

Effect of Yogic and Recreational activities for improving Learning and Distressed behaviour of Autistic students

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Abstract: *The purpose of the study was to identify the verbal capabilities and comprehension skills of Children with Autism. Students on the autism spectrum usually display special interests (read: obsessions). While teachers do not need to cater to these interests, they can be used as a motivational tool for learning. In light of this, the present paper discusses the methodology and research design used in this study. The paper begins with a discussion on the research design adopted for the study. The sampling procedure and methods of data collection were delineated. Then the methods used for data analysis were mentioned. The paper also contains the tools used for data collection. The procedure followed throughout the research's conduction, the ethical considerations that were adhered to and the statistical analyses were taken to test the hypotheses framed followed by a questionnaire.*

Keywords: *Autism, Distressed behavior, learning, autistic students.*

1. Introduction:

Children are affectionate and loving which brings bonding in the entire family. Parent-child relationships provide foundation for the development of a child. Perceptive, receptive, and conventional care of parents develop various skills in the children that help them to adjust, resolve conflicts and succeed in every situation. The majority of indications among all the cases of Autism Spectrum Disorder (ASD) are linked to social issues, communication, unusual interests and behaviours. Engaging with social situation is a common problem of autistic individual. Distressed behaviour is associated with autism which creates problem in mind and body of individual. In this behaviour, child suffers from extreme anxiety, emotional imbalance, sorrow or pain. Yoga is an ancient practice, originated in India years ago. It also known for systematic body of knowledge concerned with the physiological and mental development that modifies the physiology of the body through respiratory manipulation (breathing techniques), postures and cognitive control.

2. Statement of the Problem:

Although the significant number of researches has been done on autistic students to study their nature, a minimal study is available to provide them with a seamless learning environment. The effect of different developmental disorders and learning difficulties with autistic students and the differences in how other parental groups react to stress have been explored significantly less. Thus, the present research aimed to study the nature and difficulties of autistic students and their parents, including their quality of life and coping strategies.

3. Significance of the study:

In the present scenario, there is a growing demand of medical & psychiatry social work in India & abroad...with growing problems getting more complex day by day, there was a need for a timely intervention. Autism is a significant function of brain function characterized by social interaction, intellect and vocabulary, ritualistic or compulsive actions, and bizarre environmental responses. Autism is a complex condition that interferes with the perception of what is seen, heard, and felt. In individual activities and in the capacity to relate with others, this can cause significant problems. A child with autism should learn how to interact and connect to persons, items and events in a usual manner. All patients, however, do not experience the same degree of disability. There is a broad spectrum of symptoms that can vary from mild to moderate. This is an attempt to understand the perception, knowledge, Attitude and Practices towards the autistic children's daily schedule, lifestyle, behaviour, supportive programs, ministry of education and upbringing including the developmental aspects of the autistic children. The Researcher will focus on the areas as below.

Knowledge & Practices:

It includes information about autism, practices adopted by the parents such as Skills in Communication, Social and Intellectual Skills of parents, training source material and treatment like special education, Behavioral counselling, Medication and Nutritional Diet programmes given to the child—the attitude of parents towards these children. Home services for autism allow parents to have complete control over any aspect of their child's care. Many parents choose home services because they can work more closely with their child and customize their personal needs with therapies. A home system's one-to-one operations help build a strong bond between parents and autistic students. Consequently, the residence is also a school that allows the child to sustain the learning process.

4. Objectives:

The present research has the following objectives: -

- To study the nature of children with Autism Spectrum Disorders.
- To study the difficulties faced by autistic students in learning.
- To study the causes of distressed behaviour.
- To study the pattern of quality of life of autistic students.
- To assess the quality of parent-child interaction.
- To assess the level of stress and coping behaviour in the mothers of children with autistic spectrum disorders.
- To study the relationship between perceived stress, quality of life, and parents' coping strategies with special needs.
- To study the level of interaction of teachers with autistic students.
- To study the coping strategies of teachers to deal with these type of students.
- To study the type of coping strategies used by parents of children with Mental Retardation.
- To study how yoga is helpful for autistic students in learning.
- To provide counselling to parents & spread awareness among society regarding mentally challenged & disabled person for community rehabilitation.

