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Original Research Article

A Study to Assess the Knowledge and Attitude Regarding Tourette's Syndrome Among Teachers in Selected Primary Schools at Jaipur, Rajasthan, with a View to Developing an Information Booklet on Prevention of Tourette's Syndrome

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Abstract

Background of the study: Tourette's syndrome (TS) is an inherited neurologic disorder characterized by repeated involuntary movements and uncontrollable vocal sounds called tics. Both multiple motor and one or more vocal tics need to be present; causes marked distress or significant impairment in social, occupational, or other important areas of functioning. In this modern era, both parents may have job and they may not get enough time to give proper attention to their children. At the same time, the children spend most of their time with teachers in the school. So the teachers are getting a better chance to identify the problems of children in comparison with others. By early detection, we can prevent the disturbances and distress that may occur in their future.

Methodology: The data was generated by using structured questionnaire. Convenient sampling was adopted to select 60 teachers as subjects from Jaipur. The data obtained from the subjects were analyzed and interpreted in terms of the objectives and hypotheses of the study. Descriptive and inferential statistics were used for the data analysis, and the *p-value* was set at the 0.05 level.

Results: The result was formulated using the data obtained. The overall mean score of knowledge on Tourette's Syndrome is 16.48, and the standard deviation is 3.084 and that of attitude is 50.22, and the standard deviation is 10.187respectively. 41.7% teachers had inadequate knowledge, 25% had moderately adequate knowledge and 33.3% had adequate knowledge. Among the teachers, 20% had a moderately favorable attitude; 50% had unfavorable and 3 0% ha d favorable attitude respectively. There was a statistically significant correlation between knowledge and attitude. Pearson's R correlation was 0.308. The knowledge level had an association with the demographic variable and the attitude level had an association with the demographic variables.

Conclusion*:* This study revealed that the knowledge of teachers regarding Tourette's Syndrome was inadequate, and most of them had a moderately favorable attitude. There was a significant correlation between t h e level of knowledge and attitude. There was a significant association between the knowledge and demographic variable, age, as well as a significant association between the level of attitude and demographic variables; educational status and no. of class hours taken per day. Thus, the hypothesis was accepted only in the context of the above-mentioned two demographic variables and in the correlation.

Keywords: Tourette's syndrome, Knowledge, Attitude, Reflexes, Psychotherapy.

Introduction

Tourette's syndrome, also known as Tourette's, Tourette's disorder, or Gilles de la Tourette's Syndrome (GTS), is an inherited tic disorder characterized by multiple motor (physical) tics and at least one vocal tic. Experts believe it is

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closely linked to damage or abnormalities to the basal ganglia of the brain.[1]

Tourette's syndrome is an inherited neurologic disorder characterized by repeated involuntary movements and uncontrollable vocal sounds called tics. Both multiple motor and one or more vocal tics need to be present; causes marked distress or significant impairment in social, occupational, or other important areas of functioning.[2]

The exact cause of Tourette's syndrome isn't known, and there's no known way to prevent it. There is likely a combination of genetic and environmental factors. Theories about the causes of Tourette's syndrome include:

Genetics: Some studies of twins and families suggest that Tourette's syndrome may be an inherited disorder. The specific genes involved in Tourette's Syndrome are still being defined.

Brain chemical abnormalities: Certain neurotransmitters like dopamine and serotonin in the brain may play a role.

Infections: Some research suggests that there's a link between infections and tics, but this remains controversial.[3]

The risk factors of Tourette's syndrome are Family history of Tourette's syndrome, other tic disorders, or obsessive-compulsive disorder, Sex: male (three to four times more likely to be affected) and Streptococcal infection (may be a risk in some children). The secondary causes of tics include hereditary disorders, carbon monoxide poisoning, traumatic brain injury, cerebral infections, medications and illegal drugs.[4]

The onset of the disorder is before the age of 18 and is more common in boys. The duration of the disorder may be lifelong, although there may be periods of remission that last from weeks to years. The symptoms usually diminish during adolescence and adulthood and, in some cases, disappear altogether by early adulthood.[5]

