulation of limbic system results in generation of anxiety and fear response. Septohippocampal pathway activation in limbic system lead to production of anxiety response

CEREBRAL CORTEX:

The frontal and temporal cerebral cortex is connected with para-hippocampal region and hypothalamus. They are involved in production of anxiety disorder

FIG 4: LIMBIC SYSTEM



BIOLOGICAL THEORY OF ANXIETY

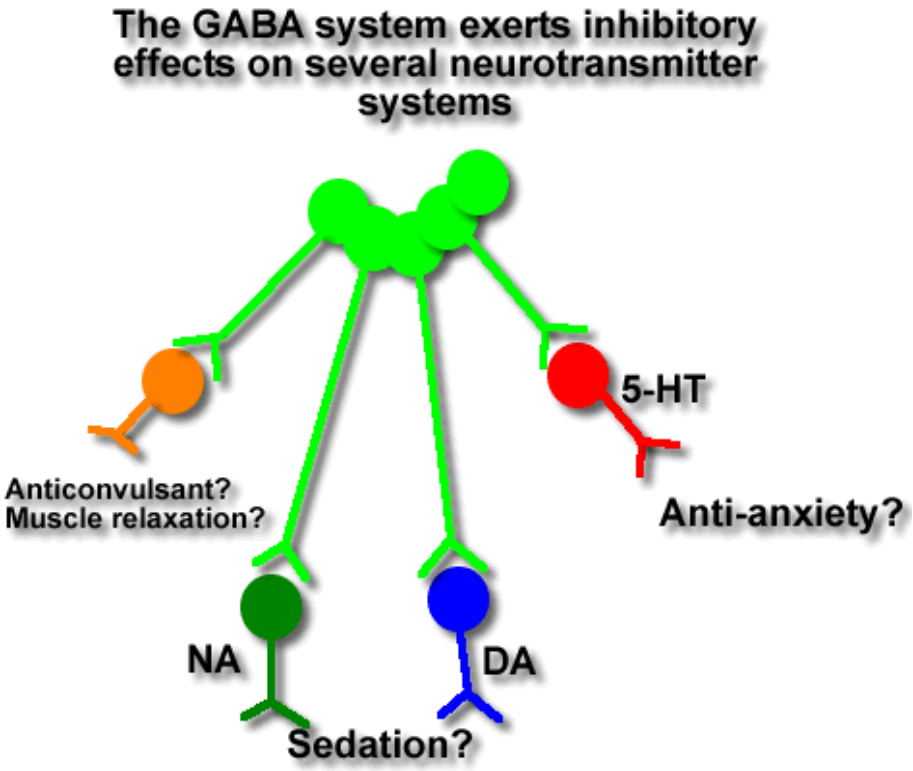
The neurotransmitter – GABA is present in CNS which reduces activity, when GABA level are decreased it causes anxiety. The anxiety is produced by reduced level of GABA in CNS. This is confirmed by using anxiolytics as anxiety disorder treatment as they have their action by modifying GABA receptors [16, 17, 18].

Selective serotonin reuptake inhibitors (SSRI) are the first line drugs in treating anxiety disorder [19]; they are also used for treating depression. Thus, SSRI may help in alleviating anxiety by acting on GABA neurons [20]. Caffeine and benzodiazepines can aggravate anxiety and panic attacks, thus their stoppage results in cessation of anxiety symptoms [21]. Increased level of neurotransmitter – serotonin transporter in persons with generalised anxiety

Dopamine – a neurotransmitter associated in causing social anxiety disorder. Recent study suggests that relation between social anxiety and affinity of dopamine D2 and D3 receptors in striatum [22].

Persons with social anxiety who are getting treated with dopamine antagonist such as haloperidol will have cessation of symptoms. This emphasis the role of dopamine – a neurotransmitter in social anxiety [23]. Glutamate and norepinephrine are other neurotransmitter which are overactive in social anxiety disorder. Two SSRI which are approved by FDA in treating social anxiety are Sertraline and Paroxetine.

FIG 5: GABA SYSTEM EXERTS INHIBITORY EFFECTS ON SEVERAL NEUROTRANSMITTER SYSTEM



BRAIN IMAGING STUDIES

Brain imaging studies of specific anxiety disorder shows increased in size of cerebral ventricles. MRI study of patients with panic attack shows defect in right temporal lobe. MRI, SPECT, EEG shows abnormality in frontal, temporal, and occipital area and in parahippocampal gyrus.

MEDICAL

Acute and chronic medical conditions like hyperthyroidism, tumours, cardiovascular disease and infections also causes anxiety. Hence, while assessing a child for anxiety disorder condition which causes anxiety should be ruled out.

PEER INFLUENCES

Adolescence spend most of their time with friends. Peer influences have both positive and negative impact on their social and emotional development. Next to their parents peers provide emotional support. They are good companions. Peer groups includes classmates, friends, romantic relations, social crowds. Negative outcome in peer relationship has its impact as poor academic performance and serious mental problems.

CHILD – PARENT RELATIONSHIP:

Parental anxiety and parent – child interactions are the risk factor associated with development of anxiety in adolescence. Anxious parents can reinforce their anxious behaviour to their children [(24).] In parent – child interaction, overprotective and critically parenting styles are the contributing

factors in the development of anxiety disorder [25]. Evidence states that insecure attachment due to early separation from mother results in development of anxiety as they grow older [26]. Hence this necessitates the screening of anxiety disorder in parents.

TYPES OF ANXIETY DISORDERS:

1. Generalised anxiety disorder
2. Panic disorder
3. Separation anxiety disorder
4. Social anxiety disorder
5. School avoidance

DEMOGRAPHY OF ANXIETY DISORDER

10 – 25 years of age is high risk period for development of anxiety disorder. Specific and social phobia are common in childhood and early adolescence. Generalised anxiety disorder (GAD), Panic disorder are common in late adolescence and early adulthood. GAD has increased prevalence in elderly age group. Social anxiety disorders are more prevalent in late adolescence as evidenced by that they are more symptomatic in the age group of about 16 to 19 years [27]. Adolescent girls inhibited as toddlers are more affected by generalized social anxiety than boys [28].

GENDER DIFFERENCE IN ANXIETY DISORDER:

Girls experience significantly more anxiety symptoms than boys [29, 30, 31]. When compared to boy's girls are more likely to be diagnosed with anxiety disorders [32]. Gender based differences also exist in the manifestation of specific anxiety disorders. Girls manifest different symptom patterns than boys for some conditions [33].

GENERALISED ANXIETY DISORDER

It is a most common chronic disorder. It is characterized by long lasting, persistent, excessive worries. This type of anxiety does not focus on any specific object or situation.

It last for most days and during 6-month period. Substance abuse and general medical condition does not cause GAD. It is difficult to control and it causes impairment in patient's life

EPIDEMIOLOGY:

GAD prevalence ranges from 3 to 8 %. The ratio of women to men affected with this disorder is about 2 to 1. GAD has its onset in late adolescence or early adulthood, but most commonly cases are seen in older adults

COMORBIDITY:

GAD is most commonly associated with other mental disorder such as specific phobia, social phobia, depressive disorder and panic disorder

ETIOLOGY:

Biological, psychological factor and psychosocial factor contribute to generalised anxiety disorder.

CLINICAL FEATURES

GAD children may be associated with restlessness, headache, abdominal pain and heart palpitation.

DIAGNOSIS

It is characterised by persistent and frequent worry and anxiety is out of proportion to the input of the circumstances or event. GAD cause significant impairment or distress in life.

It is diagnosed by DSM – 5, Diagnostic criteria for generalised anxiety disorder

1. Excessive anxiety and worry that last for more than days for at least 6 months
2. It is difficult to control the worry
3. They are associated with three of the following
    a. Restlessness
    b. Easy fatigability
    c. Difficulty in concentrating
    d. Irritability

e. Disturbance in sleep

f. Muscle tension

4. The worries cause significant distress / impairment in functioning of life

5. Substance abuse and general medical condition does not attribute to GAD

DIFFERENTIAL DIAGNOSIS

Cardiovascular disease, cerebrovascular disease, panic disorder and obsessive-compulsive disorder etc.

PANIC DISORDER

An acute intense attack of anxiety accompanied by feeling of impending doom is called panic disorder. It is characterised by discrete periods of intense fear. Fear can vary from several episodes during one day to few attacks during a year.

EPIDEMIOLOGY

Prevalence of this disorder is 1 to 4 %. Females are two to three times more commonly affected than men. Young adulthood is commonly affected by panic disorder.

COMORBIDITY

They are associated with other psychiatric disorder. Major depressive disorder occurs in about one – third of patients with panic disorder. Other

commonly occurring disorder are social phobia, specific phobia, social anxiety, generalised anxiety disorders

ETIOLOGY

Biological factors – norepinephrine, serotonin and GABA are major neurotransmitters implicated in panic disorder.

PANIC PRODUCING SUBSTANCES

Panic producing substances are called panicogen. Respiratory panicogens are carbon dioxide, bicarbonate and sodium lactate. Neuro chemical panicogens are alpha 2 adrenergic receptor antagonist, yohimbine, GABA receptor inverse agonist.

BRAIN IMAGING:

MRI shows involvement in temporal lobe particularly amygdala and the hippocampus. Panic disorder patient have cortical atrophy in right temporal lobe. PET scan shows dysregulation of cerebral blood flow.

GENETIC FACTOR

There are four to eightfold higher risk for first degree relatives in patients with panic disorder.

DIAGNOSIS

A panic attack is a brief attack of intense fear and apprehension last from minutes to hours, peaks in less than 10 minutes. Panic attack in patients with

specific and social phobia are expected, such expected attacks are called as situational predisposed panic attack. They are diagnosed by DSM – 5 Diagnostic criteria for panic disorder

a. Panic attack associated with four or more symptoms

    1. Palpitation
    2. Sweating
    3. Trembling
    4. Sensation of shortness of breath
    5. chest pain
    6. Feeling of choking
    7. nausea
    8. feeling dizzy
    9. chill or hot sensation
    10. going crazy
    11. fear of dying

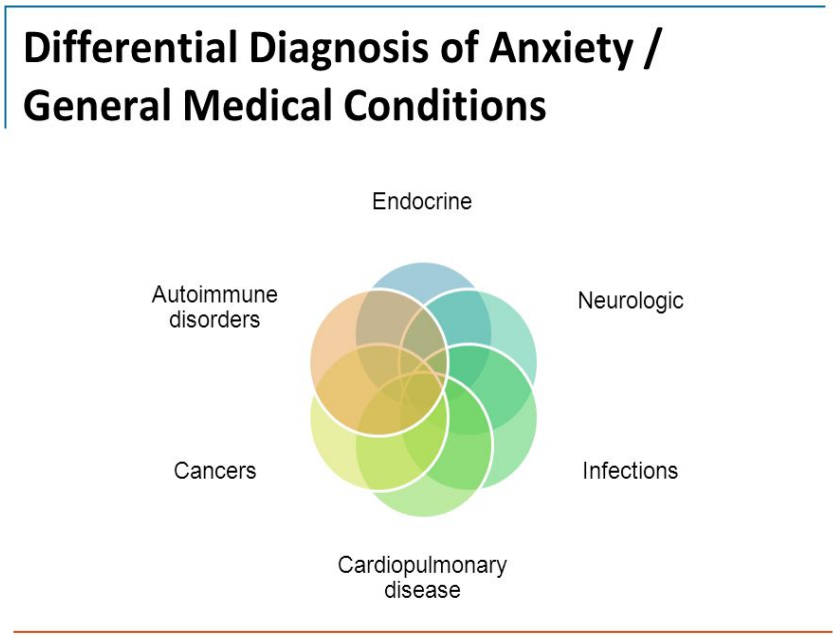
B. Attack is followed by 1 month or more of one of the followings

    1. Change in behaviour in order to avoid the attack
    2. Persistent worry about panic attack and their consequences
    3. Their effects are not caused by substance abuse
    4. This effect are not explained by other mental health disorder

DIFFERENTIAL DIAGNOSIS

Angina, congestive heart failure, asthma, cerebrovascular disease, hyperthyroidism, generalised anxiety, social phobia specific anxiety disorder etc.

FIG 6: DIFFERENTIAL DIAGNOSIS OF ANXIETY DISORDER



SOCIAL ANXIETY DISORDER

It is common anxiety disorder, it is also referred as social phobia, they have fear of social situation. It is different from specific phobia in which patient has persistent and intense fear of a situation or an object. Persons with social phobia feel uncomfortable in social situations like oral presentation, social gathering, meeting new people. They have fear in performing activities like speaking or eating in front of others, shy bladder syndrome – paruresis – refuse to use bathroom when others are nearby. They experience a vague fear of

embarrassing one. Self-mutism is the early manifestation of social phobia, because most of these children have social phobia symptoms.

EPIDEMIOLOGY

The prevalence of social phobia is about 3 - 13 %. Females are most commonly affected by social phobia than males.

COMORBIDITY

It is associated with mood disorder, anxiety disorder, bulimia nervosa.

ETIOLOGY

Studies showed that some children are characterised by a pattern of behaviour inhibition. This trait is common in children of parents with panic disorder, severe shyness may develop in children as they grow older. Parents of social phobia persons may overprotect their children

NEUROCHEMICAL FACTORS:

Dopaminergic dysfunction causes social phobia. Patient with phobia release more epinephrine or norepinephrine, even with normal level persons with phobia become sensitive.

GENETIC FACTORS:

Three times higher incidence in 1st degree relatives of persons with social phobia

DIAGNOSIS

DSM – 5, Criteria for diagnosing social anxiety disorder

a. When an individual exposed to social situation (meeting unfamiliar people, having a conversation with new people) they experience marked fear
b. The person fears that other will negatively evaluate their anxiety symptoms
c. Social situations will always produce fear in them (children express this fear by crying, clinging, tantrums, shrinking)
d. They avoid social situation
e. The fear and anxiety is persistent for six months or more
f. The fear and anxiety are not attributed by substance abuse or other medical condition
g. The fear, avoidance and anxiety are not explained by other medical disorder

DIFFRENTIAL DIAGNOSIS

Panic disorder, agoraphobia, major depressive disorder, avoidant personality disorder, schizoid personality disorder

COURSE AND PROGNOSIS

Age of onset is late childhood or early adolescence. It is a chronic type of disorder. It can disrupt the life of a person over many years. this disruption includes poor academic performance, and interferes with social development and job performance

SEPERATION ANXIETY DISORDER

Only anxiety disorder which is restricted to infants, childhood and adolescence is separation anxiety disorder (SAD). It is normal in young children between 8 to 14 months of age. Children are afraid of unfamiliar situation and person and are often clingy. When this fear is excessive, occurs in children over 6 years of age and last for four weeks, they may have this disorder.

Child become nervous and fearful when they are separated from parents and caregivers. This disorder disrupts the child and interfere with daily activities such as poor school performance.

