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RESEARCH ARTICLE

Prevalence of anxiety disorder among male school students at Taif governorate, Saudi Arabia

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Abstract

Background: In our study we examined the psychiatry properties of the parent version of the Spence Children's Anxiety Scale (SCAS-P).The classification of anxiety disorders by DSM-IV (obsessive–compulsive disorder, generalized anxiety, social phobia, panic/agoraphobia, separation anxiety and fear of physical injuries).Anxiety disorders are highly prevalent and impairing conditions among children and adolescent.

Aim of study: to determine the prevalence of anxiety disorders among students of primary schools.

Methodology: A cross-sectional descriptive study was done. A multistage random sampling technique will be used to recruit the 334 students from two primary governmental schools.

Results: we found that the prevalence of obsessive compulsive disease in the male students 18,6%, prevalence of Social phobia in the male students 7,8%, prevalence of panic Agoraphobia in the male students 11,4%, prevalence of Physical Injury in the male students 8,4%, prevalence of Separation Anxiety in the male students 26,9%, and the prevalence of Generalized Anxiety in the male students 6,6%.

Conclusions: Findings demonstrate the significance anxiety disorders among primary school male students, and highlighting on clinical symptoms of it.

Introduction:-

We show that in the past few years, research on the diagnosis and assessment of childhood anxiety has focused on constructing child self-report questionnaires that are related to the commonly used classification system of DSM-IV (American Psychiatric Association, 1994). But this questionnaires did not examine specific anxiety disorders, but were typically designed to measure indicators of anxiety in general. Moreover, they were generally derived from adult anxiety measures rather than being based on child specific items. The classification of anxiety disorders by DSM-IV (namely separation anxiety, generalized anxiety, social phobia, panic/agoraphobia,obsessive–compulsive disorder, and fear of physical injuries). Anxiety is one of the most common psychological disorders in school-aged children and adolescents worldwide (Costello, Mustillo, Erkanli, Keeler & Angold, 2003). The prevalence rates range from 4.0% to 25.0%, with an average rate of 8.0% (Bernstein & Borchardt, 1991; Boyd, Kostanski, Gullone, Ollendick & Shek, 2000).

Most common type of anxiety disorder:-

Obsessive-compulsive disorder

Obsessive-compulsive disorder (OCD) is one of the most common and psychological disorder that occurs across the whole life span. It is characterized by recurrent obsession, compulsions, or both. (American Psychiatric

Association 2000) Obsessions are frequent and troubling thoughts, feelings, ideas, or sensations, while compulsions are conscious, steady, and constant pattern of actions, for example counting, checking, or avoiding. Obsessions increase the anxiety, and compulsions usually reduce it. Anxiety is usually worsened in patients who try to oppose executing their compulsions. (American Psychiatric Press; 1993) Obsessive-compulsive related disorders (OCRD) are a group of disorders with overlapping symptoms and compulsive qualities that are otherwise, distinct disorders from OCD.(Rapoport JL, editors ; 1989) Regrettably, OCD and related disorders are frequently under-diagnosed and under treated.