The essential feature of Tourette's syndrome is the presence of multiple motor tics and one or more vocal tics. They may appear simultaneously or at different periods during the illness. Some of the main signs and symptoms of Tourette's Syndrome are repeated involuntary movements (motor tics) like facial tics, eye blinking, head jerking, neck stretching, lip biting, cheek biting, touching other people, body twisting, and uncontrollable vocal sounds (vocal tics) like throat clearing, coughing, sniffing, barking, inappropriate words, and so on. The disturbance causes marked distress or interferes with social, occupational, or other important areas of functioning.[6]

There's no specific test that can diagnose Tourette syndrome. Doctors rely on the history of the person's symptoms to diagnose the disorder. The Diagnostic and Statistical Manual of Mental Disorders (DSM) determines the criteria for a diagnosis of Tourette syndrome. The criteria includes: Both motor tics and vocal tics must be present, although not necessarily at the same time; Tics occur several times a day, nearly every day or intermittently, for more than a year; There must not be a break in tics for more than a three-month period; the onset of tics occurs before age 18; Tics aren't caused by medications, other substances or another medical condition. The diagnosis may be delayed because families and even doctors are sometimes unfamiliar with the symptoms, or the symptoms may mimic other problems. Because tics and movement problems can be the result of other serious health conditions, a doctor may suggest blood tests or an MRI to rule out other problems.[7]

There's no cure for Tourette's syndrome. Treatment of Tourette's syndrome is intended to help control bothersome tics and to help cope with the psychosocial aspects of the condition. When tics aren't severe, treatment may be unnecessary. Treatment options include:

Medications

Medications like antipsychotics, antidepressants, stimulants and central adrenergic inhibitors can be used to help control or minimize tics.

Psychotherapy

It can help with accompanying problems, such as ADHD, obsessions, depression and anxiety and help people to cope emotionally.

Deep brain stimulation

For debilitating tics that don't respond to other treatments.[8]

In this modern era, both parents may have job and they may not get enough time to give proper attention to their children. At the same time, the children spend most of their time with teachers in the school. So the teachers are getting a better chance to identify the problems of children in comparison with others. By early detection, we can prevent the disturbances and distress that may occur in their future.[9]

Need for the Study

Tourette's syndrome is an inherited neurologic disorder characterized by repeated involuntary movements and uncontrollable vocal sounds called tics. Tourette's syndrome usually occurs between the ages of 2 and 15 years. In 90% of patients, the diagnosis is made before age 13. The disorder is three times more common in boys than in girls.[9]

About 1 out of 50 people in the US has Tourette's syndrome. According to the world's current best estimates, Tourette's syndrome affects approximately 6 in a range of every 1,000 school children. The prevalence of Tourette's syndrome is estimated at 2% of the general population. This may be a conservative estimate, since many people with very mild tics may be unaware of them and never seek medical attention.[10]

Objectives of the study

- To assess the level of knowledge regarding Tourette's Syndrome among Primary teachers at selected schools of Jaipur.

- To assess the attitude regarding Tourette's Syndrome among primary teachers at selected schools of Jaipur.
- To find out the correlation between the level of knowledge and attitude regarding Tourette's Syndrome among primary teachers at selected schools of Jaipur.
- To determine the association between the level of knowledge, the attitude of primary teachers regarding Tourette's Syndrome, and selected demographic variables.
- To develop an information booklet on the prevention of Tourette's Syndrome.

Hypothesis

H_1: There will be a significant relation between the level of knowledge and attitude regarding Tourette's syndrome.
H_2: There will be a significant association between levels of knowledge on Tourette's syndrome and selected demographic variables.
H_3: There will be a significant association between levels of attitude regarding Tourette's syndrome with selected variables.