EPIDEMIOLOGY

Prevalence of separation anxiety is approximately 4 – 5 % with mean age of 7 – 11 years. It equally affects both boys and girls

CAUSES

a. After a stressful event in child life like death of a parent or caregiver

b. Change of environment like moving to another school or house

c. Stay in hospital

d. Children with parent who are over protective may be prone to develop separation anxiety

e. More chance of children getting affected with separation anxiety are children with family members having anxiety or another mental health disorder

SYMPTOMS

a. An unrealistic worry that bad things will happen to their parents
b. An unrealistic worry that bad thing will happen to them if they leave caregiver
c. Temper tantrums
d. Complaints of stomach aches and headache on school days
e. Refused to stay away from home
f. They refused to sleep alone without parents or caregivers
g. They refused to go to school
h. Having nightmares during sleep about separation

DIAGNOSIS

These symptoms persist for a period of four weeks in children they are diagnosed as having separation anxiety

EASE NORMAL SEPERATION ANXIETY

a. For a brief period of time leave your child, after getting used to separation leave your child for longer time
b. When they are hungry and tired they develop separation anxiety hence schedule separation after feeding
c. Assuring the child that everything will be fine
d. When a child is away from home, make new environment familiar to them

e. Develop confidence in child to handle separation

f. Don’t allow them to watch scary shows in television

g. Talk with them about their feeling and console them

h. Listen to their feelings

i. Remind them about their survival during last separation

j. Thought the child to handle and anticipate separation when there is change in environment like school and home

k. Encourage the child to participate in school activities, this will help them to develop friendship

l. Praise the child and give positive reinforcement if they are separated for a while

SCHOOL PHOBIA

It is also called as school refusal or school avoidance. It is a form of anxiety associated with attending school or staying in school. These anxieties are chronic and they can cause panic, worry and stress. It is not just a phase to pass, school phobia is real problem that will persist for several weeks. It interferes in normal life of a person. They cause disruption like engaging in school and forming relationship. Students shows school phobia during transitions like entering a school or changing school

EPIDEMIOLOGY

2.4 % of school students will experience school phobia. It is common in age group of 5 - 7 and 11 - 14 years. Study revealed that 4.5% of children aged 7 – 11 and 1.3% of children aged 14 – 16 years are school avoiders. Both boys and girls have similar prevalence of school avoidance [34, 35]

COMORBIDITY

Often school phobia is associated with other mental health disorder like depression, social anxiety and separation anxiety disorder

SYMPTOMS

A student will complaints of symptoms like vomiting, headache. abdominal pain and diarrhoea. When they are allowed to stay back at home, these symptoms will disappear. Reappearance of these symptom on next day is characteristic of school phobia. It should be differentiated from truancy.

Characteristic properties of school phobia

1. They are smart and having good academic responsibility
2. They are emotionally stressed about attending school
3. Parents known their absence from school
4. Child do not have any antisocial activities
5. Child usually stay safely in home during school hours

Characteristic properties of truancy

1. Lack of fear and stress about attending school
2. Children attempt to hide their absence from school to their parents
3. Child have antisocial activities like lying or stealing
4. Child will not stay back at home during school hours
5. Child is not willing to do academic work, they lack interest in it.
6. They will bunk the school or skip the class

CONTRIBUTING FACTORS TO SCHOOL PHOBIA

a. Younger children suffering from anxiety
b. Death of a family member
c. Children who crave to spend lot of time with caregiver
d. Any distressing event happened in school like shame or punishment
e. Divorce or marital issues between parents
f. After a long time re – entry into school
g. Moving into new school

The anxiety and fear in students grows so severe, to attend the school. The thinking of going to school will make the child sense back pain, feel dizzy, and cry uncontrollably. Anxiety and fear grows so severe that they harm themselves or experience panic attacks. This child has poor academic record due to frequent absenteeism from school.

TIPS TO OVERCOME SCHOOL REFUSAL

a. Have a conversation with them to reveal the stressors that are causing anxiety
b. Discuss the ways to cope up with the issue and share your experience with them
c. Practice meditation, deep breathing and relaxation exercise to reduce anxiety
d. Help your child to find book, music and meditation to listen, relax and practice everyday
e. Child should get enough rest at night bedtime, so that they could establish an early morning routine to prepare themselves during school days.
f. Encourage them to participate in sports, social and other group activities, these activities will give them support and positivity
g. Communicate with the teachers about the condition of child so that they can motivate and support them
h. Get help from mental health professional, so that they can evaluate the mental status of the child and recommend the best treatment modality. They may benefit from
    1. Medications
    2. Cognitive behaviour therapy
    3. Individual therapy
    4. Family therapy

TREATMENT

Early return to school is the goal for children with school avoidance. Don't allow any excuses for not attending school unless medically indicated. Multimodal team approach is the treatment of choice which includes mental health professional, child, parents, and teachers. Explain to parents about the psychological and physiological symptoms of child and treat them with exposure-based treatment such as systemic desensitization, relaxation training and training for school skills

Cognitive behaviour therapy teaches the child about the modification of these negative thought. Parents should be taught about behaviour management strategies like escorting the children to school, giving positive reinforcement for going to school and negative reinforcement for not attending school. Parents and teacher involvement are necessary to increase the treatment effectiveness.

ASSESMENT

The most common psychological disorder in children and adolescence is anxiety disorder [38]. Anxiety disorder are underestimated because of its under diagnosis [39]. If untreated this disorder will lead to adult version of anxiety. Anxiety is associated with substantial negative effects [40].

Expectation and pressure from Indian parents among school children and adolescence for academic achievement results in anxiety disorders. Comprehensive assessment is essential in approaching children with anxiety

disorder. Adolescence with anxiety disorder present with symptoms like school refusal, defiant behaviour and poor academic performance. Hence treating physician should have a high index of suspicion for diagnosing anxiety disorder. Information about the adolescence regarding anxiety symptoms should be obtained from multiple informants such as parents, teachers and adolescence. Subjective distress will be revealed by interviewing with adolescence, and the parent's reports shows detail about dysfunction.

TREATMENT OF ANXIETY DISORDER

Psychological problem which is common in adolescence is anxiety disorder. They are often missed, under diagnosed or misdiagnosed and hence results in significant dysfunction. Early diagnosis and appropriate treatment will improve the overall functioning of adolescence. Depression is the most common co- morbidity associated with anxiety disorder in adolescence. Severity of anxiety disorder are increased by co- morbidity, hence they should be diagnosed and managed appropriately.

Differentiate anxiety disorder from medical cause and other mental health disorder presenting with anxiety. Medical condition which presents with anxiety symptoms and migraine, hyperthyroidism, asthma, lead intoxication, seizure disorder, pheochromocytoma, hypoglycaemia and cardiac arrythmia. Psychoactive drugs and medically prescribed drugs causes drug induced anxiety disorder which includes beta agonist, methylxanthine, anti-asthma drugs, steroids, sympathomimetic drugs, and selective serotonin reuptake inhibitor.

Psychoactive drugs include cocaine, cannabis, hallucinogen and stimulants. Hence medical examination and screening for toxicology is necessary to diagnose this condition.

Other psychoactive illness that produce anxiety symptoms are Attention deficit hyperactive disorder and Autism spectrum disorder. Autism spectrum disorder children can present with selective mutism. Hearing disability children can also present as school phobic person. Symptoms of anxiety may be an early manifestation in other mental health disorder such as Bipolar affective disorder.

Three types of intervention are indicated prevention, selective prevention and universal prevention. Based on symptoms or early indicator the selected individuals are subjected to Indicated prevention. Individuals with risk factors for a given disorder are applied to selective intervention. Irrespective of the risk factors, the entire population are subjected to prevention program in universal intervention. “Treatment based prevention” is an intervention [47], this provide intervention at later developmental stage. Anxiety in childhood leads to development of other mental health problems. Hence early identification and timely intervention will prevent the child from developing substance abuse, depression and adult anxiety disorder.

Prevention program are targeting children with specific risk factors for developing anxiety disorder. Their intervention is

1. They target children of parents with anxiety disorder
2. Targeting children who had stressful life events
3. Targeting the children who exhibits behaviour inhibition

Child anxiety prevention study is a prevention program they examined the offspring of anxious parents based on three domains which include social, familial and behaviour. It is a preventive intervention to decrease the anxiety symptoms and preventing the development of anxiety disorders in the children of parents with anxiety symptoms.

INDICATED INTERVENTION

At risk individual based on symptom and early indicators are targeted in indicated intervention.

BARRIERS TO IMPLEMENTATION OF PREVENTION PROGRAMS:

Identification of participants, consent and engagement are the barrier to implement the program. Another limitation is the sustainability of the program. In school or preschool setting prevention program have been implemented. It is easy to assess the entire subpopulation in school-based setting for prevention program. Low levels of consent to participate in the program form the barrier for implementing the prevention program. Low level of consent, poor engagement and sustainability are the issue in the program.

ADVANTAGES OF PREVENTION PROGRAM

Miller [35] states that this universal prevention program is effective in creating awareness and understanding of anxiety disorder in children. When applied to whole population it has extreme effectiveness. Thus, in the prevention of anxiety disorder, universal program plays a vital role. In targeted high-risk children moderate to large preventative effect was shown by selective program. Indicated prevention program also had moderate preventative effect on anxiety symptoms. Traditional treatment trials also evidence the long-term efficacy of three prevention program [49,50].

MANAGEMENT

A multimodal approach is necessary for the management of anxiety disorder. Therapy begins with educating the adolescence, parents and communicating the same to school. For planning the treatment of an individual consider risk factors, psycho – social stressors, impairment in functioning, severity of illness, age and family functioning and co – morbid illness. Knowing the type of anxiety disorder further helps in planning the treatment.

PSYCHOTHERAPY

The first choice of treatment in anxiety disorder is psychotherapy, which is of sole important in milder cases. Cognitive restructuring and behaviour training are done in cognitive behaviour therapy. Adapting skills and initially taught to them to develop control over anxiety inducing situation and followed

by relaxation training such as Jacobson progressive muscle relaxation, deep abdominal breathing challenging negative thoughts (cognitive restructuring) and graded exposure to fearful situation.

TREATMENT OF SOCIAL PHOBIA

Treatment of Specific Phobia Includes:

a. Participant modelling by demonstrating approach to fearful situation by therapist

b. Social skill training

TREATMENT OF PANIC DISORDER

A unique approach to panic disorder is where the patient is exposed to exercise that will induce physical sensation that are associated with panic symptoms like shortness of breath, sweating and dizziness followed by educating the patient about the physiology that lead these symptoms

COGNITIVE BEHAVIOUR THERAPY

Cognitive behaviour therapy is an evidence-based treatment approach. CBT develop skills with practice and encouragement. There are variety of components to teach the child having concrete skills. Thus, the previously feared child will remain the vicinity of the situation. The components of the CBT are the following.

PSYCHOEDUCATION:

Educating the child about the nature of anxiety disorder which includes physiological, cognitive and behaviour components which trigger the anxiety.

MONITORING

By predicting the anxiety or reducing the anxiety by applying the learned strategies in CBT.

RELAXATION TRANING:

Educating the child about the calming skills to increase the threshold to control over unexpected panic disorder.

COGNITIVE RETRAINING:

Child is educated about alternative methods and adaptive way of thinking to decrease arousal and increase control over anxiety

PROBLEM SOLVING:

To solve day to day problem, child is educated about concrete skill approach. Thus, they become efficient to manage the unexpected events and decreasing anxiety arousal

ASSERTIVENESS TRAINING

In this training child is educated about verbal and non-verbal skill approach to get their needs in adaptive ways

EXPOSURE AND RESPONSE TREATMENT

In this preventive method, child ability to face the fearful situation is increased.

REPLASE PREVENTION

In this therapy child is taught to maintain gain even after the treatment components are selected and delivered based on the child symptoms and problems. After mastering the previous skills new skills are taught to the child. While teaching the skills child developmental and mental age should be considered, so that the child can learn the skills and apply it in appropriate situation. Parents are also play an integral part in treatment so that they can help in teaching the skills to child.

This therapy can be applied to an individual or to group. Parents should be counselled to remain calmly when the child is facing anxiety. Parents should talk and listen with the child regularly instead of giving advice they should help and assist the child. Child is exposed to fearful situation and followed by relaxation techniques as an anxiety management in systemic desensitization form of behaviour therapy.

PHARMACOTHERAPY

Pharmacotherapy is effective in the management of anxiety disorder. Start with lower dose of drug followed by increasing the dosage. in the presence of co-morbidities combination of drugs can be used. The first line of treatment in the

management of anxiety disorders is SSRI (selectiveserotonin reuptake inhibitor). The commonly used drugs are fluoxetine, sertraline, fluvoxamine, escitalopram and paroxetine.

TABLE 1: SSRI DOSE AND SIDE EFFECTS

S.No	MEDICATIONS	STARTING DOSE	THERAPEUTIC DOSE	SIDE EFFECTS
1.	Sertraline	12.5 – 25mg	50 – 200 mg	Nausea, sedation
2.	Fluvoxamine	12.5 –25 mg	50 – 200 mg	Nausea, insomnia
3.	Fluoxetine	5 – 10 mg	10 – 60 mg	Hyperactivity
4.	Paroxetine	5 – 10 mg	10 – 40 mg	Sedation, nausea
5.	Citalopram	5 – 10 mg	10 – 40 mg	Insomnia, diaphoresis

Start treatment with minimum dose and then gradually increase the dose once in 2 – 4 weeks, depending on the need of the patient.

FDA provide risk of serotonin syndrome and warning signs about suicidal tendencies.

SYMPTOMS AND SIGNS OF SEROTONIN SYNDROME

a. Confusion
b. Muscle rigidity
c. Diarrhoea

d. Headache
e. Shivering
f. Dilated pupils
g. Rapid heart rate and high blood pressure
h. Restlessness

Severe serotonin syndrome may be life threatening

a. Seizures
b. High fever
c. Irregular heartbeat
d. Unconsciousness

Before starting SSRI, bipolar disorder should be ruled out. Other medications used are SNRI, tricyclic antidepressant and bupropion. Venlafaxin is commonly used SNRI, its side effects are behavioural activation, nausea and hypertension. Imipramine and clomipramine are tricyclic antidepressants used. Tricyclic antidepressant is not commonly used because of its side effects such as anticholinergic, cardiac, antihistaminergic effects and postural hypotension. The risk of serotonin syndrome increases when tricyclic and SSRI are combined.

If there is no response to one SSRI, then another SSRI can be given. Consider SNRI if there is no improvement with two distinct SSRI, co - morbidities and organic causes should be evaluated in case of poor response to

treatment. In case of poor response to treatment institution of psychotherapy along with medication should be considered prior to switching another agent.

CONCLUSION

Adolescence frequently encountered the anxiety disorder which cause significant impairment in their life. The diagnostic challenges arise because of its varied presentation. Hence is essential to have high index of suspicion and through evaluation. Early identification will help in timely initiation of treatment which results in significant improvement in the functioning and quality of life.

REVIEW OF LITERATURE

In 1997 Birmaher [23,24,53] et al created a new self-reportinstrument - scoring system for screening children with anxiety disorder. A questionnaire of 85 item was formulated and administered to 341 outpatient children and 300 parents, after item analysis and factor analysis, scale was reduced to 38 questionnaire, child and parent version both yielded five factors which includes somatic and panic disorders, general anxiety, separation anxiety, social phobia disorders. The scared shows good reliability for screening of anxiety disorders.

Muris [54] investigated the relationship between scared and two other commonly used anxiety disorder measures for children, the revised children manifest anxiety scale (RCMAS) and the fear survey schedule for children – revised (FSSC – R). Records showed that scared score are highly positive in a way related to RCMAS and FSSC-R thus provide evidence for validity of scared.

Weitkamp. K et al [29,57] studied German version of scared. He administered 77 children of aged 11 to 18 years in outpatient psychotherapy and 66 parents to scared and child behaviour checklist respectively, compared to CBCL, German scared had good divergent and convergent validity.

Hafiz. N et al examined the validity of scared in arab nation using Arab version. Both child and parent version were used, they administered 67 children and 77 parents. Results confirmed the internal consistency by alpha = 0.92 for parent version and 0.91 for child version, and parent – child agreement was good.

Arabic version of scared satisfactory demonstrated psychometric properties in Lebanon sample

Wang et al examined scared – 41 in high school students in earthquake-stricken areas of Wenchang. They adopted cluster random sampling to select 2729 students for questionnaire using scared – 41. Results showed 11.9 % of total variance was contributed by social phobia, and scared – 41 can be used for assessing students in earthquake-stricken areas for anxiety disorder.

Boris Birmaher [23,24,53] extended their work on psychometric analysis of SCARED, a child and parent version for screening children with anxiety disorder using 41 questionnaire items, they conducted on 190 children and adolescence and 166 parents, they concluded scared is a valid tool for screening children with anxiety disorders, 5 item version of SCARED appears to be highly reliable instrument for screening anxiety disorders in epidemiological studies.