Generalized anxiety disorder

Generalized anxiety disorder (GAD) is one of the most frequent anxiety disorders seen in primary care and is particularly prevalent among older adults in this setting(Wittchen HU, Kessler RC, Beesko K, Hofler M, Hoyer J (2002). Generalized anxiety disorder (GAD) is characterized by chronic worry, anxiety and tension and frequently occurs concomitantly with other disorders, mainly depression. Generalized anxiety disorder (GAD), primarily characterized by excessive and uncontrollable worry accompanied by physical symptoms (e.g., muscle tension, irritability, sleep disturbance) (American Psychiatric Association,2000). These diagnoses are, however, frequently missed due to patient related reasons such as the stigmatization of mental illness and physician related reasons such as insufficient awareness of the diagnoses, and cause these illnesses to remain untreated. Generalized anxiety disorder is a complicated diagnosis consisting of many physical symptoms and persistent worry lasting a minimum of 6 months. The chronic nature and vague physical symptoms may lead to difficulty in diagnosing GAD (Hoehn-Saric R (2005). There are many significant risk for anxiety disorders and depression in adulthood (Hallion LS, Ruscio AM (2013)and Pine DS, Cohen 1998). Generalized anxiety disorder is one of the most common disorders among older adults, with prevalence as high as 7.3%, second only to specific phobia. Generalized anxiety disorder (GAD) is one of the most common and debilitating anxiety disorders among children and adolescents (Rapee RM (2001) and Rossler W (2009). To complicate diagnosis further, older adults are less likely than their younger counterparts to attribute their somatic symptoms to psychological problems, which diminish the likelihood of being asked about anxiety by their physicians. Primary care physicians recognize that most patients with GAD experience emotional distress, but only 25% to 50% receive diagnoses (Roy-Byrne PP, Wagner A 2004).Culture affects how one defines health and illness, including the meanings of specific physical and psychological sensations (Beesdo K, Knappe S, Pine DS 2009). Research conducted by Klein and Last and Messer (Kessler RC2012 and Beidel D, Christ M, Long P 1991). demonstrated that anxiety disorders commonly occur in school-aged children and are frequently associated with adverse outcomes, including social isolation, interpersonal difficulties, and impaired school adjustment.

Social phobia:-

Social Phobia (SP) is an internationally psychiatric condition. Its recognition has increased during the last years. Social phobia was initially defined in 1980 by the American Psychiatric Association as "a persistent fear of one or more situations (the socially phobic situations) in which the person is exposed to possible scrutiny by others, and fear that he or she may do something or act in any way that will be humiliating or embarrassing" (APA, 1987). Social Phobia also includes the fear of humiliation and embarrassment due to the anxiety of the individual that is unable to interact with unfamiliar people, and in social sittings such as parties, public speaking or dining out (APA, 1994). According to the DSM-IV classification, the essential defining characteristics are:

1) A marked and persistent fear of social or performance situations in which embarrassment may occur;
2) Exposure to the social or performance situation almost invariably provokes an immediate anxiety response (APA, 2000).

A major difficulty for people who suffer from Social Phobia is a fear that is excessive or unreasonable (Van Velzen, Emmelkamp, & Scholing, 2000). Furthermore, phobic people cannot balance such fear with the circumscribed situation (Stemberger, Turner, Beidel, & Calhoun, 1995). Normally, individuals have the essential social skills to be effective in their interactions with others (Kashdan & Steger, 2006). However, it is their fear of negative evaluation that prevents them from interacting. Instead, fear leads to avoidance of situations or focus on their own internal physiological reactions to anxiety (Spector, Pecknold, & Libman, 2003). Consequently, they can appear to others as disinterested in social relations, as they avoid meeting with new people, making conversations and attending social activities, as well public speaking and functioning (Kashdan, 2002).

Methodology:-

Study area;
Taif city is located in Mecca province of Saudi Arabia at the west of Saudi Arabia in an elevation of 1700 meters on the slopes of the Al-Sarawat Mountains. It has a population of 987,914 (2010 census). Taif city includes 602 primary schools 310 for boys and 292 for girls.The number of primary schoolchildren is 66294 (31745 boys and 43540 girls).

Study design:-
A cross-sectional descriptive study.

Study population:
Primary school male students enrolled in governmental schools in Taif, Saudi Arabia,2015-2016,who were present at time of the study and were willing to participate in it.

Sample size:
A multistage random sample will be carried out to recruit the participants of the study as follow:

First stage: two male governmental primary schools will be selected out of male governmental primary schools by using simple random sample.

Second stage: all students in the schools selected will be included in the study.
Females will not be included in the study because they are not easily allowed to male investigators to access female students according to Saudi community traditions.

Data collection:-
A Predesigned questionnaire was applied from Spence children's Anxiety scale (SCAS) to all children aged (12-15) years within the school were subjected to the questionnaire, by themselves.

Population selection criteria:

Inclusion criteria:

1) Students enrolled in governmental schools in Taif, Saudi Arabia,2015-2016.

