

## **MANAGEMENT OF STRESS IN DYSLEXIC CHILDREN THROUGH PSYCHO-YOGIC-AYURVEDIC PACKAGE**

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### **Abstract**

Study helped to elaborate the role and space of psycho-yogic-ayurvedic package in the life of dyslexic children. In this hectic and competitive era, these therapies are playing its important part in individual's life day by day. Not only, it is easy to apply but also give beneficial effects on stress of dyslexic children which badly affecting the personality of such children. This therapy thus increases the individual's sense of own well-being both physically and mentally of every age group through counselling, asanapranayama and ayurvedic drugs which help them to increase memory, concentration and confidence in reading and thus lowering down the stress level .

**Keywords:Stress;Dyslexia;Psycho-yogic-ayurvedic package;Concentration;Confidence**

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## 1. Introduction

Development of children is of utmost importance, particularly in the developing scenario of world today, to sustain and carry forward the overall developments for better future of our society. According to Freud and Adler, 0-5 years and 4-5 years of age are important stages for the perfect personality development. As a whole, we can say that early and middle childhoods are the perfect stages of personality development. In the individual's life, parents, teachers and society play equally important role for his vast intellectual, moral and social development by understanding his needs and behaviour properly. There are many aspects of child development like physical, motor, cognitive, language, social, emotional etc. Any disturbances in these aspects lead to various disabilities and psychological problems in children (**Aggarwal, 2007**). Children have less self understanding and they have not yet developed a stable sense of identity nor do they have an adequate frame of reference regarding reality, possibility and value. As a result, they are unable to cope with stressful events which might be reflected in behavioural and emotional problems.

For every child, reading is the key to success in school, to the development of out-of school interests, to the enjoyment of leisure time, and to personal and social adjustment. It helps him adjust to his age mates, to become independent of parents and teachers, to select and prepare for an occupation and to achieve social responsibilities. According to **Kavale and Forness (2000)**, 90% of all children identified as learning disabled are referred for special education services because of reading problems.

Now a day, children are having problems of learning disorder, which are found across all ages, socio- economic levels and races. The problems of these children may range from mild to severe. Although, they are not physically handicapped or mentally retarded but exhibit difficulties in basic psychological processes responsible for reading, writing, arithmetic and speaking (**Coons, 2011**). According to **U.S. Department of Education, National Centre for Education Statistics (2016)**, all disabilities were found to be 6,429 and out of them, learning disabilities were 2,277 in the year 2012-2013.

These children would manifest difficulties in one or more of the following areas:

- a. Only reading

- b. Reading and writing
- c. Only writing
- d. Doing arithmetic
- e. Thinking tasks
- f. Language comprehension and expression
- g. Children with LD have difficulty in initiating and maintaining relationships with their peers i.e. have difficulties making friends.
- h. Children with LD also have difficulty in establishing relations with teachers and other adults.
- i. Some children have mood swings and occasional emotional imbalance like excessive anger, depression, extreme frustration, aggression and very low self esteem.

Reading disorder is a learning disorder which is commonly called as “**Dyslexia**” in which children have problem in reading, writing and mathematics, and interferes in their academic achievement and daily routine. Mathematics Disorder and Disorder of Written Expression are commonly associated with Reading disorder, and it is relatively rare for either of these disorders to be found in the absence of Reading Disorder.

According to **National Institute of Health, US**, about 80% of people with learning disorder have reading disorder. 4% reading disorder is found in school age children. **Mogasaleet al. (2012)** observed the prevalence of specific learning disabilities to be 15.17% in sampled children, whereas 12.5%, 11.2% and 10.5% had dysgraphia, dyslexia and dyscalculia, respectively among primary school children in a South Indian city.

**Common problems related to such children are-**slow reading speed,poorcomprehension,omission of words and spelling errors,problem in writing and mathematical expression,confusion with directions,delay in spoken language,difficulty in discrimination between close sounds/numbers like n or m, b or d,6 or 9,impaired hearing,pooreyesight,clumsiness.

Identified by Oswald Berkhan in 1881, the term ‘dyslexia’ was later coined in 1887 by Rudolf Berlin, an ophthalmologist practicing in Stuttgart, Germany, from the Greek word dys - hard,

bad, difficult and lexis-speech, word. Samuel Kirk, a psychologist was first person to work on dyslexia.

**Dantzeret al. (2010)** published that stress, sickness and depression can generate inflammation in the brain, which is detrimental to learning. According to a new study, T cells level the learning curve by producing a protein that combats inflammation, establishing a more learning-conducive environment in the brain.