Fahimeh Dehghani [41] examined the properties of scared– child version in Persian translation in a sample of 9 – 13 years aged, 557 children in Isfahan and Iran. They compared scared with Children depression inventory (CDI) and Revised children manifest anxiety scale (RCMAS). Results revealed that five factor models of scared – c had high internal consistency and good reliability

Ellin simon [43] studied the screening method for anxiety disorder and to discriminate between them, the study population were selected from the children who scored high on scarred 71- version. They classified them as high anxious

(top 15% of scared version) – 783 children and medium anxious (those who scored two points above to two points below the median – 80 children. The selected high anxious, medium anxious children and their parents were going through an interview the anxiety disorder interview schedule – AIDS, of these 60% of high anxious and 23% of medium anxious children had anxiety disorder. Thus, scared scale proved to be valid for discriminating between child with and without anxiety disorder.

William [44] in his study used scared scale to asses 1340 students in Netherlands and categorised them into early (10 – 13 years) and middle (14 – 18 years) adolescence groups. He revealed five factor structures of the scared is best for adolescence population, and also for gender, age and ethnic groups.

Cecelia et al [45] examined the reliability and validity of spence children anxiety scale (SCAS) and SCARED in 556 German children from primary school as a screening tool for anxiety disorder. He compared the validity of SCAS and SCARED scale and found that both scales have high reliability and validity as a screening protocol for anxiety symptoms in children.

William [44] on 2010 done a meta-analysis and psychogenic properties of scared for screening anxiety disorder in children and adolescence in different set of population. They collected 25 anxiety articles from various database from different countries and put into study, they observed that scared questionnaire suited for all groups and this is a valid screening tool for anxiety disorder.

Jastrowski et al [52] assessed sacred for paediatric chronic pain, 349 children and 476 parents were administered who presented for treatment of chronic pain. Internal consistency of scared score ranged from 0.92 to 0.93. Except school phobia all other subscales showed good internal consistency. Hence scared promised to be a measure of anxiety in paediatric chronic pain.

Monga et al [53] examined the divergent and convergent validity of scared scale. The SCARED, state – Trait Anxiety Inventor for children (STAIC) and the Child Behaviour Checklist (CBCL) were administered to 295 children and their parents. The divergent and convergent validity of scared is proved be the fact that children with anxiety disorder scored higher on scared than children with depression, thus they concluded scared is a valid screening tool.

Peter muris [45] analysed scared as a tool for screening anxiety disorder in children. They recruited 437 children of aged 7 – 14 years. In his study 82 students scored high. These children were interviewed to assess their extent for fulfilling DSM – IV criteria. Their results predicted the validity of scared in detecting anxiety disorder.

Wren [55] examined the reliability of scared in both child and parent version. Participants were selected from primary care visit, they included 236 children of aged 8 – 12 years and their parents. Child self-report scored higher than parent reports, younger children and female gender also scored high in scared scale.

Muris [54] in his novel study examined SCARED – R – revised version 66 item in children and their parents. Their scores were compared with DSM – IV, CBCL and global assessment of functioning (GAF) rating scale. SCARED – R had a good parent – child agreement and internal consistency. SCARED – R 66 item showed promising utility in predicting anxiety disorder.

Crocetti et al [59] examined the psychometric properties of Italian version of scared in 1975 Italian adolescence and compared it with 1115 Dutch adolescent. It revealed scared five factor structure is applicable to both boys and girls and also to early and mid-adolescence.

Colet et al [60] assessed scared in a Spanish children of age 8 to 12 years, they administered to 1508 children. This study concluded a reduced version of scared four factor structure analysis and results revealed Spanish version of scared has good reliability.

Su, Linyan [61] examined validity and reliability of scared in Chinese children, they assessed 1559 students. Results revealed moderate to high internal consistency (alpha = 0.43 – 0.89), and moderate parent – child correlation (alpha = 0.49 – 0.59) and analysis revealed same five factor structure as original.

An Indian study by Russell [66] validated SCARED in adolescence population in a different setting. 500 adolescences were administered, they assessed using scared and DSM – IV criteria for diagnosing anxiety disorder. The participants were interviewed further using (K-SADS-PL). Total score of > 21

was the cut-off point used in this study. The test – retest reliability and inter – rated reliability for scared is good. The study demonstrated good internal consistency.

Diogo et al [67] analysed sensitivity and specificity of sacred scale. In his cross-sectional study 119 participants of aged 9 to 18 years were included. Further the students were analysed by psychiatrist using (K-SADS-PL) interview, 44 students had screened positive for one form of anxiety disorder. The cut – off point was set at 22. The study concludes that scared scale has moderate sensitivity and specificity in diagnosing anxiety disorder

Canals et al [69] examined a cut off score for scared both child and parent version in Spanish population. Area under the curve used to assess the validity of both scared child and parent version. They proposed a cut off score of 25 for scared child version and 17 for parent version. According to this study sensitivity of child version was 75.9% and parent version was 62.8%. their results revealed that scared – c as a better screening test for anxiety disorder, and scared – p can be used for complementary information.

Steensel, et al [72] studied scared 71 as a screening tool for anxiety in autism disorder children. He compared 115 children having autism with anxiety disorder and 122 children with anxiety disorder. Result concluded scared 71 was quite comparable with both autism and anxiety disorder.

In 2017 Simona scaini et al conducted a study in Italian sample foe evaluating mother – child agreement level and examined both parent and child version of the scared scale. In this study 171 children of aged 8 – 18 years and their parents were evaluated. They revealed moderate to strong mother – child agreement level. This study also confirms the importance of evaluating both child and parent version in screening protocols for anxiety disorder.

Anna Van Meter et al study investigated the efficiency and diagnostic utility of parent rated scared in caregiver report for identifying youth anxiety disorders. They suggested that clinician can utilise this as screening for youth anxiety disorder and improve the accuracy of diagnosis.

Rhonda Boyd et al examined the properties of scared in African – American high school students0, a 41-questionnaire item was administered to 111 children, 30% of the scored high to warrant further assessment for anxiety disorder, and girls showed significantly higher anxiety symptoms.

Arwa Arab examined psychometric properties of five structure – self report scared in a sample of children and adolescence boys and girls in Saudi Arabia in 2015. They highlighted female had higher symptoms. Anxiety symptoms was elevated over time with girls, while adolescence boys showed reduction in anxiety symptoms with age.

Siu Mui cha, Chi Hung Leung analysed factor structure of scared in a sample of Chinese adolescence in Hong Kong. They collected data from 5226

youth aged 12 – 18 years. they revealed that five factor subscales had high reliability. However, data collected in this study does not fit the original five factor model. This result highlighted a seven-factor model analysis which includes the four original factors and three new factors (fear of loneliness, separation fear, worry about harm), representing different aspects of separation anxiety disorder should be included in scared to enhance the validity.

A study on psychometric properties of scared in Brazilian children using Portuguese version was done by Luciano Isolan [62]. He evaluated 2410 students. They assessed 2537 Brazilians students from 6 schools of aged 9 – 18 years. This study revealed female scored higher anxiety symptoms than males and scared is a valid tool to screen anxiety symptom in Brazilian.

VARIOUS SCALES USED TO SCREEN ANXIETY IN CHILDREN AND ADOLESCENCE

Several scales are available to diagnose anxiety disorder. Clinically experienced persons like psychiatrist, clinical psychologist, development and behaviour paediatrician and social workers conduct structured and semi structural interview for confirming the diagnosis.

- Schedule for Affective Disorders and Schizophrenia for School – Age children, Epidemiologic version – 5 (K- SADS – E5)
- Schedule for Affective Disorders and Schizophrenia for School Age Children, Present and Lifetime Version (K-SADS – PL)

- Diagnostic interview for Children and Adolescence – Revised (DICA – R)
- Multidimensional Anxiety Scale for Children (MASC)
- The Hamilton Anxiety Rating Scale
- Anxiety Disorders Interview Schedule for Children (ADIS)
- The Anxiety Rating Scale for Children – Revised
- Revised Children Manifest Anxiety Scale (RCMAS)
- Child Behaviour Checklist (CBCL), Teacher Report Form (TRF)
- Composite International Diagnostic Interview (CIDI)
- Screening for Childhood Anxiety Related Emotional Disorder (SACRED)

VALIDITY OF SCARED SCALE

It has child self-report SCARED – C, and parent report SCARED – P version. Each version consists of 41 questionnaires. Both version has identical questions. When compared with other screening scales, scared scale showed good divergent and convergent validity. It was originally developed in English language for screening a clinical population. It has many advantages as a screening scale for anxiety disorder. It has good reliability. The five-factor analysis have good internal consistency that showed by Cronbach's alpha and good test retest reliability. It also shows good discriminant validity. It differentiates adolescence with and without anxiety disorder. Specific anxiety disorder can be diagnosed using this scale. It differentiates anxiety disorder from

depressive disorder [41,42]. When compared with (A- DISC) – Anxiety Disorder Interview Schedule for Children Shows good convergent validity. It also has good sensitivity and specificity [43]. It is economical and easily administered screening scale for anxiety disorder.

Scared scale is meaningfully and positively related to other anxiety questionnaires [44]. Scared scale was translated in many languages and it was found that it is a reliable instrument to screen anxiety [45].

Psychometric properties of the scared scale were good for the successful translation of scared into German language [46]. Hence scared is a valid, reliable and fragile screening tool

AIM AND OBJECTIVES

AIM OF THE STUDY:

To screen for various types of Anxiety Disorders in Higher Secondary school students in rural areas using SCARED scale

SPECIFIC OBJECTIVES:

- To screen for generalized anxiety disorder in higher secondary school students using SCARED scale
- To screen for panic disorder or significant somatic symptoms in higher secondary school students using SCARED scale
- To screen for social anxiety disorder in higher secondary school students using SCARED scale
- To screen for significant school avoidance in higher secondary school students using SCARED scale
- To screen for separation anxiety disorder in higher secondary school students using SCARED scale

MATERIALS AND METHODS:

This is a descriptive study, done at Government Mohan Kumaramangalam Medical College and Hospital, Department of Paediatrics. Study was done in schools attached to Adolescent Health Programme to the department. Ethical committee approved this study for research studies of Government Mohan Kumaramangalam Medical College and Hospital.

REFERENCE POPULATION

The reference population of this study belongs to higher secondary school children of,

SOURCE POPULATION

Group of children from whom we are going to collect and analyse the data and obtain the results are referred as source population. Students of class 9^{th} and 10^{th}std in government higher secondary school are involved in this study.

INCLUSION CRITERIA

All children belonging to 9^{th} and 10^{th} std of various groups.

STUDY PERIOD

One year and ten months from January 2018 to October 2019.

STUDY SAMPLE

This is a type of non – random sampling study. Power of the study is reduced in non – random study, and the results obtained in this study cannot be extrapolated over the reference population. This is because random sampling type of study needs large sample size and is time consuming. However random sampling increases the power of study and reduces bias.

SAMPLE SIZE

The sample size includes 500 students belonging of 9^{th} and 10^{th} std from two higher secondary schools which comes under Adolescence Health

Programme of Government Mohan Kumaramangalam Medical College Hospital. This study includes 350 girls and 150 boys.

TOOLS USED IN THE STUDY

The tool used in this study is SCARED scale, which is used to screen for child anxiety related disorder.

It consists of two versions

1. Child version
2. Parent version

Both version consist of 41 similar questions. Children have to answer the question which explain a situation they are facing in the last three months. Each question has three answers like never, somewhat true and true always. Each answer has a score and the individual score are added to diagnose the presence of anxiety. Specific anxiety disorder is diagnosed by adding the score of specific questions.

Out of 41 questions if the child has scored more than or equal to 25 it indicated the presence of anxiety disorder.

For diagnosing panic disorder, a score of 7 for questions 1,6,9,12,15,18,19,22,24,27,30,34,38 should be obtained.

For diagnosing generalized anxiety disorder a score of 9 for questions 5,7,14,21,23,28,33,35,37 should be obtained.

For diagnosing separation anxiety disorder a score of 5 for questions 4,813,16,20,25,29,31 should be obtained.

For diagnosing social anxiety disorder a score of 8 for questions 3,10,26,32,39,40,41 should be obtained.

For diagnosing significant school avoidance, a score of 3 for questions 2,11,17,36 should be obtained.

DATA COLLECTION PROCEDURE

Data is collected from 9^{th} and 10^{th} std students of corporation school using the SCARED scale. The children were informed well about the study and informed consent was obtained from them. Children were explained about the benign nature of the study. General introductory talk was given to children to get a rapport with them and the children were made comfortable. Questions were given to the children and one to one type of interview was taken. Their answers and disorder if they have if any was kept confidentially.

Parents of their children are asked to attend the parent – teachers meeting. In the meeting introductory talk about the anxiety disorder in children and adolescence were given. Necessity for screening anxiety disorder, early diagnosis and treatment if needed were discussed. They are also told about the importance of parent's cooperation when the treatment is needed. If needed they were referred to psychiatrist.

RESULTS

TABLE 2: GENDER DISTRIBUTION

GENDER DISTRIBUTION IN SAMPLE

SEX	MALE	FEMALE
SUBJECTS	150	350

Total number of students screened: 500

In this study we enrolled 500 students with boys 150 students and girls 350 students of ratio is 3:7

CHILD VERSION

Prevalence of various anxiety disorders

TABLE 3: CHILD VERSION – ANXIETY DISORDERS

S.NO	DISORDER	NUMBER	PERCENTAGE
1.	Panic Disorder	36	7.2%
2.	Generalised Anxiety Disorder	39	7.8%
3.	Separation Anxiety Disorder	31	6.2%
4.	Social Anxiety Disorder	42	8.4%
5.	Significant School Avoidance	26	5.2%

Percentage analysis reveals that out of the total 500 students screened 7.2% (36) were found to have panic disorder, 7.8 %(39) generalised anxiety disorder, 6.2 % (31) experienced separation anxiety, 8.4% (42) social anxiety and 5.2% (26) significant school avoidance.

