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Descriptive Study of Nightmare Incidences at Primary Schools (1-6 grades) in Jalalabad City

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ABSTRACT

Nightmares are unpleasant or frightening dreams that occur sporadically in virtually all children. The peak incidence occurs between 3 and 6 years of age. Developmental, genetic, psychological, and organic factors have been identified as causes of nightmares. Nightmares usually occur in the middle of the night or in the early morning when rapid eye movement sleep is more common. The content of the nightmare almost always involves a specific danger to the child. On awakening, the child is fully alert, may be easily calmed or comforted, and can usually recall the details of the nightmare. Sporadic nightmares are common in children and require reassurance only. If nightmares are frequent and persistent, a psychological evaluation of the child and family is indicated

This study investigated the relationships between a history of childhood maltreatment, the frequency of disturbing dreams, their associated distress, and the presence of psychopathology. Participants completed questionnaires assessing dream recall, bad dream and nightmare frequency, nightmare distress, psychological well-being, and history of childhood trauma.. Women reporting more severe forms of maltreatment reported higher frequencies of disturbing dreams, higher levels of nightmare distress, and greater psychopathology. Results showed that nightmare distress explains frequency of disturbed dreaming beyond the effect of psychopathology and childhood trauma. The results highlight the importance of assessing waking distress associated with disturbing dreams independently from their actual incidence.

In 18 schools of Jalalabad city,13 out of them were boys school and 5 of them were girls school , in primary classes(1-6) in 14000 students 9000 out of them were boys and 5000 were girls .1000 persons whom were investigated as a sample 620 were boys and 380 were girls, 730 of them were normal and 270 persons were suspected , after ENT and other examinations 10 of them detected as defective and they removed from research , in remaining 260 persons of whom 180(23,79%) boys and 80(7630%)girls having signs of nightmare . 240(92%)of them were having transient sings and 20(69,75)were having permanent signs of night mare .all patients were between the age of 6-13(average age 9 years)14 persons out of them did medical treatment which was 98% effective and 6 persons (30%)did cultural treatment which was 2% effective

Keywords: *Sleep, NREM Sleep, REM Sleep Dream anxiety, insomnia, Hypersomnia.*

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1. Introduction

As the health education level is low in our beloved country and is under the negative cultural consequences. The socio economic state of our people is totally different compared to the other countries' population.

On the other hand, due to four decades of consecutive conflicts, several weapons and chemical substance were used which affected our children and pregnant women, due to these consequences children are faced with different disabilities including nightmares.

Nightmare is the preschool age illness with the high prevalence rate. Affect the children chronically and has negative consequences on their academic and social life, therefore, it is very crucial and important. No study has been conducted yet to show

the nightmare prevalence in primary schools' students in Jalalabad city, Nangarhar Province, Afghanistan. Therefore, Neuro-Psychiatry department of Nangarhar Medical Faculty assigned me to conduct a study on nightmare prevalence in primary schools' students in Jalalabad City considering the following points:

- Nightmare is more prevalent, but people have less knowledge about it
- Children with nightmare are suffering from fear and their educational life is affected as the people are more traditional, then they take the children with nightmares to the traditional healers and don't seek the medical assistance
- Children with nightmares face with problems at home, community and school.
- Up to now no study has been conducted in Jalalabad City about nightmare prevalence.

2. Objectives

Nightmare is a common mental and sleep disorder of the child age, occurs at preschool age, has a chronic tendency and causes problems in social and educational environments. No any study has been conducted in eastern region, Jalalabad City yet to address the prevalence of the nightmare in children. Therefore, Neuropsychiatry department of Nangarhar Medical Faculty assigned me to study nightmare incidences in schools, from 1st to sixth class students in Jalalabad City. Considering the result and recommendations the main objectives of this study are below;

- Identification of these patients
- Management of these patients
- Rising awareness to the parents and school administrations to behave in a good manner with the children of nightmare disorder
- To motivate children of this disorder for early management
- To identify the proper educational approaches for these children
- To provide the valuable information to Doctors and Medical students

3. Literature Review

Nightmare is the common type of parasomnia and a sleeping problem, it is valuable to narrate few sentences about normal sleep and sleep disorder.