Due to all these conditions, such children suffer from low self-esteem, low confidence, stress, depression and frustration, conduct disorder, ADHD, physical, mental and social problems etc. may be because of lack of opportunity, poor teaching, cultural factors, impaired vision or mental retardation. They cannot even live their life properly and become centre of attraction for others due to hesitation and loneliness. They are even not able to discuss their problems freely in front of others and slowly their problem increases to a high level. **Boyse (2010)** reported that television affected children's cognitive development and thus replaced reading.

Therapy aims to increase the individual's sense of well-being. There are many therapies which are helpful for prevention of such problems like psychotherapy, home therapy, Ayurveda, yoga, laughter, music therapy etc. along with, or instead of, therapeutic conversations, communication between therapist and child patient which must depend on free play, games, or activities of various sorts. If the condition is diagnosed properly, it can be cured up to some extent with family, friends and teachers' support, love and care. The purpose of my study is to assess whether counselling of children and their parents along with suitable yogic and ayurvedic therapies provided to children can alleviate the percentage rate of problem of dyslexia in children to help them to spend a fruitful life in future.

## **2. Research Method**

### **2.1 VARIABLES**

#### **2.1.1 Independent variable**

Psycho-yogic-ayurvedic package was taken as independent variable. This includes –

##### **A. Psychological package-**

1. Individual counselling includes dyslexic children.
2. Family counselling includes parents of dyslexic children and teachers.
3. Play therapy includes scrabble games, puzzles, drawing games.

**B. Yogic package –**

1. *Simhasana*(roaring lion pose)
2. *Bhramari pranayama* (humming bee)

**C. Ayurvedic package –**

1. *Brahmi (Bacopamonnieri)*
1. *Shankhpushpi (Convolvulus pluricaulis)*
2. *Vacha (Acoruscalamus)*

**Regimen**

- Individual counseling– 30 minutes twice a week
- Play therapy – 10 minutes daily
- Yogic therapy – 10 minutes daily
- Family counseling – 30 minutes twice a month
- Ayurvedic therapy –45 days
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**Individual Counselling**

Humans are born, live, and die within social groups. They grow, learn and work in the company of others. In the life, they face many challenges at the levels of family, school, college, career and so on.

**Journal of the American Academy of Child and Adolescent Psychiatry (2005)** reported that therapy, which includes parents, was an effective, essential part of treatment for children's substance abuse and conduct disorders and is emerging as an effective treatment for depression and anxiety disorders as well.

School life can be challenging and is often stressful. Students experience those challenges in a number of different ways: difficulties in adjusting to school, confusion in deciding on a major or career path, or struggling in relationships, or making friends or getting along with a roommate. Problem becomes more serious when children have problem in reading, writing and mathematics

which interferes the academic achievement of daily routine of them. Many students feel anxious, depressed, confused, or overwhelmed at some point during their school experience and need help dealing with feelings and problems that seem beyond their control. For children, that help may come from friends, family members, significant others, etc., but in some cases, help is needed from a trained professional. In this process of counseling in the form of individual and family counseling can be helpful to improve the situation occurring between parents and children in their life (**Chaddha, 2008**).

Counselling works as a helping profession that underlies the important role towards the society. It is process that can help people identify more effective strategies both to cope with difficult situations and to achieve their goals. Individual counselling, since the early days of the counselling movement, has been identified as the core activity through which all the other activities become meaningful. It is a one to one helping relationship that focuses on a person's growth and adjustment, problem solving and decision making needs. It is a client- centred process that demands confidentiality. This process is initiated when a state of psychological contact or relationship is established between the counsellor and the client; it progresses when certain conditions essential to the success of the counselling process prevail. Many practitioners believe that these include counsellor's genuineness or congruence, respect for the client and an empathic understanding of the client's internal frame of reference. Effective counselling requires counsellors to have not only the highest levels of training and professional skills but also certain personality traits.

According to **Gibson (1989)**, 98.8% of prevention and the Elementary School Counsellors were engaged in individual counselling and 81% in group counselling. Individual counselling is basically a collaborative effort between counsellor and his counselling process. Counselling process involves following stages-

- a) Relationship establishment
- b) Problem identification and exploration
- c) Planning for problem solving
- d) Solution application and termination

## Family Counselling

The family is the basic institution of our society and the one that has the longest period of impact on the individual. Family counselling focuses on family system. If the counselling is concerned primarily with the family system, it can be viewed as family counselling. It focuses on relationship and communication. Family counselling benefits the whole family by helping everyone to know how they are feeling. It helps the individual to understand and cope better with the stresses and strains of family life. Families can be a source of support, encouragement and love but sometimes relationships within families are put under strain and family members feel isolated or overlooked. Parental conferences are significant, not only to the family-school relationship but also to student behavior and achievement. The counselor can effectively consult with parents on various occasions to promote understanding of pupil's characteristics and their relationships to his behavior. Consultation can assist parents in coping with or modifying student behaviors, improving interpersonal relationship skills and adjusting attitudes. Parents may also consult with the school counselor in regard to their children's academic planning, progress or problems. The counselor may also serve as a consultant to interpret school programs to parents and to explain the mainstreaming of students with disabilities. **Pinsoff and Wynne (2000)** observed that family or couple's therapy is better than individual therapy for schizophrenia, childhood autism, ADHD children, aggression, substance abuse and marital distress.