CHART 1: CHILD VERSION – SPECIFIC ANXIETY DISORDER

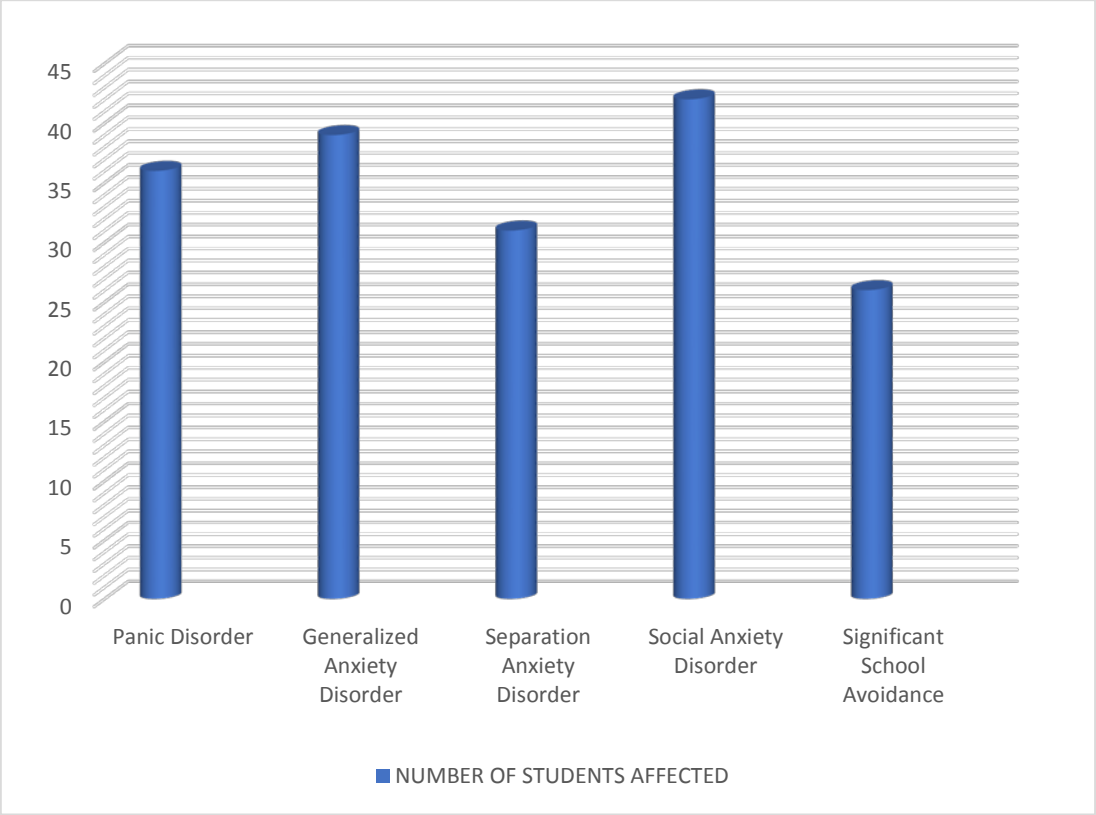
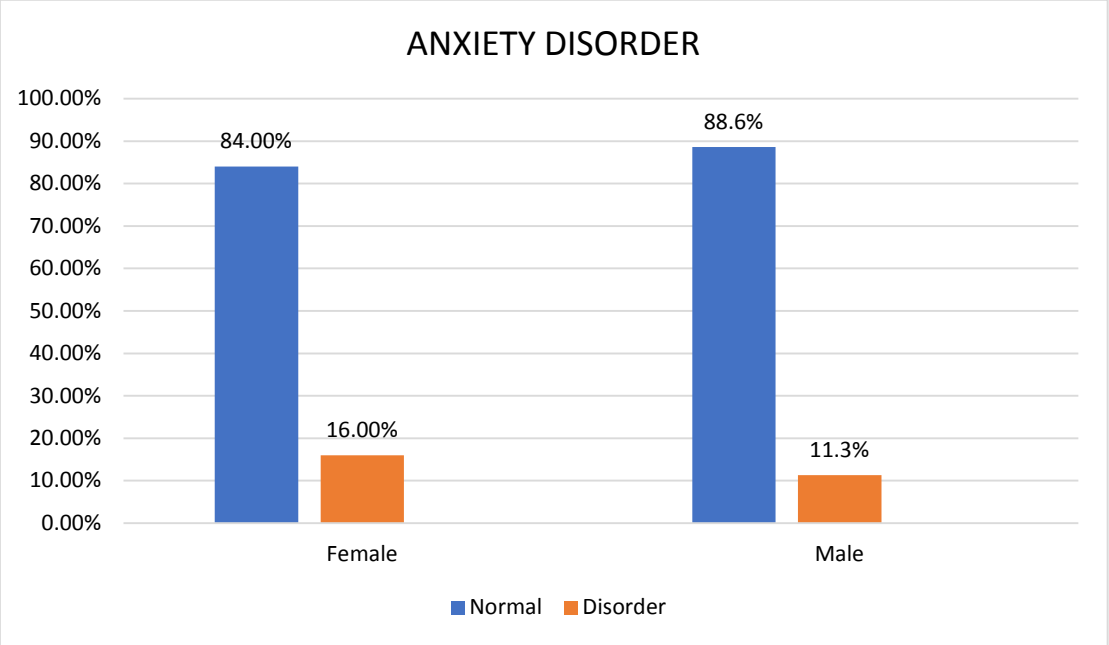


TABLE 4: COMPARISION OF TOTAL ANXIETY DISORDER BETWEEN MALE AND FEMALE IN CHILD

			Gender	
			Female	**Male**
TOTAL	Normal	Count	294	133
		%	84%	88.6%
	Disorder	Count	56	17
		%	16%	11.3%

CHART 2: TOTAL ANXIETY DISORDER BETWEEN MALE AND FEMALE IN CHILD

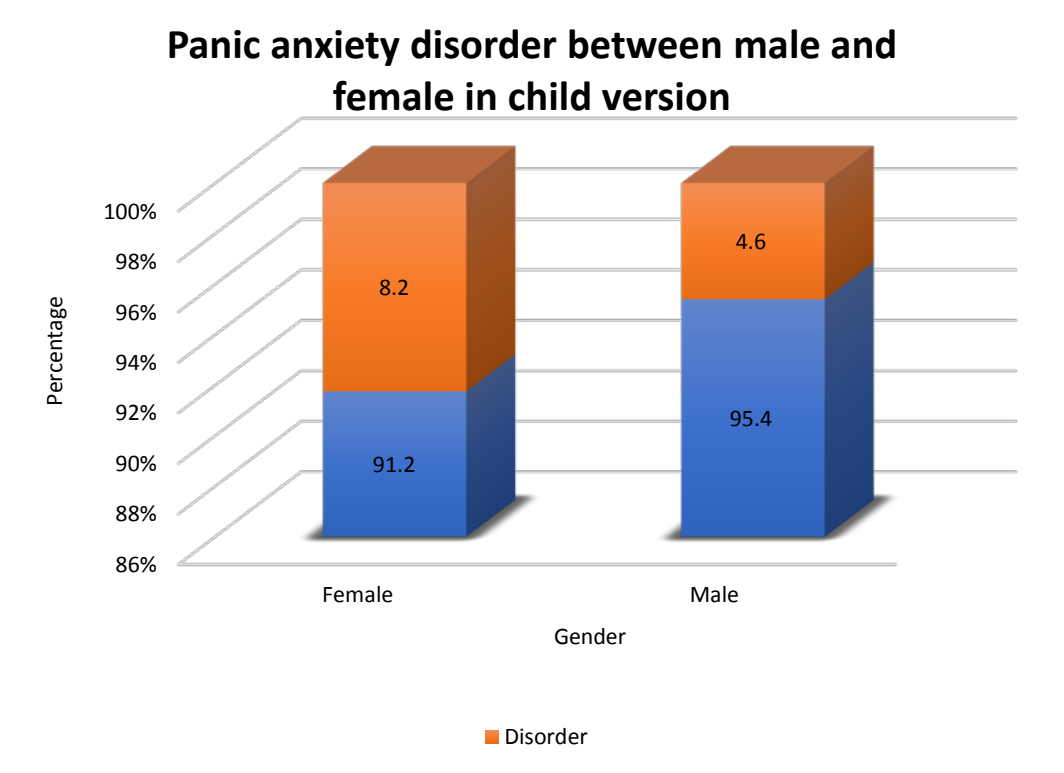


Percentage analysis reveals in child version 16 % (56) of female children and 11.3 % (17) of male children experienced anxiety symptoms.

TABLE 5: COMPARISION OF PANIC ANXIETY DISORDER BETWEEN MALE AND FEMALE IN CHILD VERSION

			Gender	
			Female	Male
Panic	Normal	Count	321	143
		%	91.7%	95.3%
	Disorder	Count	29	7
		%	8.2%	4.6%

CHART 3: PANIC DISORDER IN CHILD VERSION

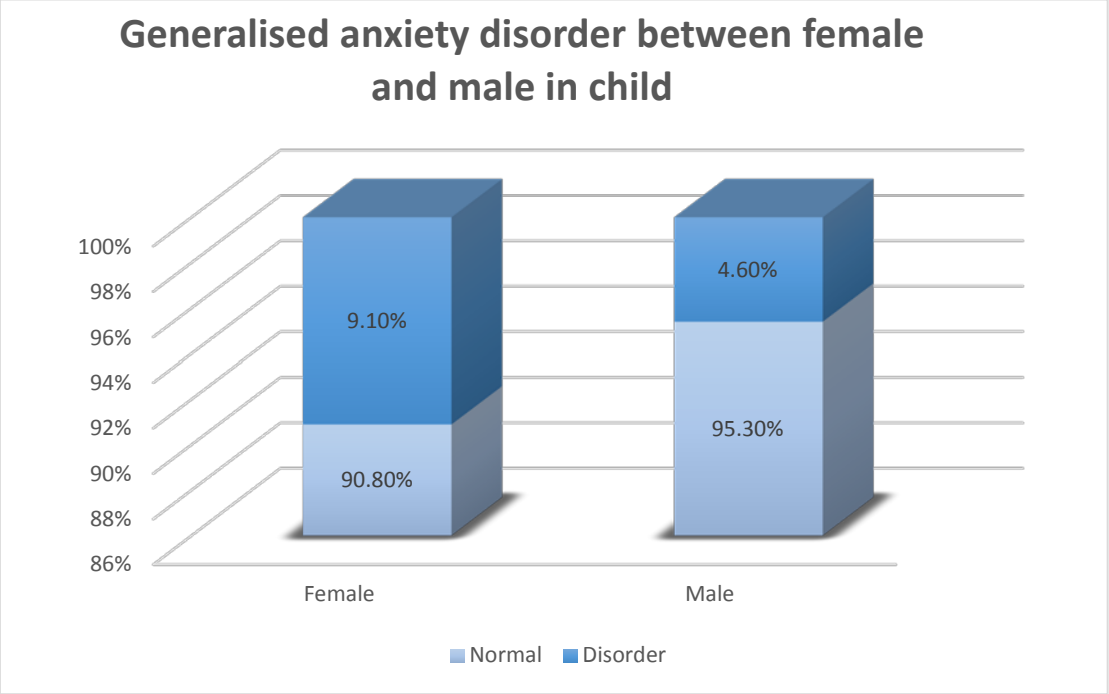


Percentage analysis reveals panic disorder in child version is 7.2% students screened positive with male 4.6% (7) and female 8.2 % (29) experienced panic disorder.

TABLE 6: GENERALIZED ANXIETY DISORDER IN CHILD VERSION

			Gender	
			Female	Male
Generalised anxiety	Normal	Count	318	143
		%	90.8%	95.3%
	Disorder	Count	32	7
		%	9.1%	4.6%

CHART 4: GENERALIZED ANXIETY DISORDER IN CHILD VERSION

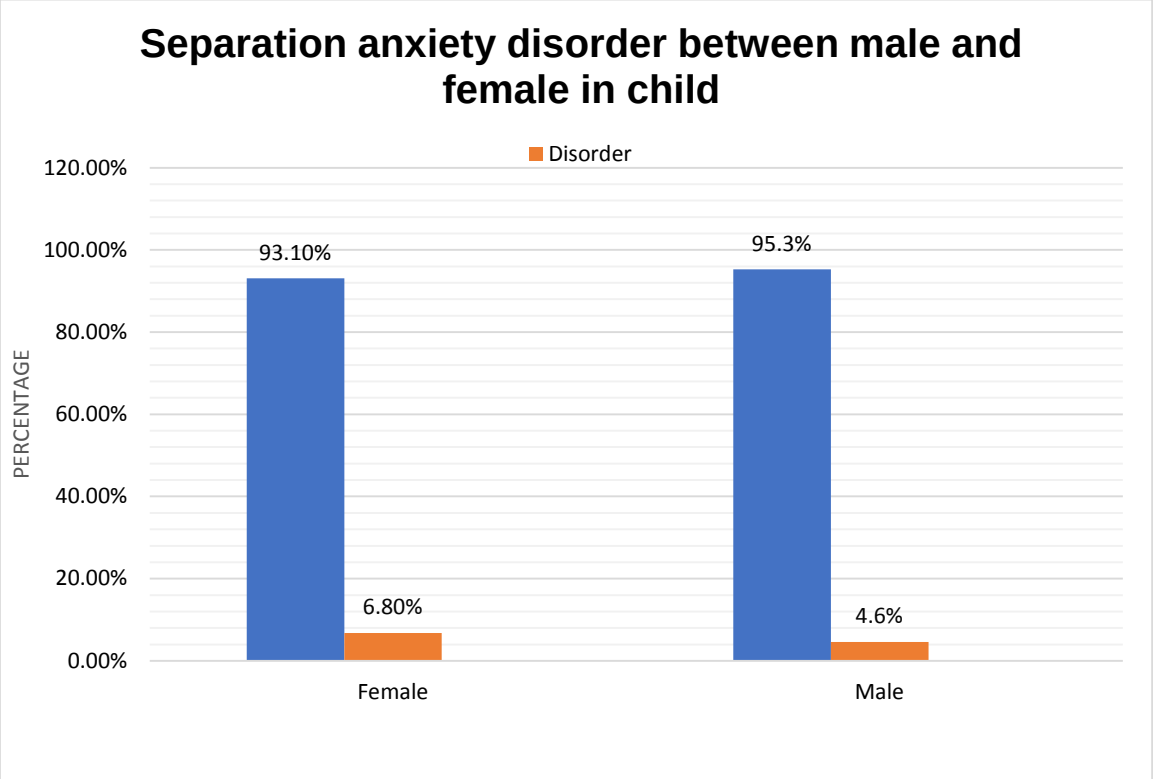


Percentage analysis of generalized anxiety disorder in child version shows 7.8 % (39), with males 4.6 % (7) and female 9.1 % (32) experienced generalized anxiety disorder.

TABLE 7: SEPARATION ANXIETY DISORDER IN CHILD VERSION

			Gender	
			Female	Male
Separation anxiety	Normal	Count	326	143
		%	93.1%	95.3%
	Disorder	Count	24	7
		%	6.8%	4.6%

CHART 5: SEPARATION ANXIETY DISORDER IN CHILD VERSION

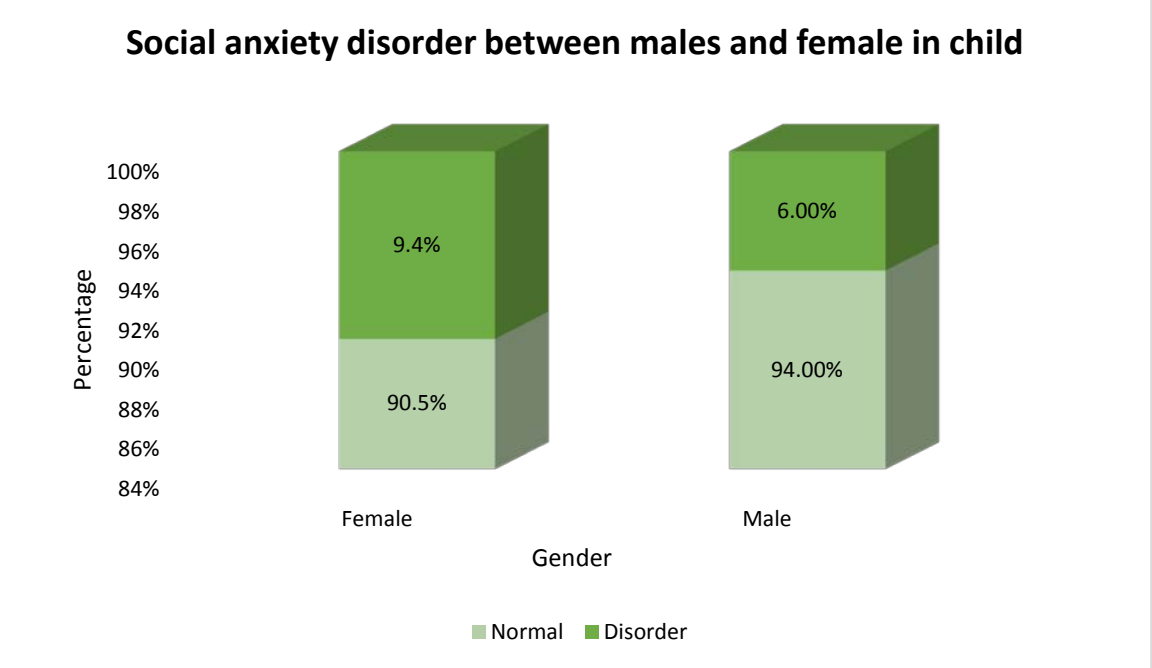


Percentage analysis reveals male students 7 (4.6 %) and female students 24 (6.8 %) experienced separation anxiety disorder

TABLE 8: SOCIAL ANXIETY DISORDER IN CHILD VERSION

			Gender	
			Female	Male
Social anxiety	Normal	Count	317	141
		%	90.5%	94%
	Disorder	Count	33	9
		%	9.4%	6%