Normal sleep and sleep disorder:

Definition and Sleep Physiology: sleep is a kind of loss of consciousness in which brain is more sensitive and responsive to internal stimuli compared to external stimuli and can be awaken with sensory and other stimuli. Sleep is a complex physiologic and psychologic brain function which happens in the result of active and integrated processes of brain. Sleep is a regular repetitive and reversible cycle.

How extend from wakefulness to sleep state to that extend brain response to visual, auditory and other environmental stimuli is reduced gradually. In past, it said that sleeping is an inactive process and happens when relationship of sensory stimuli is blocked with body, but now it said that cut down of sensory stimuli for sleeping is only one factor, additionally an active mechanism for sleep initiation is identified. S factor and C factor jointly regulate the sleeping time and specifications. Sleep is a kind of unconsciousness in which brain remains active, but can't process the sensory information in effective way. During sleeping stage Ventrolateral Preoptic Nucleus (VLPON) of anterior Hypothalamus is activated. With the facilitation of GABA and Guanine inhibitory neurotransmitters, the active parts of the brain are inhibited and initiate sleep cycle. The excitatory parts of the brain are innervated by Tubromamilary nuclei of VLPON, lateral hypothalamus including other parts which inhabit these parts of the brain. During wake stage both thalamo cortical lobe and Brain stem are active.

According to polysomnography the sleep cylce consists of two stages;

Non Rapid Eye Movement (NREM) and Rapid Eye movement(REM). These both stages repeated 4 to 5 times during night, in every cycle both stages are elongated from 80 to 120 minutes or 90 minutes in average.

Sleep starts with NREM and interim of sleep deepness this stage has four stages (N1, N2, N3, N4). Green berg.(2018). Green berg.(2018).

To how extend the sleep is in deep stage to that extend there is less response to external stimuli and strong stimuli is needed for awakening. In 3-4 stage the response is so less toward stimuli. It has 80-120 minutes (average 90 minutes) time. Green berg.(2018).

Later on the first stage of REM starts which cause the increment of the eye ball movement, Pulse rate, Respiratory rate and Blood Pressure, and EEG shows alpha wave. This stage is also called paradoxical stage and as dreaming happens in this state this is also called Dream sleep state as well. Green berg.(2018).

REM sleep has two episodes; one is called tonic and another is called phasic period. Phasic period is resulted due to sympathetic nervous system stimulation which is in turn characterized by eye movement, muscle contractions and respiratory changes, and tonic period is resulted due to parasympathetic stimulation in which there is no eye movement.

NREM starts with N1 light stage and with the following stages it gets deeper. REM stage happen at late night. N3 stage related sleeping problems such as sleep walking happen at first half of the night and REM stage related sleeping problems happen at second half of the night most commonly.

In this stage muscle atonia is present, body temperature is not same as environmental temperature (Poikilothermic phenomenon) and this stage consists fourth of the total sleeping time (1.5 to 2 hours) during night. At the beginning this stage is so short (10minutes) and elongate or extend with the repetition of every cycle. At the end stage of sleep REM duration reaches to 15-40 minutes and in this stage with minimal stimuli or spontaneously wakefulness happens. In NREM stage, sleep is deep and waves are slow which is called slow wave sleep or slow stage sleep. At the beginning the duration is maximum.

Types of sleeping disorders:

Sleeping disorders are Insomnia, Hypersomnia, Parasomnia and sleep wake cycle abnormalities. Mc-phee ,et.all.(2012).

A.Insomnia:

Whenever there is a problem in initiation or maintenance of sleep, or there is less sleeping time or sleep is intermittent, is called insomnia. In anxious patients, panic spells are seen in II and III stages of sleep and usually REM is prolonged. Lots of medicines affect the first stage of sleep and make it longer. Jamson Larry j.et.all.(2020).

B.Hypersomnia, Niraj huja et.all. (2011).

Excessive sleeping during night and having tendency to sleep during the day as well.