2) Boys between 12-15 years old

Exclusion criteria:

1) Primary school students who were not present at time of conducting the study or not willing to participate.

2)Girls students

3)Those aged under 12 years or over 15 years.

Study tools:-
The Spence Children's Anxiety Scale was developed to assess the severity of anxiety symptoms broadly in line with the dimensions of anxiety disorder proposed by the DSM-IV.

The scale assesses six domains of anxiety including generalized anxiety, panic/agoraphobia, social phobia, separation anxiety, obsessive compulsive disorder and physical injury fears. It is designed to be relatively easy and quick for children to complete, normally taking only around 10 minutes to answer the questions. Young people are asked to rate the degree to which they experience each symptom on a 4-point frequency scale.

This measure consists of 44 items, of which 38 reflect specific symptoms of anxiety and 6 relate to positive, filler items to reduce negative response bias. Of the 38 anxiety items, 6 reflect separation anxiety, 6 social phobia, 6 obsessive compulsive problems, 6 panic/3 agoraphobia, 6 generalized anxiety/overanxious symptoms and 5 items

concern fears of physical injury. Items are randomly allocated within the questionnaire. Children are asked to rate on a 4 point scale involving never (0), sometimes (1), often (2), and always (3), the frequency with which they experience each symptom. The instructions state "Please put a circle around the word that shows how often each of these things happen to you. There are no right and wrong answers". There are six positively worded filler items.

Scoring:-

Only the 38 anxiety items are scored.
The responses are scored:
Never = 0
Sometimes = 1
Often = 2
Always = 3
This yields a maximum possible score of 114.

Total Score Calculation:-

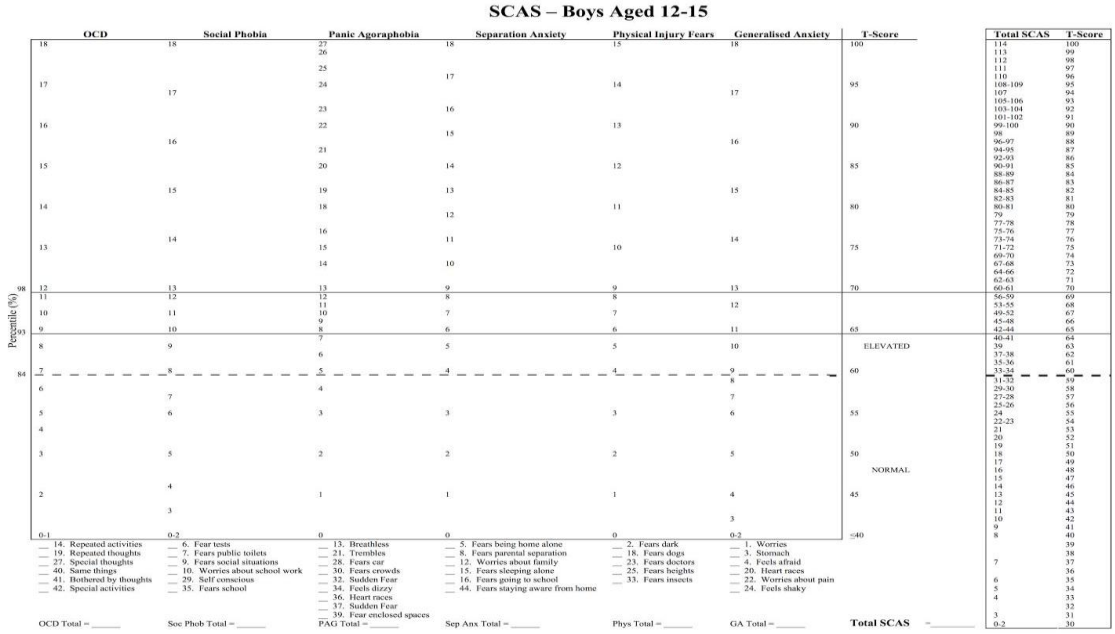
The total score is the sum of items 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 12 + 13 + 14 + 15 + 16 + 18 + 19 + 20 + 21 + 22 + 23 + 24 + 25 + 27 + 28 + 29 + 30 + 32 + 33 + 34 + 35 + 36 + 37 + 39 + 40 + 41 + 42 + 44.
Alternatively, the Total Score may be computed from adding together all the subscale scores.