## Play Therapy

Play Therapy is a form of counselling or psychotherapy that uses play to communicate with and help people, especially children, to prevent or resolve psychosocial challenges. This is thought to help them towards better social integration, growth and development. Play Therapy can also be used as a tool of diagnosis. It is generally employed with children aged 3 through 11 and provides a way for them to express their experiences and feelings through a natural, self-guided, self-healing process. As children's experiences and knowledge are often communicated through play, it becomes an important vehicle for them to know and accept themselves and others. It can help to become aware of what feelings and how these feelings get manifested in behaviour or one's body. They can learn how to become better at regulating emotions and expressing them in constructive ways. They can discover who they are and what their strong and weak points, needs, wishes, thoughts and dreams are. **Franceschini et al. (2013)** reported that playing fast-paced

video games helped improve dyslexic children's reading speed more than a year of intense, traditional therapies could. In private settings, sessions usually last 45 to 50 minutes while in hospitals and mental health clinics the duration is typically 30 minutes. The number of sessions and duration of treatment varies according to treatment objectives of the children.

### **Yogic Package**

1. *Simhasana* for increment of extrovertness and increasing confidence level (5-10 times).
2. *Bhramari pranayama* for concentration (5-10 times).

Yoga is a great boon to civilized man. Yoga is way of life, which can make a person discover his best in life. Yoga is a spiritual science for the integrated and holistic development of physical, mental and spiritual aspects of our being. Yoga is a vital tool that helps to attain state of physical, mental and social well-being.

Yoga practice helps develop the body and mind bringing a lot of health benefits. Practicing yoga every day, keeps fit and healthy throughout life. Yoga is best described as nurturing mind, body and soul with exercises, *asana*, *pranayama* and meditation (Saraswati, 2006).

### ***Simhasana***

It is also known as 'lion pose'. In *Simhasana*, the face of the practitioner resembles that of a lion, hence the name. The term '*Simhasana*' comes from the Sanskrit word '*Simha*' which means 'lion' and '*asana*' which means 'pose'. This *yoga asana* helps in relaxing stress. This pose is simple yet effective. The roaring lion posture (whose original Indian name is *Simhasana*) in yoga is suitable for people of all ages and types (including old and weak) because it is relatively easy to perform. The posture is sometimes referred to as *Bhairavasana*. *Simha* means lion, whereas *Bhairava* refers to one of the formidable forms of lord *Shiva*. The posture gets its name because the face of the person performing it resembles the face of a roaring lion (*Simhamudra* or Lion face gesture) because of the open mouth and extended tongue.

### **Benefits**

1. The practitioner develops a beautiful and sonorous voice. It helps to solve many voice related problems.



2. This *asana* is said to remove defects of the throat, nose, mouth and ears. It is known to remove bad breath.
3. It helps in cases of stuttering.

### **Precautions**

1. Those with knee injuries or suffering from knee problems may practice this *asana* in a different style.
2. The *asana* should not be practiced more than three minutes as it is neither beneficial nor advisable.
3. If a person suffers from any chronic illness or physical problems, it is better that he should discuss with the doctors.
4. If having problem in neck then neck should not be bending forward in this *asana*.

### ***BhramariPranayam***

*Bhramari Pranayama* is very effective in calming down the mind instantly. It is one of the best breathing exercises to release the mind of anger, agitation, frustration or anxiety. It is a simple technique and can be practiced anywhere at work or home and best one to de-stress anyone. This breathing technique derives its name from *Bhramari*= black type of Indian bee and *pranayama* = breathing technique.

*Bhramari* is a tonic for brain. It is best done for 2-3 minutes. The best time to perform the *Bhramari pranayama* is either in the morning or evening but always on an empty stomach. This *pranayama* if learnt correctly, anyone from a child to an elderly person can practice this. This *pranayama* should be practiced 11 to 20 times a day (Mishra, 2004). The most conspicuous effect is that it relaxes the brain. If done regularly, it can have positive effect on stress, fatigue and high blood pressure.

### **Benefits**

1. The mind becomes calm and peaceful.
2. Instant way to relieve tension, anger and anxiety. Very effective breathing technique for people suffering from hypertension as it calms down the agitated mind.