Methodology

- **Research Approach-** Explorative Survey Approach
- **Research Design-** Descriptive Design
- **Study Setting-** J.N.C.educational academy, Marudhara public school
- **Sample size-** n= 60 Teachers
- **Target Population-** Teachers who are working at the selected primary schools

Table 1: Frequency and percentage distribution of knowledge score

Knowledge level	*Frequency*	*Percentage (%)*
Inadequate knowledge 50%	25	41.7
Moderately adequate knowledge <75%	15	25.0
Adequate knowledge >75%	20	33.3
Total	60	100.0

Table 2: Frequency and percentage distribution of attitude score

Attitude level	*Frequency*	*Percentage (%)*
Unfavorable attitude <50%	30	50.0
Moderately favorable attitude <51–75%	12	20.0
Favorable attitude >75%	18	30.0
Total	60	100.0

- **Sampling Technique -**Convenient Sampling
- **Research Variable**: Knowledge and attitude of teachers on TS
- **Demographic Variables**: age, gender, type of school, educational status, , years of teaching experience, average number of students in a class, number of class hours taken per day.
- **Tool for data collection-** Structured Knowledge Questionnaire and Attitude Scale
- **Technique for data collection-** Self-administered
- **Data Analysis-** Descriptive and Inferential Statistics

Inclusion Criteria

- Teachers who are willing to participate in the study.
- Teachers who are available at the time of data collection.
- Both male and female teachers will be included in the study.

Exclusion criteria

Teachers who have been exposed to previously attended classes on Tourette's syndrome.

Development and Description of the Tool

Description of the tool

The investigator developed a structured knowledge questionnaire and modified attitude scale schedule to assess the knowledge and attitude of school teachers in selected primary schools, at Jaipur.

The following steps were carried out in preparing the tool.

- Related literature was reviewed in preparing the tool.
- Guidance and consultation from the subject experts were taken for the construction of the tool.
- A consultation with a statistician was conducted for data analysis.

Karl Pearson co-relation co-efficient method was used to find the reliability of the tool.

Procedure for Data Collection

A formal permission from the concerned authority was obtained for conducting the study. Confidentiality was maintained during the data collection. The period of data collection in J. N. C. Educational academy, New child academy senior secondary school, Jaipur. The data collection was done by administering the questionnaire to the samples.

Results

Analysis is a process of organizing and synthesizing the data so as to answer research questions and test hypotheses. The

Table 3: Correlation between the level of knowledge and the level of attitude regarding Tourette's syndrome. N=60

Study variables	*Knowledge scores*		*Attitude scores*		*Pearson's 'R' Correlation*
	Mean	*S D*	*Mean*	*S D*	
Correlation between the level of knowledge and level of attitude regarding Tourette's syndrome.	16.48	3.084	50.22	10.187	.308

data will be analyzed by both descriptive and inferential statistics on the basis of the objectives of the study. To compare the data, a master data sheet was prepared by the investigator. Mean, standard deviation and mean will be used to describe the variables, Karl Pearson's Rank Correlation was used to find out the relationship between knowledge and attitude, and the chi-square test was used to find out the association between knowledge and demographic variables, as well as attitude and demographic variables. The analyzed data will be presented in the form of tables and graphs (Tables 1-4 and Figures 1 and 2).

Discussion

This chapter deals with a detailed discussion of the findings of the study interpreted from statistical analysis. The findings are discussed in relation to the objectives, need for the study, related literature of the study, and the conceptual framework. It was represented in line with the objectives of the study, which was conducted to assess the knowledge and attitude of teacher professionals regarding Tourette's syndrome in children in selected primary schools at Jaipur. In order to achieve the objectives, descriptive and inferential statistics were selected and the samples were selected by the non-probability method of convenient sampling.

The study was conducted from March 1 to 16th 2021

The data was collected from 60 respondents through a structured questionnaire for knowledge and a Likert scale for attitude. The data is organized, analyzed and presented in accordance with the objectives of the research.

Limitations

Indian studies related to Tourette's syndrome are limited.