5. Hypothesis:

Based on the review of previous research literature and personal experience of the investigator, the following hypotheses were formulated for the study.

- Children with autism spectrum disorders will have a significantly high level of stress and poor coping behaviour.
- They will have inadequate interaction with parents and teachers.
- They will have a significantly high level of psychological symptoms such as anxiety, depression, phobic anxiety and hostility.
- They will have a low level of learning and understanding.
- They significantly have a different quality of life.
- Autistic students will respond positively to yoga exercises.

6. Sampling:

The present study was conducted on twenty-four autistic children aged 8 to 14 years. Prior permission was taken from school authorities to experiment. Later on, a meeting was born with the school authorities, teachers, and parents in samples' presence. The purpose of the study and the testing procedures and training programme were explained to them in detail. All the parents and teachers agreed to co-operate whole heartily for the noble cause. Medical records of the samples were also verified from the school health record. Since the samples were unable to respond so, the parents and teachers were responded on their behalf. For maintaining the uniformity in the mean score, only thirty-two subjects were finalized out of sixty-eight sample by using a stratified random sampling technique. After selecting samples, all the subjects were divided into four equal groups (strata) based on their similar characteristics.

7. Design of the Study:

The present study was experimental and longitudinal, where the time series design was applied to collect data. Firstly, pretest data were collected through parents and teachers using the self-made scales of maladaptive and distressed behaviour. A time-series experimental design was adopted for this study. It seemed to be the most appropriate one (Curtis. K et al., 2011) Thirty-two subjects were classified into four equal groups with eight (six in the experiment and two spares) subjects in each. There were three experimental groups (Yogic, Recreation and Yogic-Recreation), and the fourth group was kept as a control group. According to the group's nature, practical training was imparted to each group except the control group.

8. Training Programme:

Investigator developed a training programme namely yogic activities programme to treat Maladaptive and Distressed behaviour of autistic children. Yogic activities programme for the treatment of Maladaptive and Distressed behaviour of autistic children were also developed. Following (shown in Table 1) exercises were shortlisted and administered on Yogic-Group and Recreational-Group.

Table 1. Exercises shortlisted and administered on Yogic-Group and Recreational-Group.

Exercises in Yogic Group	Exercises in Recreational-Group
A. Asana:	Stand up and sit-down
Tad asana	Baby Walk
Vrikshasana	On the spot jump
Padam asana/ Lotus	Blowing of Balloons
Position Vajarasana	Match colours of balloons
Sarvang asana	Nail paint

Halasana/ Plow Pose	Crazy cards Matching Flowers Matching pet toys Differentiate vegetables and fruits Soft Ball Throw Bowling Hit on the circle Arrange the circle Rapid-fire Hot Potato
B. Pranayama: Auloma Viloma Bhramari Pranayama Ujjai Pranayama Shudhi Kriya Kapalbhati	-
C. Dhyan: Om Chanting Mantra Chanting Story Telling	-

9. Tools Used:

- Gilliam Autism Rating Scale (GARS) - James E. Gilliam (2003) (To measure the autism between the age group of 3-22).
- Autism maladaptive behaviour scale-self-made (Published in 2017) (to find out the effect of yogic and recreational activities on maladaptive behaviour of autistic children).
- Autism distressed behaviour scale-self-made (Published in 2016) (to find out the effect of yogic and recreational activities on distressed behaviour of autistic children).

10. Data collection & data sources :

To test the theory and interpret the results, data collection collects data from other available sources to find answers to the study problem. Data collection methods can be classified into two ways one is the primary method, and the other is secondary data collection methods.