3. Enhances concentration of mind and improves memory.
4. Builds confidence.

### Precautions

1. *Bhramari Pranayama* should only be practiced under the supervision of a trained yoga instructor.
2. Always perform in seated position.
3. If have ear infection, avoid this breathing exercise while practicing this *pranayama*.
4. Keep a gap of at least 3-5 hours before practicing between last meal and this exercise.

### Ayurvedic Package

1. *Brahmi (Bacopamonnieri)*
2. *Shankhpushpi (Convolvulus pluricaulis)*
3. *Vacha (Acoruscalamus)*

*Ayurveda* is the most ancient and traditional system of medicine in India. The *ayurvedic* system of medication is based on many centuries of experience in medical practice, handed down through generations. *Ayurveda* covers both preventive and curative aspects of health and disease. Preventive aspect of *Ayurveda* mainly focuses on rejuvenation. *Ayurveda* helps to improve immune system, increases intelligence, memory power and other aspects of health.

Two principles of *Ayurveda* are-

- To promote prolong life and perfect health.
- To completely eradicate the disease and dysfunction of the body.

*Ayurvedic* treatment relies on herbs and other plants including oils and common spice. **Karande (2013)** found that *Ayurvedic* drugs may have an important role in improving attention and memory in dyslexic children, thereby enabling to improve their learning potential. The plant as a whole with its leaves, flowers, fruits, seeds, roots, bark and resin has medicinal values apart from its flavor and fragrance. It acts as a perfect mechanism in bringing a balanced harmony between the mind and spirit.

### Benefits of Ayurvedic treatment –

- Main goal is prevention as well as promotion of the body's own capacity for maintenance and balance.
- Also treats specific physical and mental health problems.

### **BRAHMI**

**Botanical name:** *Bacopamonnieri*

**Family:** *Scrophulariaceae*

**Common name:** *Brahmi*, bacopa, Babies tear, *Herpestismonniera*, water hyssop

### Introduction

*Bacopamonnieri* is a creeping perennial with white and blue flowers that grows throughout much of Southern Asia. It is bitter in taste; has been used in the *Ayurvedic* system of medicine for centuries. *Brahmi* occurs naturally in India and has been used for the treatment of a number of disorders, particularly those involving epilepsy, depression, insomnia, schizophrenia, anxiety, intellect and poor memory. Traditionally, it was used as a brain tonic to enhance memory development, learning and concentration (Sharma, 2005).

*Brahmi* is widely marketed today as 'brain tonic' for enhancing memory and mental function. It appears to have antioxidant properties in the brain. These antioxidant properties could potentially lead to positive effects on mental function. Deole (2008) evaluated the antidepressant and psychoactive effect of *Brahmighrita* on depression. *Brahmighrita* showed moderate improvement in 40% patients and mild improvement in 55% patients.

### Medicinal properties

- *Brahmi* is one of the best rejuvenating and nervine tonic. According to Singh (1997), *Brahmi* is used in the treatment of a number of disorders, particularly those involving anxiety, intellect and poor memory.
- It is valuable plant for brain and entire nervous system.
- It helps in depression and mental retardation by enhancing intelligence.
- Improves intellect, consciousness and mental acuity

- Most commonly used to improve mental alertness, and enhance learning and academic performance.
- Improves learning capacity.
- *Brahmipowder* is a nervine tonic which calms down the mind. These characteristics make *Brahmivery* useful in loss of memory, schizophrenia and other psychic problems. **Dhanasekaran et al. (2007)** reported that *Bacopa* provides some protection against Alzheimer's disease and may be a helpful treatment.
- Calms the mind and promotes relaxation - increases protein synthesis and activity in brain cells.

### **SHANKHPUSHPI**

**Botanical name:** *Convolvulus pluricaulis*

**FamilyName:** *Convolvulaceae*

**Common name:** *Shankhpushpi*

**Sanskrit name:** *Mangalyakusuma*

### **Introduction**

*Shankhpushpi*; *Convolvulus pluricaulis* is an herb of choice as a brain tonic especially for the conditions of memory loss, schizophrenia, convulsions and intelligence related problems. *Shankhpushpi* powder is used to improve the intellect qualities of children. *Shankhpushpi* powder is also an important *rasayana* to be used in the mental disabilities (**Brahmvarchas, 2003**).

**Pragya (2011)** found that *Shankhpushpi* is beneficial for maintaining mental and physical health.

### **Medicinal properties**

- *Shankhpushpi* is one of the best *Ayurveda* herbs to nourish the brain tissues. In this way it benefits a lot in conditions of memory loss, schizophrenia and convulsions.
- Specially used to improve intellectual power of children.
- Brain tonic, *shamak*, sedative and therefore it is used in epilepsy, insomnia and giddiness.
- Best natural remedy for reducing stress level and sleeping disorders (**Sharma, 2005**).