C. Narcolepsy: is persistent sleeping disorder, occurs at early adult age (10-20 years age). Affect both sexes equally and severity declines after thirty years of age. 90-100% genetic factors are involved in its etiology.

D. Sleep wake schedule syndrome: It is called circadian rhythm disintegration and environmental changes Green berg.(2018).

E. Parasomnia:

This is the unknown and unepected disorder of sleep, occurs suddenly during sleep and occurs at all stages of sleep, but mostly happen in deep III and IV stages of REM sleep. John C.et.all. (2012).

Night mare (Dream Anxiety):

Unpleasant or frightening dreams that occur sporadically in virtually all children. The peak incidence occurs between 3 and 6 years of age. Developmental, genetic, psychological, and organic factors have been identified as causes of nightmares. Nightmares usually occur in the middle of the night or in the early morning when rapid eye movement sleep is more common. The content of the nightmare almost always involves a specific danger to the child. On awakening, the child is fully alert, may be easily calmed or comforted, and can usually recall the details of the nightmare. Sporadic nightmares are common in children and require reassurance only. If nightmares are frequent and persistent, a psychological evaluation of the child and family is indicated.

Green berg.(2018).

Nightmare is a fearful sleep, often called Dream anxiety attack and due to sympathetic system activation cause the full wakefulness of the person which is mostly happens during REM. This condition happens due to fearful dreaming which gradually causes the anxiety of the person and person can recall whatever he dreamed , but in night terror the person don't remember at all.

Jamson Larry j.et.all.(2020).

Recurrent and fearful nightmares usually lead to insomnia because due to fearful dreams the person doesn't to sleep or cause disorganized sleep. Most of the people suffering from nightmares don't have any mental disorder.

Also night mare is characterized by a long and scary dreaming and awakens a person in anxious state. Like other dreaming, nightmares also happens at II, III and early phases of REM. Sleep panic spells are more at this stage and this stage of sleep is called paradoxical phase and on the other hand dreaming happens in this stage, this is also called Dream sleep stat. dream is remembered by patients.

Nightmare is a state in which a person comes out of the REM to conscious state and remembers the entire dream.

Night mare can be triggered or stimulated by all fearful experiences which take place during the day. Green berg.(2018).

Nightmare is a fearful sleep, often called Dream anxiety attack and due to sympathetic system activation cause the full wakefulness of the person which is mostly happens during REM. This condition happens due to fearful dreaming which gradually causes the anxiety of the person and person can recall whatever he dreamed , but in night terror the person don't remember at all.Jamson Larry j.et.all.(2020).

Etiology:

The exact cause of nightmare is unknown but the following factors can be include

1: Genetic factors

It's said to be, that incidence of nightmare is more prominent in monozygotic twins than dizygotic twins. Rana Tanvir Ahmad. (, 2016).

2: Brain damage

It is considered since long time that those children having nightmare are tend to be affected by CNS damages while in fetal life or after birth that cause metabolic, circulatory or mechanical disorders or some infections, inflammation s, trauma and stress during early infancy period can cause mental retardation along with nightmare, which do not show any changes in CT scan. Green berg. (2018).

3: Neuro chemical factors

Several neurotransmitters can lead to sign and symptoms of nightmare because drugs that use to treat nightmare have stimulatory effect on dopamine and nor -epinephrine this theory reinforces the hypothesis of neurotransmitters in this disease as much as possible there is dysfuction in adrenergic and dopaminergic systems Jamson Larry j.et.all. (2020).

4: Psycho social factors

Stressful psychic events, lack of balance and justice in family and many other factors which lead to anxiety can cause nightmare.

Other conditions that cause nightmare include:

PTSD, fever , psychotropic drugs , alcohol toxicity .meanwhile people having schizophrenia are more venerable to be affected by nightmare , even cause sudden or chronic type of nightmare. Bohatia. (2012).