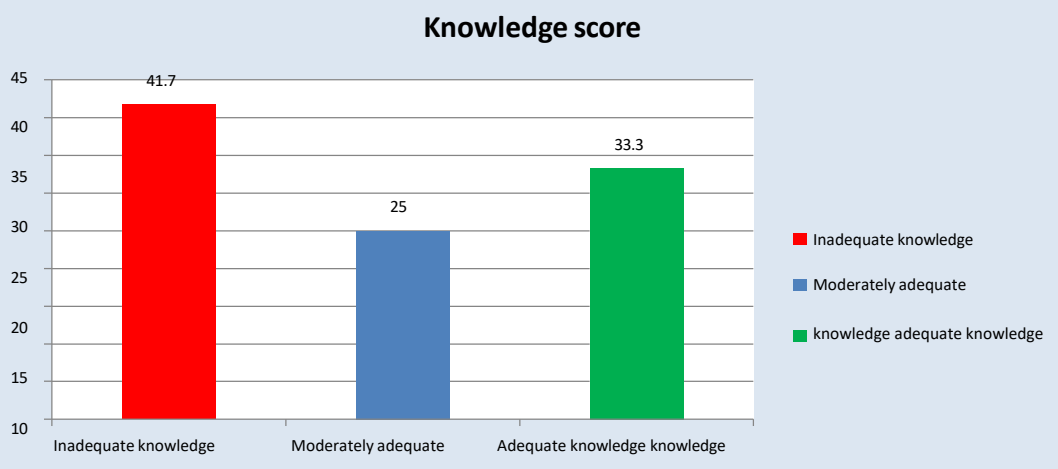

Figure 1: Percentage distribution of knowledge score level of primary school teachers regarding Tourette's syndrome

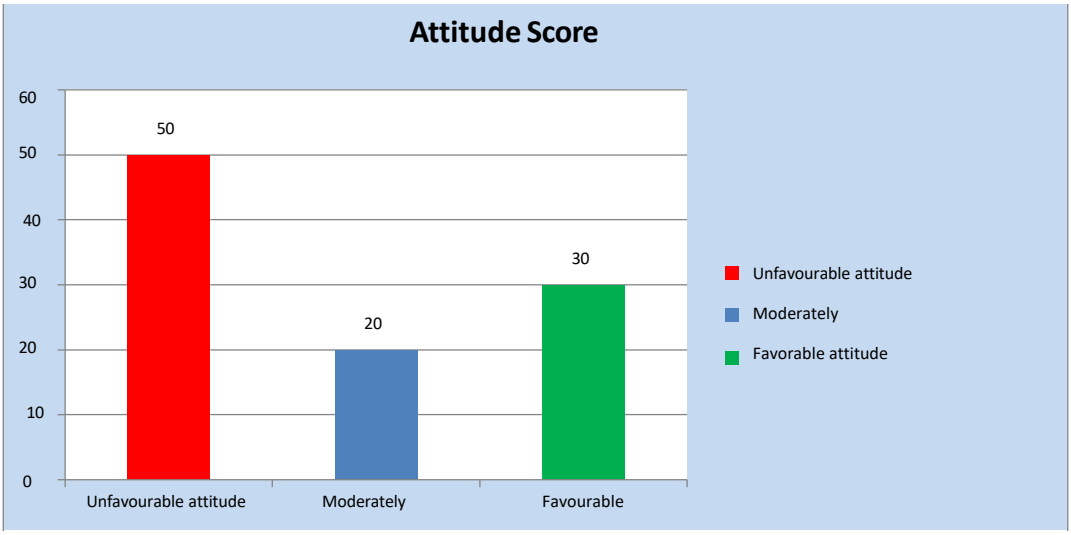

Figure 2: Percentage distribution of attitude level of samples regarding Tourette's syndrome

Table 4: Association between Socio-demographic variables; age, gender, educational status, teaches among which standard students and Knowledge level on Tourette's syndrome N=60