CHART 6: SOCIAL ANXIETY DISORDER IN CHILD VERSION

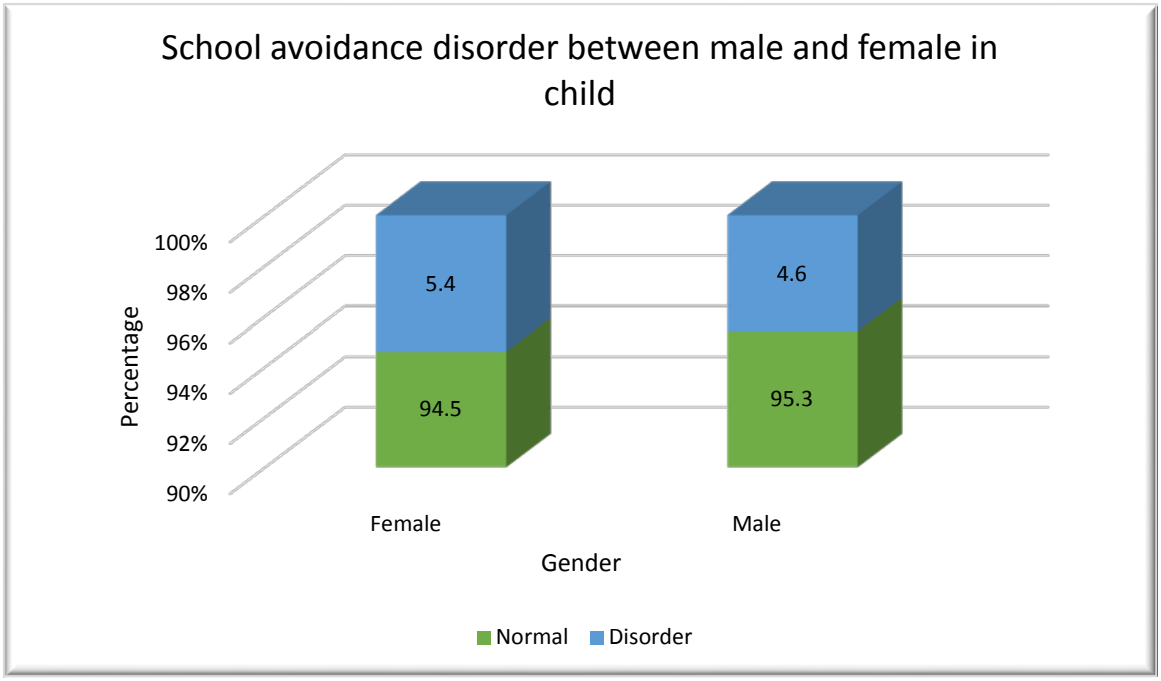


Percentage analysis in child version showed that out of 150 males screened 9 (6 %) and out of 350 female students 33 (9.4 %) experienced social anxiety disorder.

TABLE 9: SIGNIFICANT SCHOOL AVOIDANCE IN CHILD VEERSION

			Gender	
			Female	Male
School avoidance	Normal	Count	331	143
		%	94.5%	95.3%
	Disorder	Count	19	7
		%	5.4%	4.6%

CHART 7: SIGNIFICANT SCHOOL AVOIDANCE IN CHILD VERSION

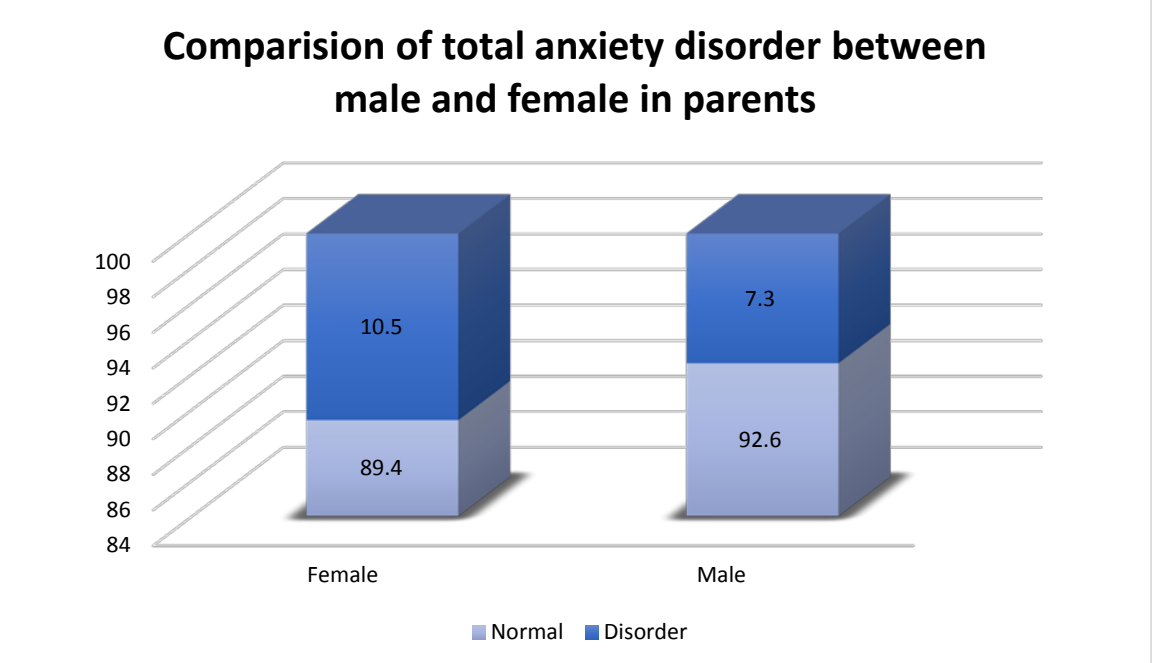


Percentage analysis in child version showed that out of 150 males screened 7 (4.6 %) and out of 350 female students 19 (5.4 %) experienced significant school avoidance disorder.

TABLE 10: COMPARISION OF TOTAL ANXIETY DISORDER BETWEEN MALE AND FEMALE IN PARENTS

			Gender		Total
			Female	Male	
TOTAL	Normal	Count	313	139	452
		%	89.4%	92.6%	90.4%
	Disorder	Count	37	11	48
		%	10.5%	7.3%	9.6%
Total		Count	350	150	500
		%	100.0%	100.0%	100.0%

CHART 8: TOTAL ANXIETY DISORDER BETWEEN MALE AND FEMALE IN PARENTS



Percentage analysis reveals that out of 150 males parents 11 (7.3 %) and out of 350 female parents 37 (10.5 %) experienced anxiety disorder

TABLE 11: PARENT VERSION ANXIETY DISORDER

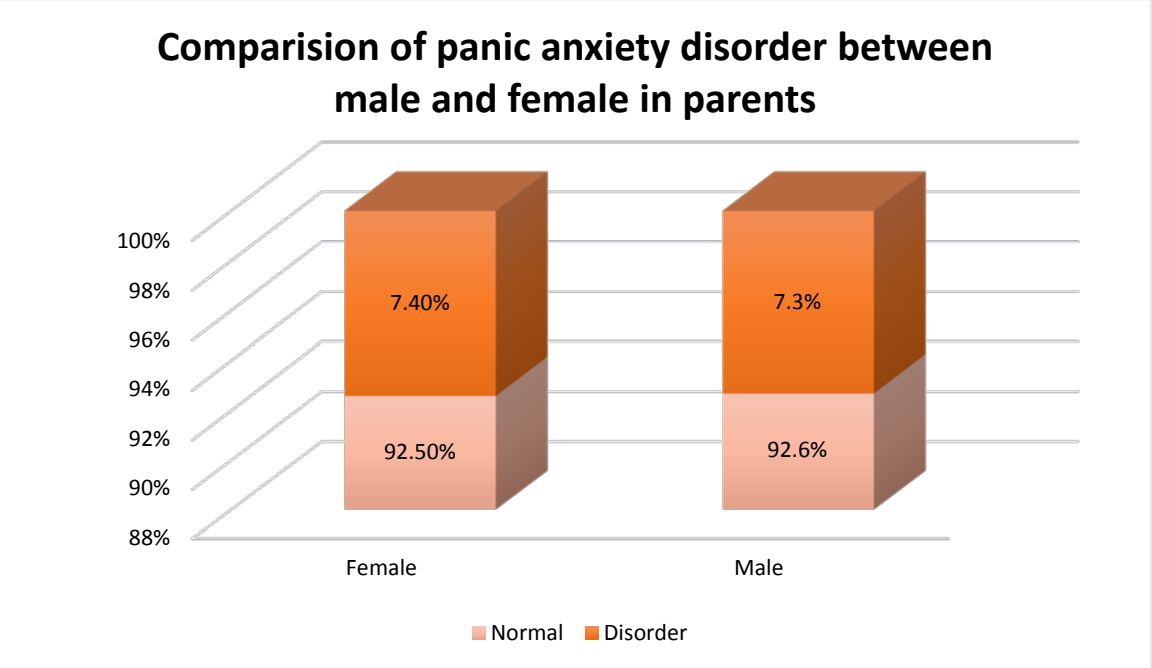
S.NO	DISORDER	NUMBER	PERCENTAGE
1.	Panic Disorder	37	7.4 %
2.	Generalised Anxiety Disorder	14	2.8%
3.	Separation Anxiety Disorder	44	8.8%
4.	Social Anxiety Disorder	37	7.4 %
5.	Significant School Avoidance	35	7 %

Percentage analysis of SCARED scale using parent version showed that 37 (7.4 %) were found to have panic disorder, 14 (2.8%) have generalized anxiety disorder, 44 (8.8 %) have separation anxiety disorder, 37 (7.4 %) have social anxiety disorder and 35 (7 %) have significant school refusal

TABLE 12: COMPARISION OF PANIC DISORDER BETWEEN MALE AND FEMALE IN PARENTS

			Gender	
			Female	Male
Panic	Normal	Count	324	139
		%	92.5%	92.6%
	Disorder	Count	26	11
		%	7.4%	7.3%

CHART 9: PANIC DISORDER BETWEEN MALE AND FEMALE IN PARENTS

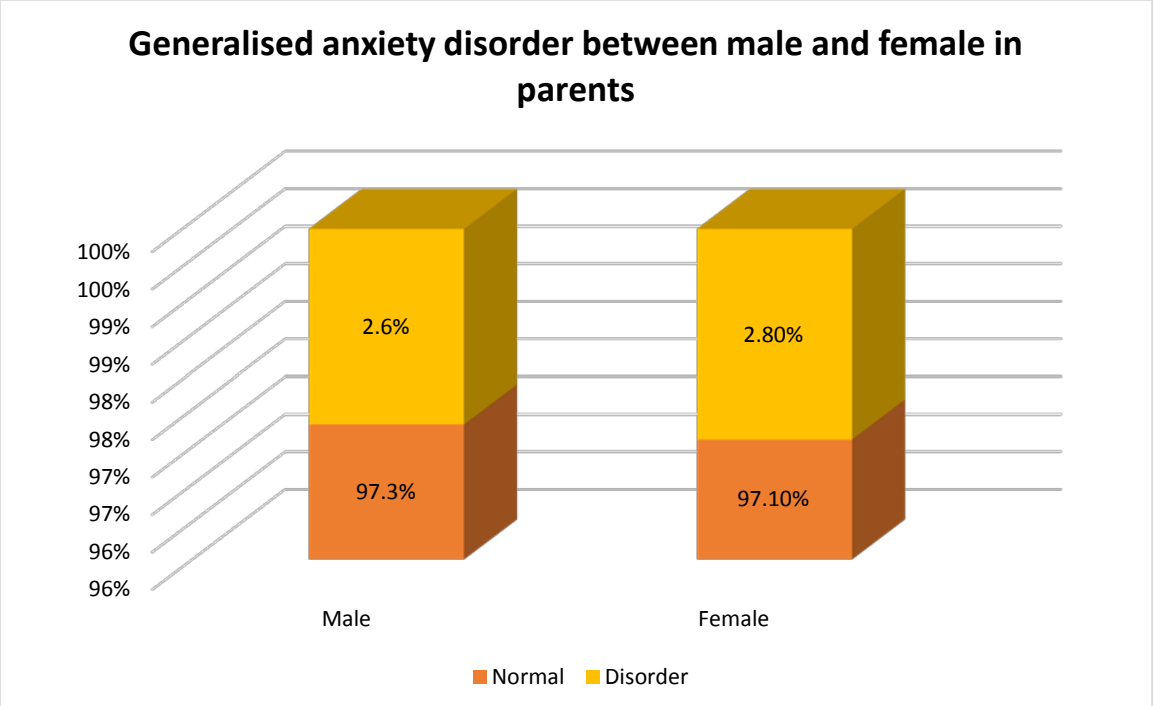


Analysis reveals that out of 150 male parents 11 (7.3 %) and out of 350 female parents 26 (7.4 %) showed panic disorder

TABLE 13: COMPARISION OF GENERALIZED ANXIETY DISORDER BETWEEN MALE AND FEMALE IN PARENTS

			Gender	
			Female	Male
Generalised anxiety	Normal	Count	340	146
		%	97.1%	97.3%
	Disorder	Count	10	4
		%	2.8%	2.6%

CHART 10: GENERALIZED ANXIETY DISORDER BETWEEN MALE AND FEMALE IN PARENTS

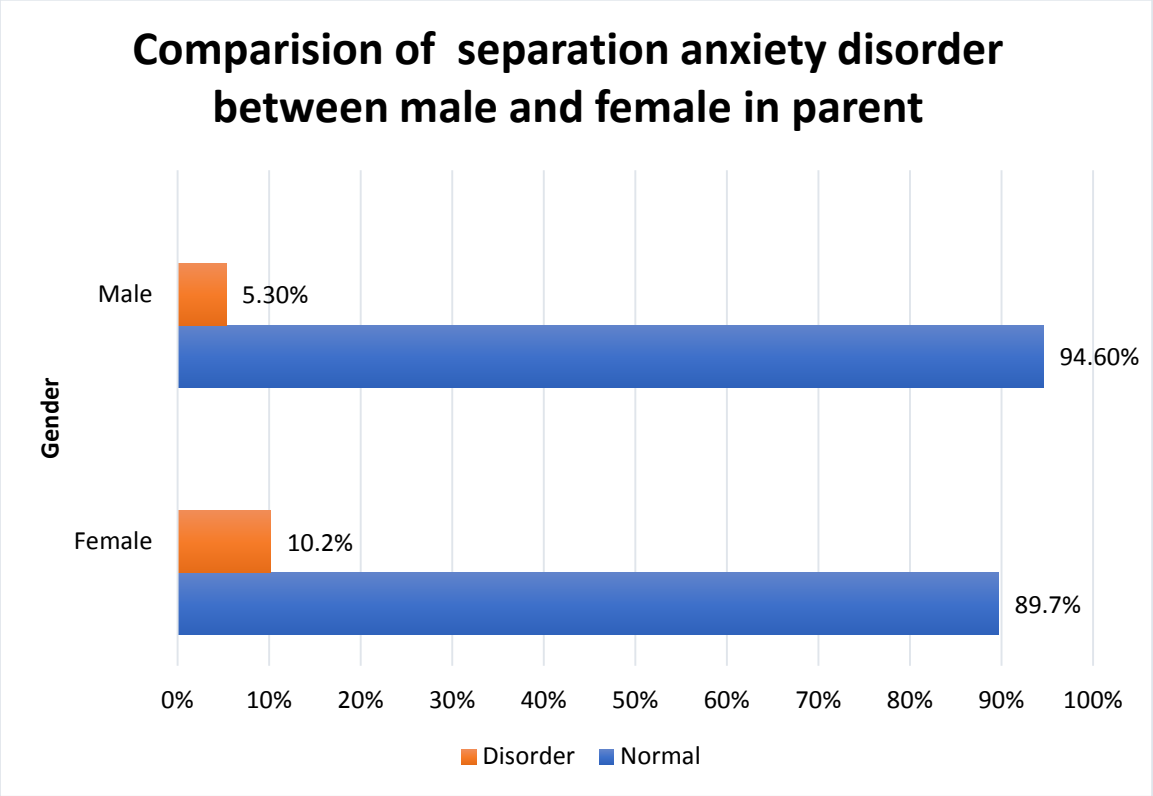


Percentage analysis in parent version showed that out of 150 males screened 4 (2.6 %) and out of 350 female students 10 (2.8 %) experienced generalised anxiety disorder