Several drugs like: L-dopa and beta adrenergic dugs can trigger nightmare, as well as withdrawal of REM drugs, alcohol or drug abuse of drugs can cause nightmare. Benjaminj.Sadock, ET .all. (2015

Epidemiology: 2-20% percent children of school age are suffering from nightmare in United States, incidence in early adolescence at primary school age is 3-5%, but the prevalence is low in Britain(1%) compared to United State.

The high incidence of nightmare is between the ages 3 to 6 six years (10-50%), but less common in adulthood (1%). Green berg. (2018).

Children between 5 to 6 years of old experience nightmare with a high frequency. More common in boys compared to girls (3:1 to 5:1)

Nightmare is a fearful sleep, often called Dream anxiety attack and due to sympathetic system activation cause the full wakefulness of the person which is mostly happens during REM. This condition happens due to fearful dreaming which gradually causes the anxiety of the person and person can recall whatever he dreamed , but in night terror the person don't remember at all. Jamson Larry j.et.all.(2020).

Recurrent and fearful nightmares usually lead to insomnia because due to fearful dreams the person doesn't to sleep or cause disorganized sleep. Most of the people suffering from nightmares don't have any mental disorder.

Diagnostic Criteria for Nightmare Disorder:

A. Repeated awakening from the major sleep period or naps with detailed recall of extended and extended and extremely frightening dreams, usually involving threats to survival, security, or self-esteem. The awakenings generally occur during the second half of the sleep period.
B. On awakening from the frightening dream, the person rapidly becomes oriented and alert (in contrast to the confusion and disorientation seen in sleep terror disorder and some forms of epilepsy)
C. The dream experience, or the sleep disturbance resulting from the awakening, causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
D. The nightmares do not occur exclusively during the course of another mental disorder (e.g., a delirium, posttraumatic stress disorder) and are not to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition.

Treatment:

Usually, no specific treatment is required for nightmare disorder. Agents that suppress REM sleep, such as tricyclic drugs, may reduce the frequency of nightmares. Benzo-diazepines have also been used.

Several medications are known to induce nightmares. Sometimes provoke nightmares, including L-DOPA and β-adrenergic blockers, as doe's withdrawal from REM suppressant medications. Finally, drug or alcohol abuse is associated with nightmares. Frequently occurring nightmares often produce a fear of sleeping type of insomnia in turn, the insomnia may provoke sleep deprivation, which is known to exacerbate nightmares.in this manner, a vicious cycle is created. Treatment using behavioral techniques can be helpful. Universal sleep hygiene, stimulus control therapy, lucid dream therapy, and cognitive therapy reportedly improve sleep and reduce nightmares. In patients with nightmares related posttraumatic stress disorder,nefazo done(an atypical antidepressant) reportedly provides therapeutic benefit. Benzodiazepines may also be helpful; however, systematic controlled trials are lacking. Evidence for the use of prazosin (Minipress), a central nervous system α-1-receptor antagonist, in the treatment of posttraumatic stress disorder-related nightmares is growing prazosin significantly increased total sleep time and REM sleep time and significantly reduces trauma-related nightmares and distressed awakenings.

4. Methodology:

At first the approval was taken from the Nangarhar Educational Directorate, then Educational directorate gave me the permission letter to go the Schools of City for data collection.

Secondly a list of schools is made, there are 18 school. Thirteen are boys' schools and five are girls' schools, the names are mentioned in first table below.

Tabe-1

No.	School Name	No.	School Name
1	Nangarhar High school	10	Abdur Rahim Niazi school
2	Abdul Wakil High school	11	Joy haft School
3	Nasrat School	12	Najmul Jehad School
4	Chaknawray High school	13	Araban School
5	Mia Omer High school	14	Nazo Ana School
6	Shaheed Arif High school	15	BiBi Hawa School
7	Istiqlal school	16	BiBi Zeenab School
8	Majboor abad school	17	BiBi Ayesha school
9	Tajrobawee school	18	Alaii School

Total number of students from first class to sixth class of the above schools are 14000, 9000 are boys and 5000 are girls. Numbers of students in each class are listed in below table.