## VACHA

**Botanical Name:** *Acoruscalamus*

**Family**

**Name:**

*Araceae*

**Common Name:** *Calamus*, Sweet Flag, Sweet Root, Bach

### Introduction

*Acoruscalamus* is commonly known as sweet flag in India. Its leaves have a lemony scent as well as the roots have a sweet fragrance. Its primary application is to open the mind, improve concentration, clarity and speech. **Ody Penelope (2009)** recommended *Vacha* to improve memory and mental awareness.

### Medicinal properties

- Provides aid to the digestive system and acts against flatulent colic, dyspepsia and vomiting.
- Depresses central nervous system, and is a well known ingredient in formulation for psycho-somatic disorders like epilepsy. **Daniel et al. (2014)** observed that *vacha* improves memory loss and intellect, and is also used to treat mental disorders.

### 2.1.2 Dependent variable

#### Stress

Faced with any challenge, we put in additional efforts and mobilise all our resources and the support system to meet the challenge. All the challenges, problems and difficult circumstances put us to stress. Thus, if handled properly, stress increases the probability of one's survival. Stress is like electricity. It gives energy, increases human arousal and affects performance. Stress can be divided in two forms; eustress that is good for achieving and distress that causes body's wear and tear. Thus stress can be described as the pattern of responses an organism makes to stimulus event that disturbs the equilibrium and exceeds a person's ability to cope. The word stress has its origin in the Latin words 'strictus', meaning tight or narrow and 'stringere', the verb meaning to tighten.

**Hans Selye**, the father of modern stress research, defined stress as "the non-specific response of the body to any demand" that is, regardless of the cause of the threat, the individual will respond

with the same physiological pattern of reactions. Stress can be physical, emotional and behavioural. Stress is not a factor that resides in the individual or the environment, instead, it is embedded in an ongoing process that involves individuals transacting with their social and cultural environments, making appraisals to cope with issues that arise. Stress is a dynamic mental/cognitive state. The three major types of stress, viz. physical and environmental, psychological and social. With increasing complexity of our life style, the level of stress has been increasing at a phenomenal rate. According to **Baron (2002)**, stress is the process that occurs in response to the situations or events that disrupt or threaten our physical or psychological functioning.

When counsellors encounter stress in clients, they need to understand the reasons for the behaviour. In working for stress prevention or reduction, initially the counsellor and client need to identify the stressors in the client's situation, their relative significance, whether they can be dealt with and possible preventive strategies.

In the present research, stress is taken as dependent variable. For measuring stress in the subjects, **Stress inventory for school students** of **Seema Rani** and **BasantBahadur Singh** is used for the study. Age limit is 6-14 years.

### **Reliability**

The inventory has both test-retest reliability and internal consistency reliability. For calculating test-retest reliability, the inventory was administered twice with a gap of 14 days on a sample of 200. The test-retest reliability was found to be 0.80, which was not only high but also statistically significant. Likewise, internal consistency reliability by odd-even method was found to be 0.79 (corrected to full length), which was highly significant. Thus inventory possessed a sufficient degree of reliability.

### **Validity**

1. The face validity of the questionnaire appeared to be fairly high.

2. The content validity is adequately assured as only those items are selected for the initial questionnaire for which there is complete agreement amongst the experts. Finally, items which showed a high discriminating value following items analysis are selected for the final test.

### **Administration**

It is a self administering inventory. The examiner should read the instructions given on the front page and examinees should read them silently along with the examiner. Items are to be tick marked by the students.

There is no time limit for answering it. Ordinarily an individual takes 50 minutes in completing the test.

### **Scoring**

The scoring method of this inventory is very easy. There are 40 items in this inventory. Every question (item) has four options. Options are –

- Very worried is given 4 marks
- Worried is given 3 marks
- Little worried is given 2 marks
- Not worried is given 1 mark

Maximum score in this inventory is 160 and minimum score is 40.

All the 40 items selected are indicative of stress in the students. This indicates that the higher the score, the higher stress of the students and the lower the score, lower stress of the students.

### **Classification of scores**

<b>Range of score</b>	<b>Qualitative Description</b>
121-160	high level of stress
80-120	moderate level of stress
0-79	low level of stress

## **2.2 HYPOTHESIS**

After reviewing the literature, the following research hypothesis was formulated.