TABLE 14: COMPARISION OF SEPARATION ANXIETY BETWEEN MALE AND FEMALE IN PARENTS

			Gender	
			Female	Male
Separation anxiety	Normal	Count	314	142
		%	89.7%	94.6%
	Disorder	Count	36	8
		%	10.2%	5.3%

CHART 11: SEPARATION ANXIETY DISORDER BETWEEN MALE AND FEMALE IN PARENTS

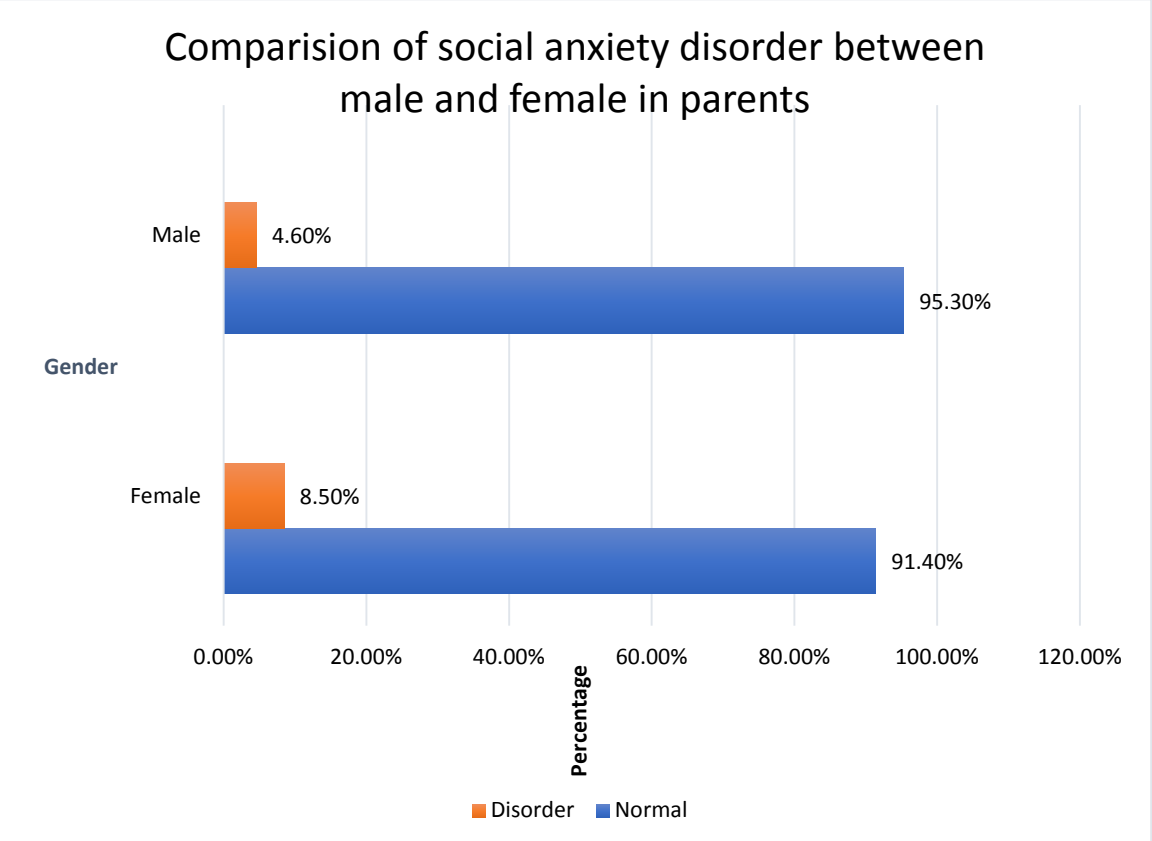


Percentage analysis in parent version showed that out of 150 males screened 8 (5.3 %) and out of 350 female students 36 (10.2 %) experienced separation anxiety disorder

TABLE 15: COMPARISION OF SOCIAL ANXIETY DISORDER BETWEEN MALE AND FEMALE IN PARENTS

			Female	Male
Social anxiety	Normal	Count	320	143
		%	91.4%	95.3%
	Disorder	Count	30	7
		%	8.5%	4.6%

CHART 12: SOCIAL ANXIETY DISORDER BETWEEN MALE AND FEMALE IN PARENTS

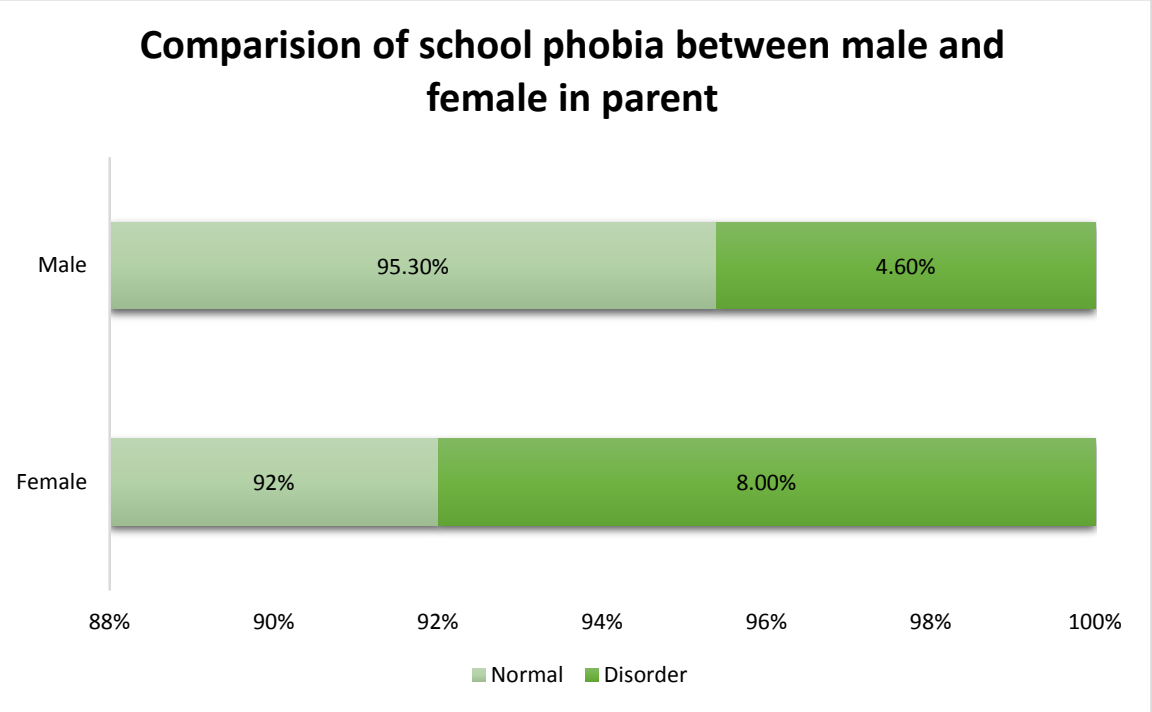


Percentage analysis in parent version showed that out of 150 males screened 7 (4.6 %) and out of 350 female students 30 (8.5 %) experienced separation anxiety disorder

TABLE 16: COMPARISION OF SCHOOL AVOIDANCE BETWEEN MALE AND FEMALE IN PARENTS

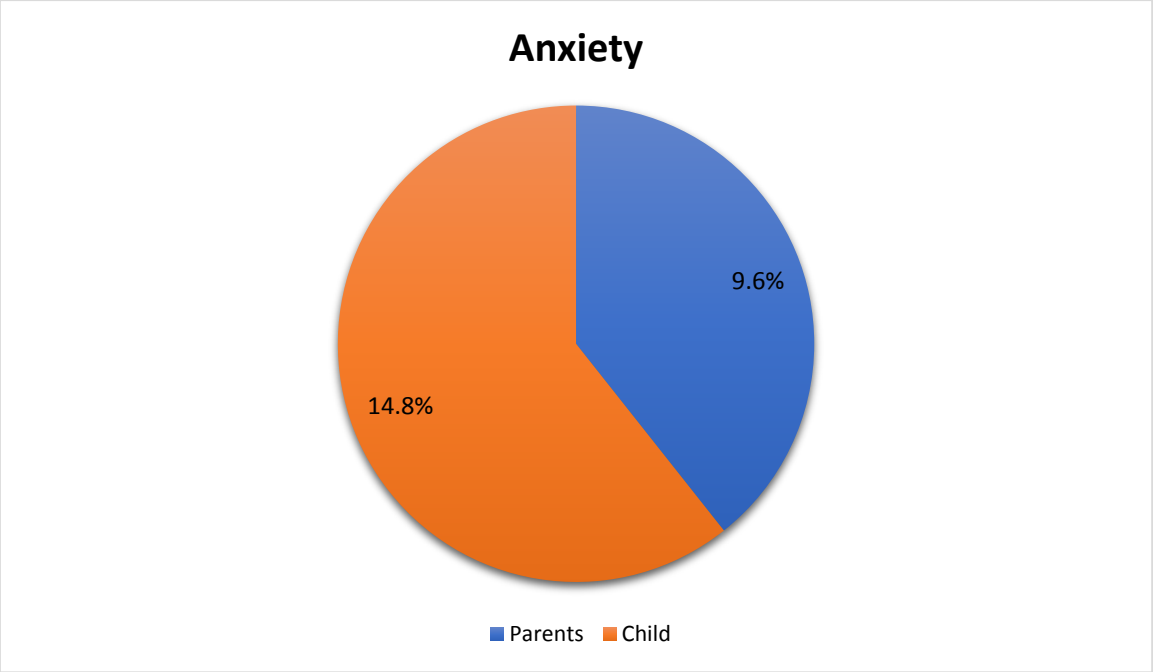
			Gender	
			Female	**Male**
School avoidance	Normal	Count	322	143
		%	92%	95.3%
	Disorder	Count	28	7
		%	8%	4.6%

CHART 13: SCHOOL AVOIDANCE DISORDER BETWEEN MALE AND FEMALE IN PARENTS



Percentage analysis in parent version showed that out of 150 males screened 7 (4.6 %) and out of 350 female students 28 (8 %) experienced school avoidance disorder

CHART 14: TOTAL PERCENTAGE OF ANXIETY DISORDER IN CHILD AND PARENT VERSION



Percentage analysis revealed that total percentage of children experience anxiety symptoms in child version is 14.8 % and in parent version is 9.6 %

TABLE 17: GENDER DISTRIBUTION IN SPECIFIC ANXIETY DISORDER IN CHILD AND PARENT VERSION

	Parent		Child	
	Female	**Male**	**Female**	**Male**
Panic	8.2	4.6	7.4	7.3
Generalised anxiety	9.1	4.6	2.8	2.6
Separation anxiety	6.8	4.6	10.2	5.3
Social anxiety	9.4	6	8.5	4.6
School avoidance	5.4	4.6	8	4.6

Analysis of gender distribution as per scared scale shows higher prevalence in girls. 7.3 % of boys in child version and 4.6 % in parent version had panic disorder whereas in girls it is about 7.4 % in child report and 8.2 % in parent report. Generalized anxiety disorder in female is 2.8 % in child version and 9.1% in parent version and in males is about 2.6% in child version and 4.6 % in parent version, separation anxiety disorder is about 10.2 % of females in child version and 6.8 % in parent version, in males is about 5.3 % in child version and 4.6 % in parent version, social anxiety disorder in females is about 8.5 % in child and 9.4 % in parent version and in male is about 4.6 % in child report and 6 % in parent report, school avoidance in females is about 8 % in child report and 5.4 % in parent report and in males is about 4.6 % in child version and 4.6 % in parent version.

TABLE 18: COMPARISION OF TOTAL ANXIETY DISORDER BETWEEN CHILD AND PARENT VERSION

			Groups	
			Parent	**Child**
TOTAL	Normal	Count	452	426
		%	90.4%	85.2%
	Disorder	Count	48	74
		%	9.6%	14.8%

Percentage analysis shows child version has higher prevalence of anxiety disorders. 14.8 % of child version shows positive symptoms whereas in parent version it reveals 9.6 % of positivity.

TABLE 19: COMPARISION OF PANIC ANXIETY DISORDER BETWEEN CHILD AND PARENT VERSION

			Groups		Total
			Parent	**Child**	
Panic	Normal	Count	463	461	924
		%	92.6%	92.2%	94.4%
	Disorder	Count	37	39	76
		%	7.4%	7.8%	7.6%
Total		Count	500	500	1000
		%	100.0%	100.0%	100.0%

Analysis of percentage for panic anxiety disorder in both child and parent version shows high prevalence in child report. Panic anxiety symptoms in child version is about 7.8 % and in parent version is 7.4 %. Overall prevalence of panic anxiety disorder is 7.6%

TABLE 20: COMPARISION OF GENERALIZED ANXIETY DISORDER BETWEEN PARENT AND CHILD VERSION

			Groups		Total
			Child	**Parent**	
Generalised anxiety	Normal	Count	461	486	947
		%	92.2%	97.2%	94.7%
	Disorder	Count	39	14	53
		%	7.8%	2.8%	5.3%
Total		Count	500	500	1000
		%	100.0%	100.0%	100.0%

Analysis of percentage for generalised anxiety disorder in both child and parent version shows high prevalence in child version. generalized anxiety symptoms in child version is about 7.8 % and in parent version is 2.8 %. Overall prevalence of generalized anxiety disorder is about 5.3%

TABLE 21: COMPARISION OF SEPERATION ANXIETY DISORDER BETWEEN CHILD AND PARENT VERSION

			Groups		Total
			Parent	**Child**	
Separation anxiety	Normal	Count	456	469	925
		%	91.2%	93.8%	92.5%
	Disorder	Count	44	31	75
		%	8.8%	6.2%	7.5%
Total		Count	500	500	1000
		%	100.0%	100.0%	100.0%

Analysis of percentage for separation anxiety disorder in both child and parent version shows high prevalence in parent report. Separation anxiety symptoms in child version is about 6.2 % and in parent version is 8.8 %. Overall prevalence of anxiety disorder is about 7.5%

TABLE 22: COMPARISION OF SOCIAL ANXIETY DISORDER BETWEEN CHILD AND PARENT VERSION

			Groups		Total
			Parent	Child	
Social anxiety	Normal	Count	463	458	921
		%	92.6%	91.6%	92.1%
	Disorder	Count	37	42	79
		%	7.4%	8.4%	7.9%
Total		Count	500	500	1000
		%	100.0%	100.0%	100.0%

Analysis of percentage for social anxiety disorder in both child and parent version shows high prevalence in child report. Social anxiety symptoms in child version is about 8.4 % and in parent version is 7.4 %. Overall prevalence is about 7.9 %.

TABLE 23: COMPARISION OF SCHOOL AVOIDANCE DISORDER BETWEEN CHILD AND PARENT VERSION

			Groups		Total
			Parent	Child	
School avoidance	Normal	Count	465	476	941
		%	93%	94.8%	94.1%
	Disorder	Count	35	26	61
		%	7%	5.2%	6.1%
Total		Count	500	500	1000
		%	100.0%	100.0%	100.0%

Analysis of percentage for school avoidance disorder in both child and parent version shows high prevalence in Parent report. School avoidance symptoms in child version is about 5.2 % and in parent version is 7 %. Overall prevalence is about 6.1%.

TABLE 24: PREDICTIVE VALUE OF PANIC DISORDER IN PARENT AND CHILD VERSION

S NO	VARIABLE		IN BOTH	PERCENT IN CHILD VERSION	PERCENT IN PARENT VERSION	P VALUE
1.	PANIC DISORDER	SCREEN NEGATIVE	436	94%	94.2%	0.001
		SCREEN POSITIVE	9	25%	24.3%	

There is statistically significance association between the predictive value of panic disorder in parent and child version of anxiety disorder with significant p – value of < 0.001.