Subscale Calculation:-

The sub-scale scores are computed by adding the individual item scores on the set of items as follows:

Subscale	SCAS ITEMS								
Separation anxiety	+5	+8	+12	+15	+16	+44			
Social phobia	+6	+7	+9	+10	+29	+35			
Obsessive compulsive	+14	+19	+27	+40	+41	+42			
Panic/agoraphobia	+13	+21	+28	+30	+32	+34	+36	+37	+39
Physical injury fears	+2	+18	+23	+25	+33				
Generalized anxiety	+1	+3	+4	+20	+22	+24			

The positive filler items that are not scored in either the total score or the subscale scores include item numbers 11, 17, 26, 31, 38, and 43.



Pilot study:-

Pilot study will be done before beginning the work in order to test the questionnaire, detect any difficulties, and also to give an idea about the prevalence of the asthma among students.

Ethical consideration: Approval by the deanship of student affairs was be taken before starting the work. During the research activities, each studied subject will be informed about the study objectives stressing on confidentiality of collected data and getting a verbal consent of the subject to share in the study.

Statistical analysis:-

Data entry and Statistical analysis was been performed using statistical package for the social science (SPSS) program for windows version 16. Frequency and range checks was been performed. Descriptive statistics was been used for the quantitative variables. Percentage was been used to determined the rate of different types of anxiety disorder.

Results:-

Table 1: Prevalence of obsessive compulsive disease in male students (N= 334)

obsessive compulsive disease	Never		Sometimes		Often		Always	
	NO	%	NO	%	NO	%	NO	%
14. Repeated activities	128	38.3	74	22.1	70	20.9	62	18.5
19. Repeated thoughts	108	32.3	70	20.9	84	25.1	72	21.5
27. Special thoughts	120	35.9	90	26.9	80	23.9	44	13.1
40. do some things over and over again	142	42.5	62	18.5	84	25.1	46	13.7
41. get bothered by bad or silly thoughts or pictures in my min	90	26.9	74	22.1	98	29.3	72	21.5
42. do some things in just the right way to stop bad things happening	88	26.3	62	18.5	96	28.7	88	26.3

Normal	NO	122/334	Elevated	NO	150/334	Diagnostic	NO	62/334
	%	36.5		%	44.9		%	18.6

We show in table 1 that 6 questions related to symptoms of obsessive compulsive disease (OCD) as Repeated activities, Repeated thoughts, Special thoughts and do some things over and over again, get bothered by bad or silly thoughts or pictures in my min and do some things in just the right way to stop bad things happening and we show also the normal percentage of the students was 36,55% and the elevated percentage of the students was 44,9% and diagnostic percentage of the students was 18,6%.

Table 2: Prevalence of Social phobia in male students (N= 334)

Social Phobia	Never		Sometimes		Often		Always	
	NO	%	NO	%	NO	%	NO	%
6. feel scared when having to take a test	70	20.9	52	15.5	118	35.3	94	28.1
7. feel afraid if having to use public toilets	180	53.8	48	14.3	62	18.5	44	13.1
9. feel afraid that will making a fool of myself in front of people	124	37.1	78	23.3	78	23.3	54	16.1
10. Worries about school work	112	33.5	80	23.9	72	21.5	70	20.9
29. worry what other people think of me	174	52	68	20.3	70	20.9	22	6.5
35.feel afraid if I have to talk in front of my class	128	38.3	86	25.7	70	20.9	50	14.9

Normal	NO	188/334	Elevated	NO	120/334	Diagnostic	NO	26/334
	%	56.3		%	35.9		%	7.8

We show in table 2 the symptoms of social phobia and we show that the normal percentage of social phobia among students was 56,3% and the elevated percentage of social phobia among students was 35,9% and the diagnostic percentage of social phobia among students was 7,8%.