1. There is no effect of psycho-yogic-ayurvedic package on stress in dyslexic children.

## 2.3 MATERIALS AND METHODS

### Packages and their administration

**Psycho-yogic-ayurvedic package: includes following 3 packages**

#### Psychological package-

1. Individual counseling- includes dyslexic children.
2. Family counseling- includes parents of dyslexic children and teachers.
3. Play therapy- includes dyslexic children (scrabble games, puzzles, drawing games)

#### Yogic package-

1. *Simhasana*
2. *Bhramari Pranayama*

#### Ayurvedic package-

1. *Brahmi (Bacopamonnieri)*
2. *Shankhpushpi (Convolvulus pluricaulis)*
3. *Vacha (Acoruscalamus)*

#### Regimen

- Individual counseling – 30 minutes twice a week
- Family counseling – 30 minutes twice a month
- Play therapy (scrabble games, puzzles, drawing games) – 10 minutes daily
- Yogic therapy – 10 minutes daily
- *Ayurvedic* therapy – 45 days

**Procurement and Preparation of drug:** Following freshly dried herbs were purchased from local *ayurvedic* medicine shop in Haridwar. Fine powders (churn) of following drugs were taken as per the quantity given in the table and mixed with each other. Preparation of drug and measurement was done at Indian Veterinary Research Institute (I.V.R.I.), Bareilly (U.P).

Name of herb	Part used	Ratio
1. <i>Brahmi (Bacopamonnieri)</i>	<i>panchang</i> (whole plant)	1 part
2. <i>Shankhpushpi (Convolvulus pluricaulis)</i>	<i>panchang</i> (whole plant)	1 part



3. <i>Vacha (Acoruscalamus)</i>	<i>mool</i> (root)	1/10 part
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**Dose of drug:** 80-100mg/kg body weight/day in two divided doses

**Schedule of drug administration:** Twice in a day

**Route of drug administration:** Oral route

**Anupan:** Cow milk

**Duration of therapy:** three trials of 45 days

After completion of 45 days of *ayurvedic* therapy, subjective and objective parameters related to the disease were assessed and then medication was stopped for 15 days and again started/stopped the medication for 45/15 days for three cycles with regular monitoring of subjective and objective parameters related to the disease after each cycle.

### Sample and sampling

The sample of the study was 50 dyslexic children selected by quota sampling technique.

The age of the subjects ranged between 8-11 years.

Sample Selection- English medium schools from Bareilly (U.P)

### Research Design

Experimental and control group design

### Tools used

To assess level of stress in subjects, "Stress inventory for school students" (2008) of Seema Rani and BasantBahadur Singh was used.

## 3. Results and Analysis

### NULL HYPOTHESIS

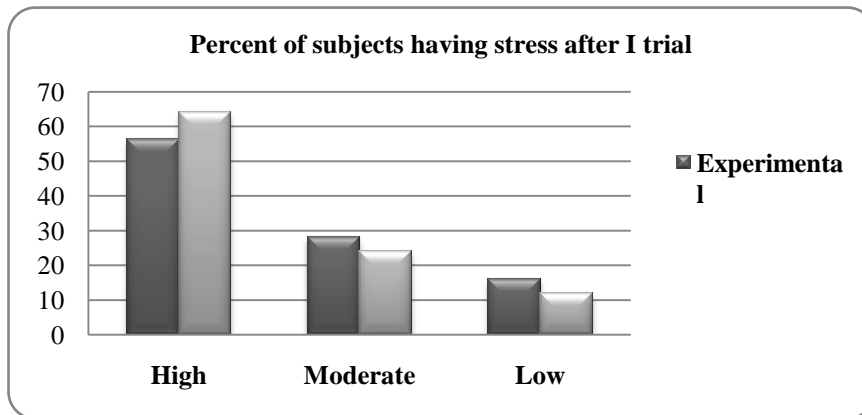
**1. There is no effect of psycho-yogic-ayurvedic package on stress in dyslexic children.**

### I trial

**Table 1: Per cent of subjects having stress after I trial**

Subjects	Stress
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	High	Moderate	Low
Experimental	56	28	16
Control	64	24	12



**Table 2: Contingency Table**

Subjects	Stress			
	High	Moderate	Low	Total
Experimental	(15) 14	(6.5) 7	(3.5) 4	25
Control	(15) 16	(6.5) 6	(3.5) 3	25
<b>Total</b>	<b>30</b>	<b>13</b>	<b>7</b>	<b>50</b>

At  $df = 2$ ,  $X^2 = 3.74$

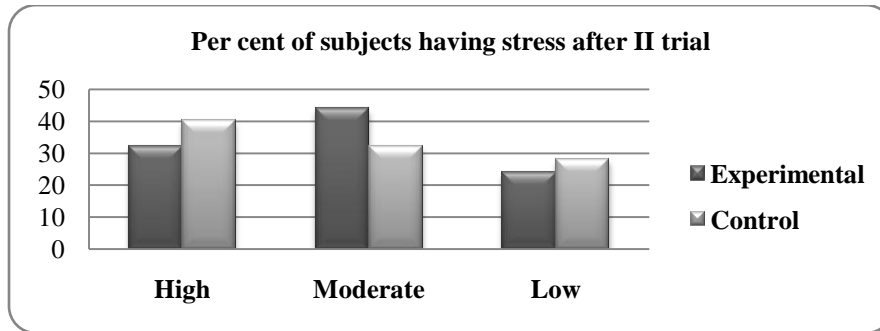
$X^2$  value is 3.74, which is not significant at 0.05 level of confidence. It indicates that there is no effect of psycho-yogic-ayurvedic package on stress on dyslexic children. Thus null hypothesis is not rejected. According to percentage table, result shows that after first trial of package, experimental group of dyslexic children had lower stress than control group.