TABLE 25: PREDICTIVE VALUE OF GENERALIZED ANXIETY DISORDER IN PARENT AND CHILD VERSION

S NO	VARIABLE		IN BOTH	PERCENT IN CHILD VERSION	PERCENT IN PARENT VERSION	P VALUE
1.	GENERALISED ANXIETY DISORDER	SCREEN NEGATIVE	457	99.1%	94%	0.001
		SCREEN POSITIVE	10	25.6%	71.4%	

There is statistically significance association between the predictive value of generalised anxiety disorder in parent and child version of anxiety disorder with significant p – value of < 0.001.

TABLE 26: PREDICTIVE VALUE OF SEPARATION ANXIETY DISORDER IN PARENT AND CHILD VERSION

S NO	VARIABLE		IN BOTH	PERCENT IN CHILD VERSION	PERCENT IN PARENT VERSION	P VALUE
1.	SEPARATION ANXIETY DISORDER	SCREEN NEGATIVE	448	95.5%	98.2%	0.001
		SCREEN POSITIVE	23	74.2%	52.3%	

There is statistically significance association between the predictive value of separation anxiety disorder in parent and child version of anxiety disorder with significant p – value of < 0.001.

TABLE 27: PREDICTIVE VALUE OF SOCIAL ANXIETY DISORDER IN PARENT AND CHILD VERSION

S NO	VARIABLE		IN BOTH	PERCENT IN CHILD VERSION	PERCENT IN PARENT VERSION	P VALUE
1.	SOCIAL ANXIETY DISORDER	SCREEN NEGATIVE	442	96.5%	95.5%	0.001
		SCREEN POSITIVE	21	50%	56.8%	

There is statistically significance association between the predictive value of social anxiety disorder in parent and child version of anxiety disorder with significant p – value of < 0.001.

TABLE 28: PREDICTIVE VALUE OF SCHOOL PHOBIA DISORDER IN PARENT AND CHILD VERSION

S NO	VARIABLE		IN BOTH	PERCENT IN CHILD VERSION	PERCENT IN PARENT VERSION	P VALUE
1.	SCHOOL PHOBIA	SCREEN NEGATIVE	454	95.8%	97.6%	0.001
		SCREEN POSITIVE	15	57.7%	42.9%	

There is statistically significance association between the predictive value of school phobia in parent and child version of anxiety disorder with significant p – value of < 0.001.

TABLE 29: CORRELATION BETWEEN BOTH CHILD ABD PARENT VERSION

Descriptive Statistics

	Mean	Std. Deviation	N
TOTAL CHILD VERSION	19.97	6.532	500
TOTAL PARENT VERSION	17.02	6.269	500

Correlations

		TOTAL CHILD VERSION	TOTAL PARENT VERSION
TOTAL CHILD VERSION	Pearson Correlation	1	.503**
	Sig. (2-tailed)		.000
TOTAL PARENT VERSION	Pearson Correlation	.503**	1
	Sig. (2-tailed)	.000	

****. Correlation is significant at the 0.01 level (2-tailed).**

There is positive correlation – Pearson correlation of value

(0.503) between the child and parent version with significant p – value of < 0.001

DISCUSSION

TABLE 30: PREVALENCE OF ANXIETY

STUDIES	PREVALENCE
Khalid et al [74]	48.9%
Sussan jo perl mutter et al [80]	8 – 10 %
Sibnath et al [77]	23.5 %
Anitha gaur et al [78]	2.89 %
Jayasree et al	54.7 %
Egger et al	0.3 – 9.4 %
Srinath et al	4.1 %
Ayesha servat et al [79]	11%
Raakhee A.S and Aparna. N et al [47]	56.8 %
Chaudry et al [81]	2.84%
Sighal et al [77]	6.6 %
Our study	12.2 %

Our study showed higher prevalence of anxiety disorder in school children of about 14.8 % in child version and 9.6 % in parent version and total prevalence of anxiety is 12.2 % which is similar to Ayesha and Sibnath et al study. Other studies show prevalence range from 0.8% to 23.5 %. High prevalence in our study may be due to fact that children we examined are highly ambitious.

GENDER DISTRIBUTION OF ANXIETY DISORDER

TABLE 31: GENDER DISTRIBUTION IN ANXIETY DISORDER

Gender	Child version	Parent version	Total
Girls	16 %	10.5%	9.3%
Boys	11.3 %	7.3 %	2.8%

The gender difference in anxiety in our study is 16 % of female in child version and 10.5 % in parent version showed higher prevalence than males with 11.3 % in child version and 7.3 % in parent version.Overall prevalence of anxiety in females is 9.3% and in males is 2.8%. A study in UK by Mentha health survey showed higher prevalence in girls. Indian cultural background makes anxiety higher prevalence in girls.

TABLE 32: PREVALENCE OF PANIC DISORDER

Study	Panic disorder
Emerson et al [82]	2.9%
Bierderman et al [88]	6%
Daniel J. Pilowsky et al	12%
H U Wittachen et al	2.6%
Jacinta B McCann	23%
Our study	7.6%

Our study showed prevalence of panic disorder of 7.6%. In child version prevalence is about 7.8% an in-parent version prevalence is 7.4 %, which is similar to Daniel et al study. There is statistically significance association between the predictive value of panic disorder in parent and child version of anxiety disorder with significant p – value of < 0.001.

As these disorder responds well to cognitive therapy, it is necessary to diagnose early and prevent complications

GENERALISED ANXIETY DISORDER

TABLE 33: PREVALENCE OF GENERALISED ANXIETY DISORDER

Study	Prevalence
E Emerson et al [82]	0.6 %
Lucknow study	0.14 %
Raakhee. A.S and Aparna. N et al [47]	13%
Khalid et al [74]	48.9%
Our study	5.3 %

The prevalence of generalized anxiety disorder by our study is 7.8 % in child version and 2.8% by parent version, and total prevalence of generalised anxiety disorder is about 5.3 % which is similar to Raakhee et al study. There is statistically significance association between the predictive value of generalised anxiety disorder in parent and child version of anxiety disorder with significant

p – value of < 0.001.

SEPARATION ANXIETY DISORDER

TABLE 34: PREVALENCE OF SEPARATION ANXIETY DISORDER

STUDIES	PREVALENCE
Susan jo perl mutter et al [80]	3.5 – 5.4 %
Chaudhury et al [81]	4 %
E Emerson et al [82]	3.7 %
Raakhee. A.S and Aparna et al [47]	4.0 %
Our study	7.5 %

The prevalence of separation anxiety disorder in our study is 6.2 % in child version and 8.8 % in parent version. Total prevalence of separation anxiety disorder is 7.5 %. There is statistically significance association between the predictive value of separation anxiety disorder in parent and child version of anxiety disorder with significant p – value of < 0.001. Other studies reveal an average of about 3.75 %. Higher prevalence may be due to urbanisation, working parents and nuclear family.

SOCIAL ANXIETY DISORDER

TABLE 35: PREVALENCE OF SOCIAL ANXIETY DISORDER

STUDIES	PREVALENCE
Richard G Heimberg et al	13.3 %
Raakhee.A.S and Aparna.N et al ([47]	15.6 %
Black et al [68]	3 – 13 %
Our study	7.9 %

The prevalence of social anxiety disorder in our study is 8.4 % in child version and 7.4 % in parent version. Total prevalence of social anxiety disorder is about 7.9 %. There is statistically significance association between the predictive value of social anxiety disorder in parent and child version of anxiety disorder with significant p – value of < 0.001. Which is similar to Black et al study and Richard G Heimberg study. While other studies reveal an incidence ranging from 1% - 13%.

SIGNIFICANT SCHOOL AVOIDANCE

TABLE 36: PREVALENCE OF SCHOOL PHOBIA

Study	Prevalence of school phobia
Burke et al (1987) (69)	1.4 – 5 %
Burke et al (1997) (70)	2 – 4 %
Christoferkennedy (71)	1 – 5 %
Raakhee A.S and Aparna.N et al [47]	9.2 %
Mukeshprabhusamy et al [87]	1 – 2 %
Our study	6.1 %

Our study revealed the prevalence of school phobia of about 5.2 % in child version and 7 % in parent version. Total prevalence of school phobia is about 6.1 %. There is statistically significance association between the predictive value of school phobia in parent and child version of anxiety disorder with significant p – value of < 0.001.

Raakhee et al study shows prevalence of 9.2%. Prevalence of other studies ranges from 1 – 5 %. Separation anxiety as a comorbid disorder associated with school phobia.

SEX DISTRIBUTION IN SOCIAL ANXIETY

TABLE 37: SEX DISTRIBUTION IN SOCIAL ANXIETY DISORDER

Study	Male : Female distribution
Vishal Chhabra et al	207
Vincente E. Caballo et al	115
Our study	63

Our study revealed a higher prevalence social anxiety in females as in child version as 9.4 % and in parent version as 8.5 %. Overall total prevalence of social anxiety is high in females when compared to males.

LIMITATIONS IN OUR STUDY

- When compared to other studies sample size is less in our study
- Two different rating scales can be used and compared
- Every year students can be subjected to SCARED questionnaire and using ROC curve statistics results can be analysed.

CONCLUSION

1. Prevalence of anxiety in our study is 14.8 % in child version and 9.6 % in parent version. Overall prevalence rate of anxiety disorder in our study is 12.2 %
2. Prevalence of panic disorder in our study is 7.8 % in child version and 7.4 % in parent version. Overall prevalence of panic disorder in our study is about 7.6 %
3. Prevalence of generalized anxiety disorder in our study is 7.8 % in child version and 2.8 % in parent version. Overall prevalence of generalized anxiety disorder in our study is about 5.3 %
4. Prevalence of separation anxiety disorder is 6.2 % in child version and 8.8 % in parent version. Overall prevalence if separation anxiety disorder in our study is about 7.5 %
5. Prevalence of social anxiety disorder is 8.4 % in child version and 7.4 % in parent version. Overall prevalence of social anxiety disorder is about 7.9 %
6. Prevalence of social phobia is 5.2 % in child version and 7 % in parent version. Overall prevalence of school avoidance is about 6.1 %
7. Prevalence of anxiety for females in our study is 9.3% and males is 2.8%. Female has higher prevalence when compared to males.

POLICY IMPLICATIONS

This study shows that more studies are to be conducted like this, and children with anxiety disorder are to be diagnosed at earlier stage and properly treated and counselled. This is to improve both the general outcome and the academic performance of the children.

We conclude

- Every child mental health is important
- Many children are affected by mental health problems
- These problems are painful and can be severe
- Mental health problems can be recognised at earlier stage and treated.

Caring families and communities working together can alleviate mental health problems

What parents can do?

- Consult with the child health care provider, they can help you to determine whether these symptoms are caused by an anxiety disorder or by a medical condition and refer the child to mental health professional.
- Consult with mental health professional regarding the symptoms and treatment about cognitive – behaviour therapy and medications using for this disorder.
- Ask question with them about available treatment and services.
- Get accurate information from libraries or other sources
- Find family friend organizations

What school teachers can do?

- Earlier identification of children with anxiety disorder
- Earlier referral to school counsellor or psychologist
- Encourage children with social anxiety disorder to participate in school and group activities.

What we paediatricians can do?

- Earlier identification of children with anxiety disorder
- Give appropriate counselling
- Guide the parents and teachers to identify anxiety symptoms at the earlier stage
- Referral to psychiatrist if needed

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PROFORMA

1. **NAME**

2. **AGE**

3. **SEX**

4. **ADDRESS**

5. **CLASS**

6. **NAME OF THE SCHOOL**

7. **NAME OF THE PARENT**

சேலம் முதன்மைக் கல்வி அலுவலரின் செயல்முறைகள்
ஒ.மு.எண்.016808 /ஈ5/2019 நாள்29.01.2019

பொருள் .. பள்ளிக் கல்வி – பள்ளி வளாக அனுமதி – சேலம் மாவட்டம் , கோட்டை, அரசு மகளிர் மேல்நிலைப்பள்ளியில் பயிலும் 10,11 மற்றும் 12–ஆம் வகுப்பு மாணவியர்களிடையே கற்றல்–கற்பித்தல் மற்றும் தேர்வுகளை எழுதுவதில் உருவாகும் பயம், அச்சம் (Screening Of Anxiety Related Disorders in Adolescence using Scared Scale) குறித்து ஆய்வு செய்து விவரங்கள் சேகரித்தல் – அனுமதி வழங்குதல் – சார்பு.

பார்வை .. டாக்டர் எஸ். பிரியங்கா , III year Peadiatrics. அரசு மோகன் குமாரமங்கலம் மருத்துவ கல்லூரி மற்றும் மருத்துவமனை , சேலம்–1 கடிதம் நாள் : .01.2019

சேலம் மாவட்டம் , கோட்டை, அரசு மகளிர் மேல்நிலைப்பள்ளியில் பயிலும் 10,11 மற்றும் 12–ஆம் வகுப்பு மாணவியர்களிடையே கற்றல்–கற்பித்தலின் மற்றும் தேர்வுகளை எழுதுவதில் உருவாகும் பயம், அச்சம் (Screening Of Anxiety Related Disorders in Adolescence using Scared Scale) குறித்து ஆய்வு செய்து , விவரங்கள் சேகரிக்க பார்வையில் காணும் கடிதத்தில் அனுமதி கோரப்பட்டுள்ளது.

மேற்காண் கடிதம் இவ்வலுவலகத்தில் பரிசீலனை செய்யப்பட்டது. அதன்பேரில், கீழ்க்கண்ட நிபந்தனைகளின்படி சேலம் , கோட்டை, அரசு மகளிர் மேல்நிலைப்பள்ளி மாணவியர்களிடையே மேற்காண் பொருள் சார்ந்த ஆய்வு விவரங்கள் சேகரிக்க அனுமதி அளிக்கப்படுகிறது.

நிபந்தனைகள்

1) சம்பந்தப்பட்ட பள்ளித் தலைமையாசிரியரிடம் முன் அனுமதி பெறப்பட வேண்டும்.
2) பள்ளி மாணவியர்களிடம் எவ்வித தொகையும் வசூலிக்கக் கூடாது
4) மாணவியர்களுக்கு எவ்வித இடையூறும் ஏற்படா வண்ணம் நடத்தப்பட வேண்டும்
5) மேற்காண் ஆய்வு குறித்து எவ்வித புகாருக்கும் இடமளிக்காவண்ணம் நடத்தப்பட வேண்டும்,.
6) பள்ளியில் கற்றல் கற்பித்தல் பணி பாதிக்காத வகையில் பிற்பகல் 3.00 மணி முதல் 4.30 மணி வரை மேற்காண் ஆய்வினை நடத்த வேண்டும்.
7) மேற்காண் ஆய்வு நடத்தப்படும் பொழுது பள்ளியின் தலைமையாசிரியர் மற்றும் சார்ந்த வகுப்பு ஆசிரியர்கள் உடன் இருத்தல் வேண்டும்.

முதன்மைக் கல்வி அலுவலர்,
சேலம்

29/1/19

பெறுநர்

- டாக்டர் எஸ். பிரியங்கா , III year Peadiatrics. அரசு மோகன் குமாரமங்கலம் மருத்துவ கல்லூரி மற்றும் மருத்துவமனை , சேலம்–1

நகல் ..

- தலைமையாசிரியர், அரசு மகளிர் மேல்நிலைப் பள்ளி , கோட்டை சேலம்.