Table 3: Prevalence of panic Agoraphobia in male students (N= 334)

Panic Agoraphobia	Never		Sometimes		Often		Always	
	NO	%	NO	%	NO	%	NO	%
13. can't breathe when there is no reason for this	160	47.9	74	22.1	68	20.3	32	9.5
21. tremble or shake when there is no reason for this	124	37.1	86	25.7	70	20.9	54	16.6
28. feel scared if traveling in the car, or on a Bus or a train	230	68.8	44	13.1	48	14.3	12	3.5
30. afraid of being in crowded places	250	74.8	44	13.1	22	6.5	18	5.3
32. sudden I feel really scared for no reason at all	206	61.6	58	17.3	38	11.3	32	9.5
34. suddenly become dizzy or faint when there is no reason for this	200	59.8	52	15.5	54	16.6	28	8.3
36. suddenly starts to beat too quickly for no reasons	200	59.8	70	20.9	40	11.9	24	7.1
37. I will suddenly get a scared feeling when there is nothing to be afraid of	222	66.4	44	13.1	54	16.1	14	4.1
39. Fear enclosed spaces	176	52.6	56	16.7	64	19.1	38	11.3

Normal	NO	138/334	Elevated	NO	158/334	Diagnostic	NO	38/334
	%	41.3		%	47.3		%	11.4

We show in table 3 the symptoms of Panic Agoraphobia and we show that the normal percentage of Panic Agoraphobia among students was 41,3% and the elevated percentage of Panic Agoraphobia among students was 47,3% and the diagnostic percentage of Panic Agoraphobia among students was 11,4%.

Table 4: Prevalence of Physical Injury in male students (N= 334)

Physical Injury Fears	Never		Sometimes		Often		Always	
	NO	%	NO	%	NO	%	NO	%
2.scared of the dark	160	47.9	80	23.8	80	23.8	14	4.1
18.scared of dogs	170	50.8	72	21.5	60	17.9	32	9.5
23.scared of doctors	178	53.2	50	14.9	58	17.3	48	14.3
25.scared of being in high places or lifts	190	56.8	34	10.1	62	18.5	48	14.3
33.scared of insects or spiders	236	70.6	54	16.1	26	7.7	18	5.3

Normal	NO	170/334	Elevated	NO	136/334	Diagnostic	NO	28/334
	%	50.9		%	51.5		%	8.4

We show in table 4 the symptoms of Physical Injury Fears and we show that the normal percentage of Physical Injury Fears among students was 50,9% and the elevated percentage of Physical Injury Fears among students was 51,5% and the diagnostic percentage of Physical Injury Fears among students was 8,4%.

Table 5: Prevalence of Separation Anxiety in male students (N= 334)

Separation Anxiety	Never		Sometimes		Often		Always	
	NO	%	NO	%	NO	%	NO	%
5. feel afraid of being on my own at home	152	45.5	70	20.9	82	24.5	30	8.9
8. worry about being away from parents	112	33.5	82	24.5	80	23.9	60	17.9
12. worry that something awful will happen to someone in his family	74	22.1	64	19.1	110	23.9	86	25.7
15. feel scared sleep alone	184	55	64	19.1	58	17.3	28	8.3
16. Fears going to school	202	60.4	56	16.7	40	11.9	36	10.7
44. feel scared if he had to stay away from home overnight	198	59.2	56	16.7	54	16.1	26	7.7

Normal	NO	98/334	Elevated	NO	146/334	Diagnostic	NO	90/334
	%	29.3		%	43.7		%	26.9