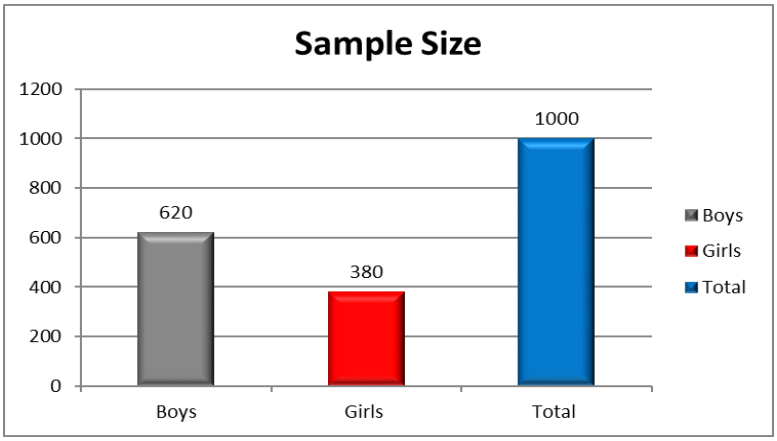
Table-2

Class	Male	Female
First class	1400	800
Second class	1500	900
Third class	1450	850
Fourth class	1450	950
Fifth class	1500	725
Sixth class	1700	775
Total	9000	5000

From every class (1-6) of each school, A, B, C and D classes were selected. Sample size were selected as; Class A form one class row, Class B from another class row, Class C from another class row and so on in cross sectional way .total sample size was 1000 students , 620 were boys and 380 were girls , showed below in table.

Table-3

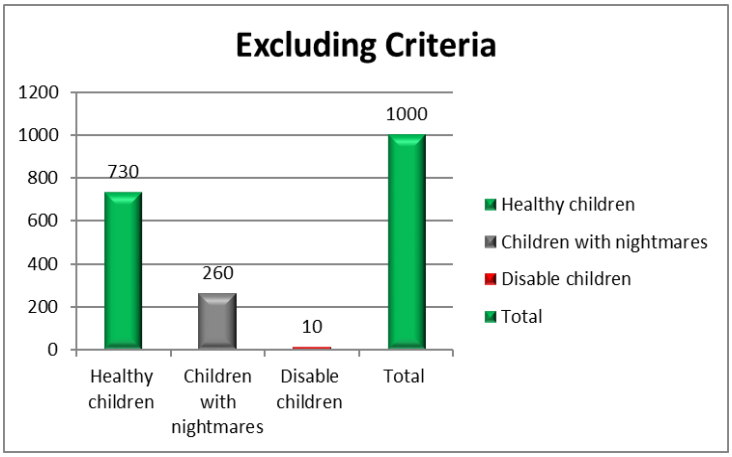
Sample size	
Boys	620
Girls	380
Total	1000



Intellectual function of the all children was rated by Ravens Progressive Matrices Test, 270 children were included in this study and 730 children were excluded from this study. Whenever these 270 children reassessed, 10 children had hearing and vision problems & they were also excluded from study. Excluding criteria are listed in table 4.

Table-4

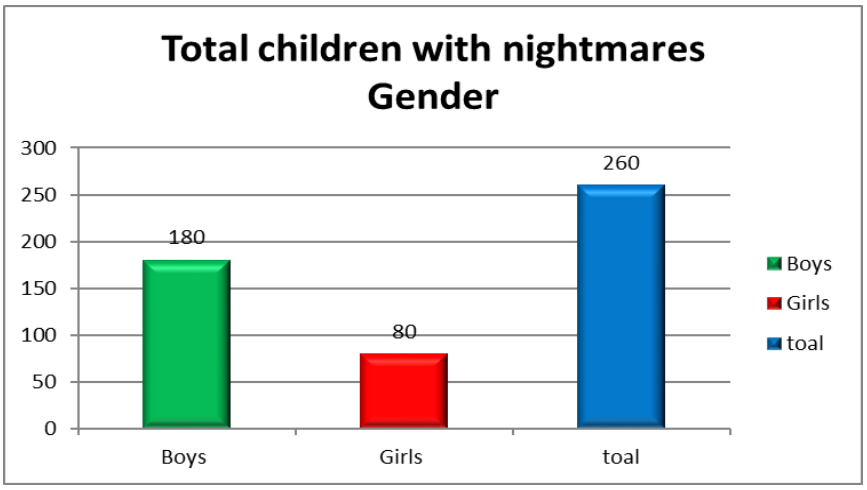
Healthy children	730
Children with nightmares	260
Disable children	10
Total	1000



260 children are study population. 180 children (69.23%) are boys and 80 children (30.76%) are girls and they were taken under study as mentioned below in table-5 with specifications.