As a database, we use primary data because primary data is the Researcher's data from first-hand sources. Primary data consist of the original information. With the help of direct survey or well-structured questionnaire, we collect this primary data. We use a questionnaire for data collection that is well analyzed in that questionnaire. We have several questions with the help of all these questions we want to know the respondent's response to the data analysis.

Data collection & data sources

Data source Primary	Primary data
Data collection	Questionnaire
Data collection procedure	A questionnaire filled by respondents

In our research study, we use the questionnaire as the data collection procedure. The respondent manually fills out this questionnaire with the assistance of convenient sampling. We use secondary also to some extent. It is the data which is already in existence. We collected secondary data from secondary sources that are:

- From websites like www.google.com& other related web pages.
- Research papers, books, and journals.

11. Methodology:

The present study sample consisted of children with autistic disorder who volunteered to participate in the study. These children are attending special schools. The initial analysis was done from a structured interview for broadly categorizing students

among autistic cases. The further classification was done based on their; social difficulties, Medical condition, speech, typical autistic behaviour and behaviour not specific to ASD, as shown in Table 2.

Table 2. Initial Symptom Recognition

The first symptom noticed
1. Social difficulties
2. Eye contact
Speech and language
1. Delay in speech
2. Limited speech
3. Deviance in speech
Behaviour not specific to autism
1. Behavior not specific to autism Activity level
2. Medical/development problems "Autistic-type" behaviours

The percentage of children with mental retardation is as high as 50 – 65% among the total children. It clearly shows that cases of ASD are overlooked in India. This is due to the non-existence of an approved standard method of diagnosis.

12. Ethical Considerations :

- Written consent for participating in the study was obtained for all the parents before administering the questionnaires.
- Identities of all the participants were kept anonymous, and information gathered during the study was kept confidential.
- Participants were informed about their free will to withdraw their participation from the study for any personal or medical reason at any point of time during the data collection.
- Following the data collection, the parents were debriefed regarding the assessment and provided information for further follow-ups with experts.

13. Summary:

The chapter deals with the research methodology adopted for the achievement of the objectives of the current study. The chapter includes a description of the research design and sampling, data collection, sample description, and research instruments to measure the variables under study. Finally, the statistical analysis approach has been explained.

The investigator prepared a self-made scale name Autism Maladaptive Behaviour Scale (AMBS) to determine the effect of yogic and recreational activities on the maladaptive behaviour of autistic children. This scale contains five dimensions: stereotypical behaviour, self-injurious behaviour, tantrum behaviour, aggressive behaviour and ritualistic behaviour, and sixty (60) items. The investigator prepared another self-made scale name Autism Distressed Behaviour Scale (AMBS) to determine the effect of yogic and recreational activities on the distressed behaviour of autistic children. This scale contains three dimensions psychological behaviour, physiology and sociology, and thirty-nine (39) items. To find out the maladaptive and distressed behaviour, a self-made scale was filled by parents and teachers of autistic children.

Questionnaire

Questions	Yes	No
1. Do you like reading?		
2. Do you have friends?		
3. Do you love travelling?		
4. Did you wish to make friends but fails to create relationships with others?		
5. Do you have a particular hobby or specific area of interest?		
6. Do other children bully you?		
7. Does it feel like that you are worthless?		
8. Do you enjoy sports?		
9. Do you enjoy joking around?		
10. Can you dress by yourself for school?		
11. Can you easily interact with other children?		
12. Can you ride a Bicycle?		
13. Do you prefer activities with imagination, such as storytelling?		

14. Does it take long to learn anything new?		
15. Do you have difficulties in completing daily activities because there is the repetition of some actions?		
16. Are you able to manage your daily chores by yourself?		
17. Do you feel left out in a group?		
18. Do you live in a world of your own with limited intellectual interests?		
19. Are you surprisingly good at some things?		
20. Do you like doing yoga?		

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