## II trial

**Table 3: Per cent of subjects having stress after II trial**

Subjects	Stress
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	High	Moderate	Low
Experimental	32	44	24
Control	40	32	28



**Table 4: Contingency Table**

Subjects	Stress			
	High	Moderate	Low	Total
Experimental	(9) 8	(9.5) 11	(6.5) 6	25
Control	(9) 10	(9.5) 8	(6.5) 7	25
Total	18	19	13	50

At  $df = 2$ ,  $X^2 = 0.74$

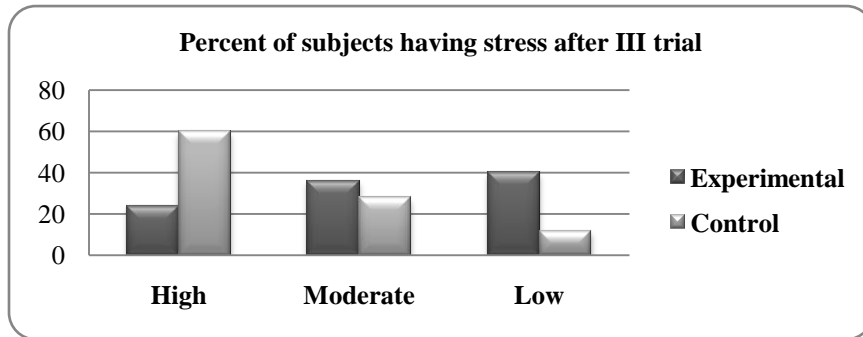
$X^2$  value is 0.74, which is not significant at 0.05 level of confidence. It indicates that there is no effect of psycho-yogic-ayurvedic package on stress on dyslexic children after second trial. Thus null hypothesis is not rejected. According to percentage table, result shows that after second trial of package, experimental group of dyslexic children had lower stress than control group.

### III trial

**Table 5: Per cent of subjects having stress after III trial**

Subjects	Stress		
	High	Moderate	Low
Experimental	24	36	40

Control	60	28	12
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**Table 6: Contingency Table**

Subjects	Stress			
	High	Moderate	Low	Total
Experimental	(10.5) 6	(8) 9	(6.5) 10	25
Control	(10.5) 15	(8) 7	(6.5) 3	25
<b>Total</b>	<b>21</b>	<b>16</b>	<b>13</b>	<b>50</b>

At  $df = 2$ ,  $X^2 = 7.84$

$X^2$  value is 7.84, which is significant at 0.05 level of confidence. It indicates that there is effect of psycho-yogic-ayurvedic package on stress on dyslexic children. Thus null hypothesis is rejected. According to percentage table, result shows that after third trial of package, experimental group of dyslexic children had lower stress than control group.

Children are the future of the country. Their development is of utmost importance to sustain and carry forward the overall development for better future of our society. According to Freud and Adler, early and middle childhoods are the perfect stages of personality development. Parents, teachers and society play equally vital role to shape the personality. Aspects of child development include physical, motor, cognitive, language, social, emotional etc. Any disturbances in these aspects lead to various disabilities and psychological problems in children.

Reading disorder is a learning disorder, commonly called as “Dyslexia” in which children have problem in reading, writing and mathematics. **DSM-IV TR (2000)** published that 2% to 10% of children to have learning disorder. In India, parents are not much aware about such disorders and consider that their children are not sincere, inattentive to their studies and when problem increases, they face problems with the children.

Common problems related to such children are slow reading speed, poor comprehension, and omission of words and spelling errors, problem in writing and mathematical expression, confusion with directions, delay in spoken language, difficulty in discrimination between close sounds/numbers like n or m, b or d, 6 or 9, impaired hearing, poor eyesight and clumsiness. Due to all these conditions, such children suffer from low self-esteem, low confidence, stress, depression and frustration, conduct disorder, ADHD, physical, mental and social problems etc.

There are many therapies which are helpful for prevention of such problems like psychotherapy, home therapy, Ayurveda, yoga, laughter, music therapy etc. Psycho-yogic-ayurvedic package included individual counselling, family counselling (parents and teachers), play therapy (scrabble games, puzzles, and drawing games), *Simhasana* and *Bhramari pranayama*, and treatment with herbs *Brahmi*, *Shankhpushpi* and *Vacha*.