Table-5

Total children with nightmares		
Sex	Number	Percentage
Boys	180	69.23%
Girls	80	30.76%
Total	260	100%



There were no any mental disorders (such as personality disorders, mood disorders Anxiety disorders, Pervasive developmental disorders and schizophrenic disorders) and no any physical disabilities (such as hearing problems, vision problems, Muscular problems) present in these children. A thorough medical history about the mothers' pregnancy, post-partum period and early development was taken from students' parents.

The students under study are from different provinces of the country, currently are living in Jalalabad city and studying in different schools of the city.

The socio-demographic data are collected through a questionnaire and their behavior is rated by Coners Rating Scale. Children whose met the criteria of the Scale then they are assessed by DSM-V criteria (Diagnostic Interview Schedule for Children) as well.

This study is designed in three parts:

1. Taking of history from parents
2. Taking history from school teachers
3. Physical and mental status examination

260 students out of 1000 were included in study, 180 are boys and 80 are girls.

The average age is nine years (6-12 years), listed in table-6 with specifications.

Table- 6

Diagnosed children with Nightmares	Numbers	Percentage
Boys	180	69.23%
Girls	80	30.76%
Age by years	6-12	Average age 9 years
Total	260	100%

Table-7: Diagnosed night mare children interim of course and duration

Symptoms	Numbers	Percentage
Transitional or temporary	240	92%
Permanent or continuous	20	7.69%
Total	260	100%

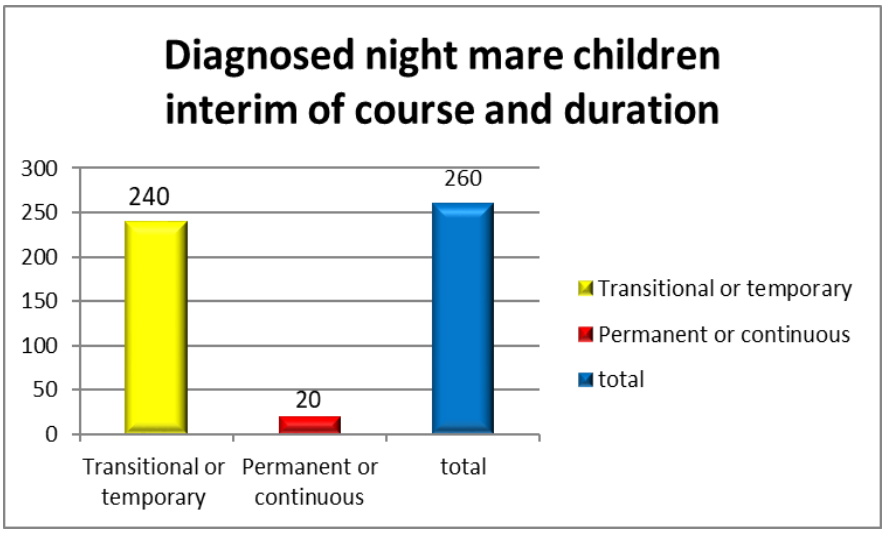
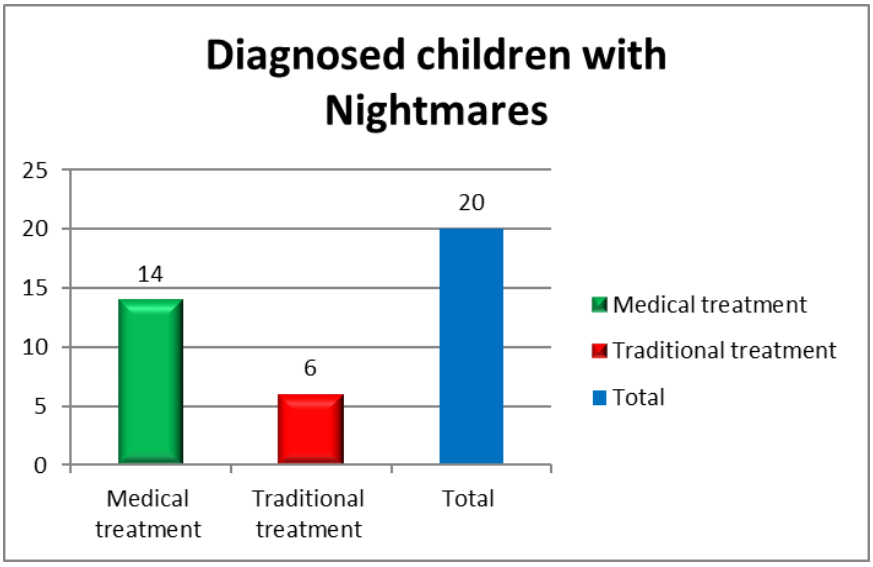