சுய ஒப்புதல் படிவம் (Informed consent form)

ஆய்வு செய்யப்படும் தலைப்பு : **"A STUDY TO SCREEN FOR VARIOUS TYPES OF ANXIETY DISORDERS AMONG HIGHER SECONDARY SCHOOL STUDENTS USING SCARED SCALE"**

பங்கு பெறுபவரின் பெயர்:

பங்கு பெறுபவரின் வயது:

பங்கு பெறுபவரின் எண் :

பங்கு பெறுபவர் இதனை (√) குறிக்கவும்

மேலே குறிப்பட்டுள்ள மருத்துவ ஆய்வின் விவரங்கள் எனக்கு விளக்கப்பட்டது. என்னுடைய சந்தேகங்களை கேட்கவும், அதற்கான விளக்கங்களை பெறவும் வாய்ப்பளிக்கப்பட்டுள்ளது என அறிந்து கொண்டேன். ☐

நான் இவ்வாய்வில் தன்னிச்சையாக தான் பங்கேற்கிறேன். எந்த காரணத்தினாலோ எந்த சட்டசிக்கலுக்கும் உட்படாமல் நான் இவ்வாய்வில் இருந்து விலகி கொள்ளலாம் என்றும் அறிந்து கொண்டேன். ☐

இந்த ஆய்வு சம்பந்தமாகவோ , இதை சார்ந்து மேலும் ஆய்வு மேற்கொள்ளும் போதும் இந்த ஆய்வில் பங்கு பெறும் மருத்துவர் என்னுடைய மருத்துவ அறிக்கைகளை பார்ப்பதற்க்கு என் அனுமதி தேவையில்லை என அறிந்து கொள்கிறேன். ☐

இந்த ஆய்வின் மூலம் கிடைக்கும் தகவலையோ , முடிவையோ பயன்படுத்திக் கொள்ள மறுக்கமாட்டேன். ☐

இந்த ஆய்வில் பங்கு கொள்ள ஒப்புக் கொள்கிறேன். இந்த ஆய்வை மேற்கொள்ளும் மருத்துவ அணிக்கு உண்மையுடன் இருப்பேன் என்றும் உறுதியளிக்கிறேன். ☐

பங்கேற்பவரின் கையொப்பம் :_____ இடம் _____ தேதி _____

பங்கேற்பவரின் பெயர் மற்றும் விலாசம்:

பெற்றோரின் கையொப்பம் : _____ இடம் _____ தேதி _____

பெற்றோரின் பெயர் மற்றும் விலாசம்:

ஆய்வாளரின் கையொப்பம் : _____ இடம் _____ தேதி _____

ஆய்வாளரின் பெயர் : _____

Screen for Child Anxiety Related Disorders (SCARED)

Child Version - Page 1 of 2 (To be filled out by the CHILD)

Name: _____ **Date:** _____

Directions:
Below is a list of sentences that describe how people feel. Read each phrase and decide if it is "Not True or Hardly Ever True" or "Somewhat True or Sometimes True" or "Very True or Often True" for you. Then for each sentence, fill in one circle that corresponds to the response that seems to describe you for the last 3 months.

		0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
1.	When I feel frightened, it is hard for me to breathe	o	o	o
2.	I get headaches when I am at school	o	o	o
3.	I don't like to be with people I don't know well	o	o	o
4.	I get scared if I sleep away from home	o	o	o
5.	I worry about other people liking me	o	o	o
6.	When I get frightened, I feel like passing out	o	o	o
7.	I am nervous	o	o	o
8.	I follow my mother or father wherever they go	o	o	o
9.	People tell me that I look nervous	o	o	o
10.	I feel nervous with people I don't know well	o	o	o
11.	My I get stomachaches at school	o	o	o
12.	When I get frightened, I feel like I am going crazy	o	o	o
13.	I worry about sleeping alone	o	o	o
14.	I worry about being as good as other kids	o	o	o
15.	When I get frightened, I feel like things are not real	o	o	o
16.	I have nightmares about something bad happening to my parents	o	o	o
17.	I worry about going to school	o	o	o
18.	When I get frightened, my heart beats fast	o	o	o
19.	I get shaky	o	o	o
20.	I have nightmares about something bad happening to me	o	o	o

Screen for Child Anxiety Related Disorders (SCARED)

Child Version - Page 2 of 2 (To be filled out by the CHILD)

		0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
21.	I worry about things working out for me	o	o	o
22.	When I get frightened, I sweat a lot	o	o	o
23.	I am a worrier	o	o	o
24.	I get really frightened for no reason at all	o	o	o
25.	I am afraid to be alone in the house	o	o	o
26.	It is hard for me to talk with people I don't know well	o	o	o
27.	When I get frightened, I feel like I am choking	o	o	o
28.	People tell me that I worry too much	o	o	o
29.	I don't like to be away from my family	o	o	o
30.	I am afraid of having anxiety (or panic) attacks	o	o	o
31.	I worry that something bad might happen to my parents	o	o	o
32.	I feel shy with people I don't know well	o	o	o
33.	I worry about what is going to happen in the future	o	o	o
34.	When I get frightened, I feel like throwing up	o	o	o
35.	I worry about how well I do things	o	o	o
36.	I am scared to go to school	o	o	o
37.	I worry about things that have already happened	o	o	o
38.	When I get frightened, I feel dizzy	o	o	o
39.	I feel nervous when I am with other children or adults and I have to do something while they watch me (for example: read aloud, speak, play a game, play a sport)	o	o	o
40.	I feel nervous when I am going to parties, dances, or any place where there will be people that I don't know well	o	o	o
41.	I am shy	o	o	o

**For children ages 8 to 11, it is recommended that the clinician explain all questions, or have the child answer the questionnaire sitting with an adult in case they have any questions.*

Developed by Boris Birmaher, MD, Suneeta Khetarpal, MD, Marlane Cully, MEd, David Brent, MD, and Sandra McKenzie, PhD. Western Psychiatric Institute and Clinic, University of Pgh. (10/95). Email: birmaherb@msx.upmc.edu

Screen for Child Anxiety Related Disorders (SCARED)

Parent Version - Page 1 of 2 (To be filled out by the PARENT)

Name: _____ **Date:** _____

Directions:
Below is a list of statements that describe how people feel. Read each statement carefully and decide if it is "Not True or Hardly Ever True" or "Somewhat True or Sometimes True" or "Very True or Often True" for your child. Then for each statement, fill in one circle that corresponds to the response that seems to describe your child for the last 3 months. Please respond to all statements as well as you can, even if some do not seem to concern your child.

		0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
1.	When my child feels frightened, it is hard for him/her to breathe	o	o	o
2.	My child gets headaches when he/she is at school	o	o	o
3.	My child doesn't like to be with people he/she doesn't know well	o	o	o
4.	My child gets scared if he/she sleeps away from home	o	o	o
5.	My child worries about other people liking him/her	o	o	o
6.	When my child gets frightened, he/she feels like passing out	o	o	o
7.	My child is nervous	o	o	o
8.	My child follows me wherever I go	o	o	o
9.	People tell me that my child looks nervous	o	o	o
10.	My child feels nervous with people he/she doesn't know well	o	o	o
11.	My child gets stomachaches at school	o	o	o
12.	When my child gets frightened, he/she feels like he/she is going crazy	o	o	o
13.	My child worries about sleeping alone	o	o	o
14.	My child worries about being as good as other kids	o	o	o
15.	When he/she gets frightened, he/she feels like things are not real	o	o	o
16.	My child has nightmares about something bad happening to his/her parents	o	o	o
17.	My child worries about going to school	o	o	o
18.	When my child gets frightened, his/her heart beats fast	o	o	o
19.	He/she gets shaky	o	o	o
20.	My child has nightmares about something bad happening to him/her	o	o	o

Screen for Child Anxiety Related Disorders (SCARED)

Parent Version - Page 2 of 2 (To be filled out by the PARENT)

		0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
21.	My child worries about things working out for him/her	o	o	o
22.	When my child gets frightened, he/she sweats a lot	o	o	o
23.	My child is a worrier	o	o	o
24.	My child gets really frightened for no reason at all	o	o	o
25.	My child is afraid to be alone in the house	o	o	o
26.	It is hard for my child to talk with people he/she doesn't know well	o	o	o
27.	When my child gets frightened, he/she feels like he/she is choking	o	o	o
28.	People tell me that my child worries too much	o	o	o
29.	My child doesn't like to be away from his/her family	o	o	o
30.	My child is afraid of having anxiety (or panic) attacks	o	o	o
31.	My child worries that something bad might happen to his/her parents	o	o	o
32.	My child feels shy with people he/she doesn't know well	o	o	o
33.	My child worries about what is going to happen in the future	o	o	o
34.	When my child gets frightened, he/she feels like throwing up	o	o	o
35.	My child worries about how well he/she does things	o	o	o
36.	My child is scared to go to school	o	o	o
37.	My child worries about things that have already happened	o	o	o
38.	When my child gets frightened, he/she feels dizzy	o	o	o
39.	My child feels nervous when he/she is with other children or adults and he/she has to do something while they watch him/her (for example: read aloud, speak, play a game, play a sport)	o	o	o
40.	My child feels nervous when he/she is going to parties, dances, or any place where there will be people that he/she doesn't know well	o	o	o
41.	My child is shy	o	o	o

Developed by Boris Birmaher, MD, Suneeta Khetarpal, MD, Marlane Cully, MEd, David Brent, MD, and Sandra McKenzie, PhD. Western Psychiatric Institute and Clinic, University of Pgh. (10/95). Email: birmaherb@msx.upmc.edu

SCARED Rating Scale Scoring Aide

Use with Parent and Child Versions

Question	Panic/ Somatic	Generalized Anxiety	Separation	Social	School Avoidance
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
Total					
	Cutoff = 7	Cutoff = 9	Cutoff = 5	Cutoff = 8	Cutoff = 3

Total anxiety ≥ 25

45

0 = not true or hardly true
1 = somewhat true or sometimes true
2 = very true or often true

SCORING

A total score of **≥ 25** may indicate the presence of an **Anxiety Disorder**. Scores higher than 30 are more specific.

A score of **7** for items 1, 6, 9, 12, 15, 18, 19, 22, 24, 27, 30, 34, 38 may indicate **Panic Disorder** or **Significant Somatic Symptoms**.

A score of **9** for items 5, 7, 14, 21, 23, 28, 33, 35, 37 may indicate **Generalized Anxiety Disorder**.

A score of **5** for items 4, 8, 13, 16, 20, 25, 29, 31 may indicate **Separation Anxiety Disorder**.

A score of **8** for items 3, 10, 26, 32, 39, 40, 41 may indicate **Social Anxiety Disorder**.

A score of **3** for items 2, 11, 17, 36 may indicate Significant **School Avoidance**.

MASTER CHART – CHILD VERSION

S.No	NAME	SEX	TOTAL	PN	GD	SP	SC	SH
1	SATHYA	F	30	4	5	8	6	2
2	RAJALAKSHMI	F	49	6	10	14	12	2
3	HARIPRIYA	F	27	9	11	3	5	1
4	HARINI	F	51	10	14	10	12	2
5	YUVASRI	F	36	8	11	13	6	4
6	DHARSHINI	F	27	9	2	12	7	0
7	GOMATHI	F	23	6	7	4	6	0
8	KEERTHANA	F	44	5	11	12	11	1
9	GOMATHI	F	33	4	7	8	10	0
10	DHIVYA	F	27	6	8	7	2	4
11	KASTHURI	F	40	2	8	8	10	1
12	PUSHPALATHA	F	30	3	6	10	5	0
13	JASMINE	F	47	4	13	8	10	5
14	RABITHA	F	47	5	11	12	9	2
15	DHIVYASRI	F	25	6	8	4	6	1
16	GANGA	F	47	6	12	8	13	6
17	GOMATHI	F	34	6	11	9	9	0
18	BHAVANI	F	41	2	13	12	9	0
19	GAYATHRI	F	38	4	13	7	10	2
20	DIVYA	F	22	5	7	4	4	2
21	DURGADEVI	F	21	3	8	8	2	0
22	HEMAVATHI	F	30	5	6	11	3	2
23	SUDHA	F	25	8	4	7	5	2
24	REVATHI	F	29	10	7	8	4	0
25	VAISHNAVI	F	10	1	6	1	2	0
26	TAMILSELVI	F	34	12	7	10	2	6
27	SWETHA	F	40	14	11	9	7	7
28	PREETHI	F	37	12	8	7	7	5
29	MOHANA PRIYA	F	26	3	6	7	9	4
30	YOGALAKSHMI	F	28	4	7	4	12	1
31	VARALAKSHMI	F	45	10	13	4	9	4
32	MAHALAKSHMI	F	36	9	13	4	10	4
33	SHARMILA	F	9	1	0	0	5	5
34	KAVIYARASI	F	45	11	10	3	9	6
35	HARSHAVARTHINI	F	21	2	6	2	5	1
36	NARKIS BANU	F	33	6	11	3	6	5
37	SANDHIYA	F	23	5	8	0	1	2
38	MEERA	F	35	9	11	2	5	6
39	SUBASRI	F	45	8	15	3	9	2
40	SHANTHINI	F	21	3	6	4	6	0
41	PRIYADHARSHINI	F	33	6	11	2	6	2
42	SUSANNA	F	18	4	3	4	2	2
43	MONASAKTHI	F	33	6	13	3	10	4
44	VANISRI	F	33	6	10	4	11	2
45	NITHYASRI	F	41	9	8	2	10	1
46	ABITHA	F	28	6	5	2	4	0
47	ELLAIYARANI	F	47	10	15	3	12	5
48	GUNAPRIYA	F	27	4	7	4	10	2
49	SANDHIYA	F	41	12	6	2	9	2
50	THULASIYAMMAL	F	47	8	14	3	10	0

MASTER CHART – PARENT VERSION

S.No	NAME	SEX	TOTAL	PD	GD	SP	SC	SH
1	RAJAN	F	34	4	7	6	6	2
2	LAKSHMI	F	45	12	9	9	12	2
3	VIJI	F	26	8	9	3	5	1
4	SATHYA	F	45	13	8	10	12	2
5	PONNUTHAI	F	33	2	11	10	6	4
6	RADHA	F	35	4	2	7	7	0
7	SARADHI	F	35	8	7	4	6	0
8	REVATHI	F	40	9	11	12	11	1
9	GOMATHI	F	29	8	7	13	6	0
10	MADHU	F	25	6	8	7	0	4
11	MANJULA	F	33	9	8	11	6	1
12	SIYAMALA	F	26	9	6	6	5	0
13	NASRIN	F	42	9	13	12	10	5
14	NASRIN	F	40	10	11	13	9	2
15	VANITHA	F	27	6	6	4	4	1
16	JOTHI	F	49	8	14	14	13	6
17	RANI	F	30	6	7	9	9	0
18	JEYANTHI	F	43	8	13	15	10	0
19	KAVITHA	F	32	9	13	0	6	2
20	SWATHI	F	41	5	4	4	4	2
21	NIRMALA	F	28	3	8	8	0	2
22	DEVI	F	32	8	8	6	3	2
23	VANITHA	F	31	4	4	7	5	2
24	REVATHI	F	30	5	7	8	4	0
25	GEETHA	F	32	1	6	1	2	0
26	SANKARI	F	29	3	7	10	2	5
27	RAMESH	F	34	9	10	8	7	5
28	YASOTHA	F	33	8	4	6	7	4
29	SANTHI	F	26	3	3	6	9	7
30	LAKSHMI	F	36	4	4	4	10	1
31	GAYATHRI	F	46	10	3	10	9	6
32	GANDHI	F	31	9	4	10	5	7
33	GEETHA	F	28	1	0	4	3	0
34	KAVIYARASAN	F	39	6	1	11	9	5
35	KASTHURI	F	26	2	2	7	5	1
36	JASMIN	F	30	6	0	4	6	6
37	MAHALASKMI	F	29	5	0	4	1	2
38	MEERA	F	28	8	2	4	5	7
39	SUBASRI	F	43	5	3	3	8	2
40	JANSI	F	30	3	4	4	6	0
41	SUGANYA	F	29	6	3	4	6	2
42	MARY	F	28	4	3	3	2	2
43	SAKTHI	F	28	6	2	4	11	5
44	PRIYA	F	31	6	4	2	12	2
45	BANU	F	38	6	1	4	10	1
46	LALITHA	F	30	6	0	2	4	0
47	SATHYA	F	44	6	0	3	11	6
48	NITHYA	F	33	4	1	3	9	2
49	DURGA	F	43	12	0	4	13	2
50	SELLIYAMMAL	F	42	3	1	2	5	0