Stress is the process that occurs in response to the situations or events that disrupt or threaten our physical or psychological functioning (**Baron, 2002**). **Krishnan (2016)** found that even a brief period of stress could cause the hippocampus to start shrinking, which precedes the onset of a change in behaviour, namely, the loss of memory. Psychological methods, like counselling (child, family members/teachers) along with play therapy of child have been found to improve the condition of child. Many students feel anxious, depressed, confused, or overwhelmed at some point during their school experience and need help dealing with feelings and problems that seem beyond their control. Individual counselling has been found to help to identify their problem and find the solution.

The other constituent of package is Yoga (*asana* and *pranayama*). *Asana*, *pranayama* and meditation nurture the mind, body and soul. Regular practicing of yoga and meditation improves the concentration of dyslexic child and thus help him in studies (**Chaubal, 2011**). Among

various yogic exercises, *Simhasana* and *Bhramari pranayama* were selected because they are easy to be performed by the dyslexic children. *Simhasana* is mainly performed for increment of extrovertness and confidence level and *Bhramari pranayama* for concentration. *Simhasana* is simple yet effective to relax the stress. *Bhramari pranayama* is a simple and best technique to de-stress anyone. **Shankari (2012)** observed that concentration and performance of poor attention students had significantly improved after *Bhramari pranayama*.

Third component of package is treatment with *ayurvedic* medicines. **Karande and Sholapurwala (2013)** found that *Ayurvedic* drugs can improve attention and memory in dyslexic children. *Brahmi* is considered as 'brain tonic' for enhancing memory, learning and concentration. It is used in the treatment of disorders, involving anxiety, intellect and poor memory (**Singh, 1997**). It may improve high order cognitive processes, such as learning and memory (**Stough et al., 2001**). *Shankpushpi* powder is used to improve the intellectual qualities of children.

The aim of present study was to investigate the problem of dyslexic children and their management through psycho-yogic-ayurvedic package. In this study, independent variable is psycho-yogic-ayurvedic package and dependent variables are self esteem and stress. To study the relationship between various independent and dependent variables, several standard statistical techniques have been used. Hypothesis has already been explained. Following hypotheses were formulated to interpret the results.

**HYPOTHESIS:** There is no effect of psycho-yogic-ayurvedic package on stress of dyslexic children.

On analysing the data generated (Tables 1-4 of results), at  $df=2$ , values of  $X^2$  were 3.74 and 0.74 on I and II trials of package, which are non-significant at 0.05 level of confidence, indicating that after two trials there was no effect of psycho-yogic-ayurvedic package on stress of experimental group of dyslexic children. After third trial (Tables 5 and 6 of results), however, value of  $X^2$  was 7.84, which is significant at 0.05 level of confidence. It indicates that after third trial there was significant effect of psycho-yogic-ayurvedic package on stress of experimental group of dyslexic

children. Thus, null hypothesis is rejected. According to percentage table also, result shows that after third trial of package, experimental group of dyslexic children had lower stress than control group. It must be due to consistent counselling that was given to individual and their family and play therapy of alphabetical and arithmetic games, which improved reading ability while yogic therapy increased their concentration and extrovertness, practice of *Bhramari pranayama*, which has been found to produced relaxed state and in this state parasympathetic activity overrides the sympathetic activity (**Kuppusamyet al., 2016**), must have played role in reducing the stress. Application of ayurvedic therapy increased the memory. Synergistic effect of all the 3 components of therapy helped in reducing their stress and thereby developing self confidence. This finding is in line with the observations of various workers described earlier for these therapies separately. It helped the children to solve their personal and educational issues and improve their personality and positivity as well. Present result compliments the finding of **Bailet (2009)**, who observed that stress, frustration, anger or sadness in kids was because reading and spelling are so hard for them.

#### 4. Conclusion

My present study was to investigate the management of stress in dyslexic children through psycho-yogic-ayurvedic package.

Through interpretation of the result we found that there is significant effect of psycho-yogic-ayurvedic package on bringing down the stress. Increase in their reading ability, support from family, and increment in concentration level, extrovertness and improved memory help to increase their self confidence and seem to have brought down the level of stress of children.

Psychological package includes individual counseling and family counseling improved their confidence and understanding, and support from family improved the problems related to their studies, mainly reading. Play therapy also provides beneficial impact i.e. mind exercises for dyslexic patients played on computers and laptops helped to think and retain thoughts, various spelling and grammar tools helped to correct any wrong grammar, number of words as well as pronunciations etc. Beside this, yogic therapy increased their concentration and extrovert nature through asana and pranayam, while ayurvedic therapy includes memory boosting drugs increased memory and concentration to improve their dyslexic symptoms related to study.

Thus, we can say that this package is beneficial for overall personality development of dyslexic children.

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