Table-8: Type of the treatment

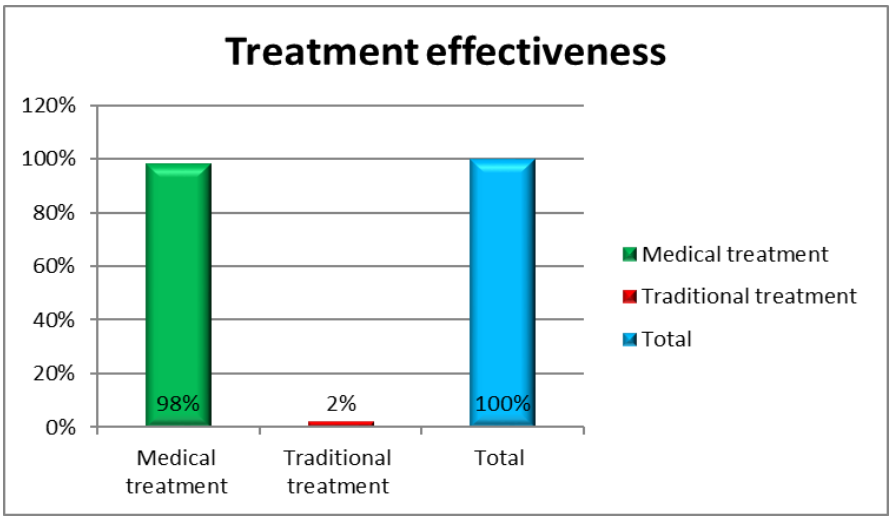
Diagnosed children with Nightmares	Numbers	Percentage
Medical treatment	14	70%
Traditional treatment	6	30%
Total	20	100%



Medical treatment was 98% effective and traditional treatment was 2% effective, showed in below table.

Table-9. Treatment effectiveness

Treatment type	Medical treatment	Traditional treatment
Numbers	14	6
Treatment effectiveness	98%	2%



Night mare prevalence in 10000 children of primary schools was 26%. Boys and girls ratio is (2.25: 1). Children who were suffering from night mares their academic and educational productivity were markedly affected and reduced.

Nightmare is a common mental and sleep disorder of the child age, occurs at preschool age, has a chronic tendency and causes problems in social and educational environments. No any study has been conducted in eastern region, Jalalabad City yet to address the prevalence of the nightmare in children. Therefore, Neuropsychiatry department of Nangarhar Medical Faculty assigned me to study nightmare incidences in schools, from 1st to sixth class students in Jalalabad City.