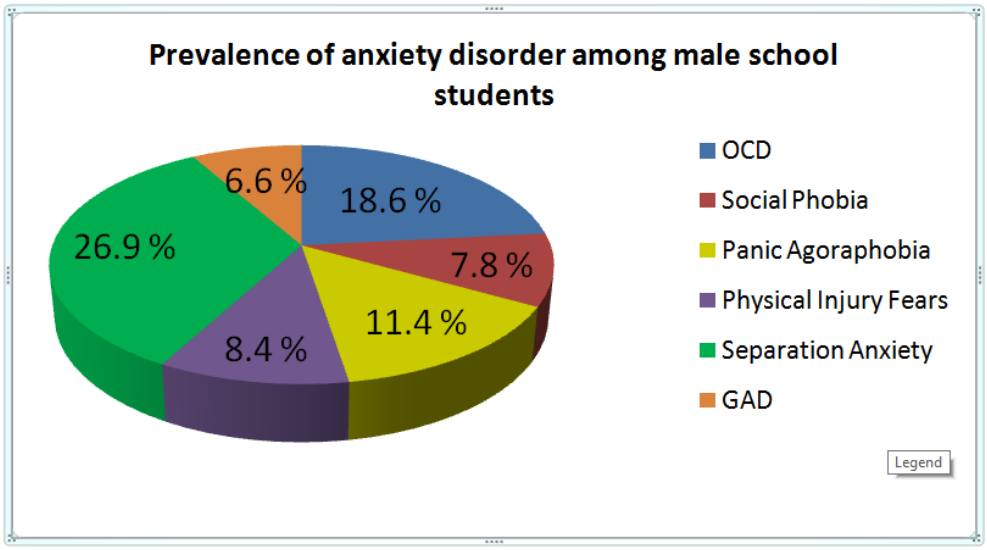
We show in table 5 the symptoms of Separation Anxiety and we show that the normal percentage of Separation Anxiety among students was 29,3% and the elevated percentage of Separation Anxiety among students was 43,7% and the diagnostic percentage of Separation Anxiety among students was 26,9%.

Table 6: Prevalence of Generalized Anxiety in male students (N= 334)

Generalized Anxiety	Never		Sometimes		Often		Always	
	NO	%	NO	%	NO	%	NO	%
1. Worries about things	92	27.5	112	33.5	114	34.1	16	4.7
3. When having a problem, I get a funny feeling in my stomach	136	40.7	70	20.9	78	23.3	50	14.9
4. afraid feeling	206	61.6	74	22.1	44	13.1	10	2.9
20. When having a problem, my heart beats really fast	62	18.5	52	15.5	110	32.9	110	32.9
22. worry that something bad will happen to him	102	30.5	88	26.3	68	20.3	76	22.7
24. feeling shaky When having a problem	94	28.1	96	28.7	68	20.3	76	22.7

Normal	NO	210/334	Elevated	NO	102/334	Diagnostic	NO	22/334
	%	62.9		%	30.5		%	6.6

We show in table 5 the symptoms of Generalized Anxiety and we show that the normal percentage of Generalized Anxiety among students was 62,9% and the elevated percentage of Generalized Anxiety among students was 30,5% and the diagnostic percentage of Generalized Anxiety among students was 6,6%.



Discussion:-

There is a lack of data estimating either the prevalence or the incidence of this disorder within the Kingdom of Saudi Arabia. It is estimated that 2-4% of individuals in the general population will develop obsessive compulsive disease (OCD)before the age of 18 years, (Mahfouz et al., 2009). And epidemiologic research studies have revealed that OCD has a lifetime prevalence of 2-3%. Some researchers have projected that the disorder is found in as many as 10% of outpatients in psychiatric clinics. The peak ages of onset appear to be from 10-19 years, closely followed by the ages of 20 and 29. (Chaleby and Raslan 1990) Studies have shown a prevalence of approximately 1% in children and adolescents. In a comparison in our study We show the prevalence of obsessive compulsive disease (OCD) in male students 12-15 years old was 18,6%. we show also the normal percentage of the students was 36,55% and the elevated percentage of the students was 44,9% .