			Knowledge Score level						
1.	*Age (in years)*	*freq*	*Inadequate*	*Moderately adequate*	*Adequate*	*Chi-squared*	*D.F.*	*p-value/* T. Value	*Result of H1*
	20–24	14	5	3	6	29.072[a]	6	.000	Accepted
	25–29	25	13	9	3			12.592	
	30–34	11	7	3	1				
	Above 35	10	0	0	10				
2.	Gender								
	Male	21	8	6	7	.264[a]	2	.876	Rejected
	Female	39	17	9	13			5.991	
3.	Type school of								
	Government	00							
	Semi government	28	14	10	4	9.000[a]	2	.011	Accepted
	Private	32	11	5	16			5.991	
4.	Educational status								
	Basic school teaching course	22	12	9	1	19.463	4	9.488	Accepted
	Bachelor of education	28	7	4	17				
	Master of education	10	6	2	2				
5.	Years of teaching experience								
	Less than 1 year	17	10	5	2	21.696	6	12.592	Accepted
	1–5 years	16	8	3	5	16	8	3	5
	6–0 years	19	7	7	5	19	7	7	5
	More than 10 years	8	0	0	8				
6.	Average number of students								
	Less than 30	13	3	3	7	4.870[a]	4	9.448	Rejected
	30–50	28	15	6	7				
	More than 50	19	7	6	6				
7.	No of class hours taken per day								
	1 hour	25	11	9	5	17.080	6	12.592	Accepted
	2 hours	19	4	2	13				
	3 hours	5	3	1	1				
	More than 3 hours	11	7	3	1				

Summary

The purpose of the study was to assess the knowledge and attitude of teachers on Tourette's Syndrome. The study was descriptive in nature. The study was conducted in selected primary schools in Jaipur. A total of 60 teachers who were working at the above-mentioned schools and met the inclusion criteria were selected by using a convenient sampling technique. The investigator introduced him to the teaching staff in those schools and obtained consent for the present study. The subjects were gathered at staff room and provided each of them with the questionnaire. The conceptual framework of the study was based on "Revised Pender's Health Promotion Model (1996)". The instrument used for the study was a self-administered questionnaire and a modified Likert scale. The self- administered questionnaire was prepared to determine the level of knowledge, and a modified Likert scale was used to determine the attitude of the teachers on Tourette's Syndrome.

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No.

Conflict of Interest

The Author declares that they have no conflict of interest with regard to the content of the report.

References

1. Tourette syndrome [Internet]. Wikipedia [cited 2026 May 3]. Available from: https://en.wikipedia.org/wiki/Tourette_syndrome
2. Tourette syndrome [Internet]. Medical News Today [cited 2026 May 3]. Available from: https://www.medicalnewstoday.com/articles/175009.php
3. Tourette syndrome [Internet]. WhereInCity [cited 2026 May 3]. Available from: http://www.whereincity.com/medical/topic/general/diseases/tourette-syndrome-236.htm
4. Tourette syndrome risk factors [Internet]. ThirdAge [cited 2026 May 3]. Available from: http://www.thirdage.com/hc/c/tourette-syndrome-risk-factors
5. Mary C. Townsend. Psychiatric mental health nursing. 5th ed. New Delhi: Jaypee Brothers Medical Publishers; 2007. p. 373.
6. Symptoms [Internet]. WrongDiagnosis [cited 2026 May 3]. Available from: http://www.wrongdiagnosis.com/symptoms.htm
7. Tourette syndrome: Tests and diagnosis [Internet]. Mayo Clinic [cited 2026 May 3]. Available from: https://www.mayoclinic.org/diseases-conditions/tourette-syndrome/diagnosis-treatment/drc-20350470
8. Tourette syndrome: Coping and support [Internet]. Mayo Clinic [cited 2026 May 3]. Available from: https://www.mayoclinic.org/diseases-conditions/tourette-syndrome/diagnosis-treatment/drc-20350470
9. Tourette's syndrome incidence [Internet]. FreeMD [cited 2026 May 3]. Available from: http://www.freemd.com/tourettes-syndrome/incidence.htm
10. Tourette syndrome statistics by country [Internet]. RightDiagnosis [cited 2026 May 3]. Available from: http://www.rightdiagnosis.com/t/tourette_syndrome/stats-country.htm