Considering the result and recommendations the main objectives of this study are below;

- Identification of these patients
- Management of these patients
- Rising awareness to the parents and school administrations to behave in a good manner with the children of nightmare disorder
- To motivate children of this disorder for early management
- To identify the proper educational approaches for these children
- To provide the valuable information to Doctors and Medical students

5. Findings

In 18 schools of Jalalabad city,13 out of them were boys school and 5 of them were girls school , in primary classes(1-6) in 14000 students 9000 out of them were boys and 5000 were girls .1000 persons whom were investigated as a sample 620 were boys and 380 were girls, 730 of them were normal and 270 persons were suspected , after ENT and other examinations 10 of them detected as defective and they removed from research , in remaining 260 persons of whom 180(23,79%) boys and 80(7630%)girls having signs of nightmare . 240(92%) of them were having transient sings and 20(69,75) were having permanent signs of night mare .all patients were between the age of 6-13(average age 9 years)14 persons out of them did medical treatment which was 98% effective and 6 persons (30%)did cultural treatment which was 2% effective .

6. Discussion

As considering my research result, in my research at primary classes (1-6) in school 114children out of 1000 were suffering from nightmare and most of them were girls. the prevalence of nightmare in 1000 children were (11,4%) and the ratio between boys and girls is 2,25:1.

The same research has been done in Brazil on 403 children the incidence of nightmare was (17, 1%) and ratio between boys and girls was 1, 9:1

In Bangkok research on 433 children 6, 5% were affected by nightmare and ration between boys and girls was 1:1, 09, P=0,006.

In Qatar research on 2000 children prevalence of nightmare was 9,4%and ratio was 3:1,39 .P=0,003.

Name of research	Number of children	Incidence of nightmare	Ratio between boys and girls
My research	1000	11,4%	1:2,25
Brazil	403	17,1%	1:1,9
Qatar	2000	9,4%	1:3,39
Bangkok	433	6,5%	1:1,09

7. Suggestions

1. Public health workers should choose such a path in order to diagnose children affected by nightmare in a good manner.
2. Clinical doctors should do their best to do appropriate treatment for children suffering from nightmare.
3. Educational workers should provide separate educational system for these children
4. They should provide extra knowledge in school and learning centers for these children
5. Their parent and family members should not abuse them physically if the children cannot concentrate on their studies
6. Their parents should be educated that they have to take their children into hospital and appropriate treatment instead of wasting their time on visiting priest.

References

1. Abbas abdul K.**,**Aster Jon C. et.al(2018).Robins Basic pathology**,**Philadelphia**,**Elsevir,10th edition, Pp;835,849.
2. American Psychiatric association ISS BN, Quic reference to the diagnostic criteria From DSM_ 5, www.dsmoline .org/ Donnelley&Sons company 2010 pp; 65-66-67.
3. Aminof Michael j. Green berg David A. et al.(2015).Clinical Neurology, Toronto, Mc Graw Hill,9th ,Pp;1,26&46.
4. Bruat John C. M,(2102)Current Diagnosis & Treatment Neurology ,San Francisco,Mc Graw Hill ,2nd ed,Pp;35,39& 47.
5. Drake William, Glynn Michael,(2012). Hutchison's Clinical Methods, Toronto, Saunders Elsevier, 23rd edition, Pp; 57,79.
6. Jamson Larry j, Fuci Anthony S,et al.(2020).Harrison's Manual of Medicine Philadelphia,pennsylvania,Mc Graw Hill,20th, Pp;1097,1099,1102.
7. Jogi Renu,(2017).Basic ophthalmology,New Delhi 110002,India,The Health Scinences publisher New Delhi,5th ed,Pp;381,387&398.
8. Papadakis Maxine A, Mcphee Stephen j,et al(2021), Current Medical Diagnosis & Treatment,London, Mc Graw hill-Lange, 60th ed,Pp;1122,1123.
9. Sadock Benjamin james,Sadock Virginia Alcott,et al.(2015). Synopsis of Psychiatry,New York /SABAM,Brussels,Wolters Kluwer, 11th ed. Pp;533,535,537.
10. Sadock Benjamin j.Sussman Norman, et al. (2015).Psychiatric Drug Treatment,Tokyo,Wolters Kluwer,6th ed.Pp;159,169&201.