Although there has been less evidence on the prevalence of Social Phobia in children and young people compared to adults, there have been some important studies. Among Saudi adolescents with mental health problems, the most frequent symptoms were of phobic anxiety (17.3%) (Mahfouz et al., 2009). Al Gelban (2009) found that phobic anxiety symptoms were the most prevalent (16.4%) in 545 Saudi girls students. To date, there have been no epidemiological studies with children for Social Phobia in Saudi Arabia or other Arab countries, which supports the need to conduct the present study with children in Saudi Arabia to address this research gap. In a comparison in our study We show the prevalence of Social Phobia in male students 12-15 years old was 7.8%. we show also the normal percentage of the students was 56,3% and the elevated percentage of the students was 35,9%

The majority of studies in Saudi Arabia investigated relationships between social phobia and factors such as parental rearing style; or variables such as age, gender, economic status, and academic achievement. Other authors studied the differences in personality between social phobia and other disorders. Some studies also evaluated therapeutic programs to mitigate or reduce the symptoms of social phobia. In one study was published in English in 1987 by Chaleby, who found that adult social phobia constituted approximately 13% of all emotional disorders in an out-patient clinic sample. Most patients were young, unmarried (51%), male (80%), and of relatively higher educational (28% University, 49% high school) and occupational (57% clerk and professional) status. A subsequent study by Chaleby and Raslan (1990) in Saudi Arabia, found that Social Phobia was highly comorbid with other mental health disorders. Like other service-based studies, a constraint was the self-selection of the sample, which was recruited from a private and a specialised hospital setting, i.e. whether the findings can be generalised to standard health services or indeed to the general population.

Another study was conducted by Arafa et al. (1992), and replicated the earlier finding on the high prevalence of Social Phobia in Saudi Arabia. Al-Khodair and Freeman (1997) completed a comparative study on social phobia across two cultures; i.e. Saudi Arabia and Scotland, and found differences in the profiles of the two groups. The age at assessment and the course of the disorder were different. Saudis were much younger with shorter period of illness; Scottish subjects had significantly higher anticipatory fears; the Saudi group felt more at ease when they were with younger people, while age had no effect on the Scottish group; the Scottish group reported more panic attacks, history of depression, agoraphobia, history of abusing alcohol and using psychiatric drugs. In conclusion, social and cultural differences appeared to have some effect on social phobia in terms of age at treatment, duration of illness, co-morbid panic disorder, depression, alcohol problems and in some social situations.

Social phobia is a disorder commonly associated with other anxiety and psychiatric disorders. In a predominantly clinical male sample, Bassiony (2005)

estimated the prevalence of depression in patients with Social Phobia, and the relationship between the severity of Social Phobia and depressive symptoms. The study found that 59% of Social Phobia patients had another psychiatric disorder. Of those, 41% had depression, 92.5% of whom developed it later than SP. The aim of the Al Zahrani (2007) study was to test out an aetiological model of Social Phobia and related phobias in a Saudi population. The study found that the development of social phobia, commencing in early life, during childhood, and developing in later life were significantly affected by fear of negative evaluation and victimization. El-Tantawy, Raya, Al-Yahya, and Zaki (2010) studied SP among Saudi psychiatric out-patients to investigate its prevalence, demographic and clinical characteristics. In out-patient attendees, the one-month prevalence of social phobia was 5.63%, with higher rates of dysthymic disorder than major depression among social phobia patients. These patients also had high levels

of neuroticism and low levels of extroversion. The sample study was again recruited from a specialized service and was only followed-up over a short period of one month.

A number of epidemiological studies have shown that Generalized anxiety disorder are highly prevalent in the general population and in primary care (Wittchen HU Comer JS, Gallo KP, Korathu-Larson P, Pincus DB ,2012) Across epidemiological surveys worldwide, lifetime prevalence estimates range from 1.8% to 6.9% among adults(Lieb R, Wittchen HU 2011) and from 0.3% to 5.8% among youth (Beesdo K, Pine 2010, Merikangas KR2010). In a comparison in our study We show the prevalence of Generalized anxiety disorder in male students 12-15 years old was 6,6%. we show also the normal percentage of the students was 62,9% and the elevated percentage of the students was 30,5% .

Conclusions:-

Findings demonstrate the significance anxiety disorders among primary school male students, and highlighting on clinical symptoms of it.

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