

## An Experimental Study to Assess the Effectiveness Structured Teaching Programme Regarding Identification of Autism and its Management among Pre Primary School Teachers in Selected Schools of Ahmedabad

Hina Patel

### How to cite this article:

Hina Patel, An Experimental Study to Assess the Effectiveness Structured Teaching Programme Regarding Identification of Autism and its Management among Pre Primary School Teachers in Selected Schools of Ahmedabad. Journal of Emergency and Trauma Nursing. 2021;2(1):9–14.

**Author's Affiliations:** Lecturer, Apollo Institute of Nursing, Gandhinagar, Ahmedabad, Gujarat 382428, India.

**Corresponding Author: Hina Patel,** Lecturer, Apollo Institute of Nursing, Gandhinagar, Ahmedabad, Gujarat 382428, India.

**Email:** heenapatel0044@gmail.com

### Abstract

A study to assess the effectiveness of the structured teaching programme regarding Identification of Autism and its Management among pre-primary school teachers in selected pre-primary schools of Ahmedabad city.

Pre-experimental research approach was used with one group pre-test post-test design. The study was conducted in selected pre-primary schools of Ahmedabad city. The investigator used multi-stage simple random sampling technique for selecting 60 samples. In the view of the study structured teaching programme on Identification of Autism and its Management was prepared. The reliability of the structured knowledge questionnaire was 0.78.

Data were analysed by using descriptive and inferential statistics. The mean pre-test knowledge score was 9.75 whereas post-test knowledge score was 24.25. The mean post test knowledge score is significantly higher than the mean pre test knowledge score with the mean difference of 14.5 and the calculated 't' value ( $t=34.399$ ) was greater than tabulated 't' value ( $t=2.00$ ) which was statistically proved at 0.05 level of significance. The findings of the study reveal that there is no significant association with pre-test knowledge scores and selected demographic variables of the samples except attended seminar or lecture on autism. There was significant increase in the knowledge score of pre primary school teachers after administration of Management was 9.75 whereas post-test knowledge score was 24.25. The mean post test knowledge score is significantly higher than the mean pre test knowledge score with the mean difference of 14.5 and the calculated 't' value ( $t=34.399$ ) was greater than tabulated 't' value ( $t=2.00$ ) which was statistically proved at 0.05 level of significance. The findings of the study reveals that there is no significant association with pre-test knowledge scores and selected demographic variables of the samples except attended seminar or lecture on autism. There was significant increase in the knowledge score of pre primary school teachers after administration of the Management was 9.75 where as post-test knowledge score was 24.25. Mean difference of 14.5 and the calculated 't' value ( $t=34.399$ ) was greater than tabulated 't' value ( $t=2.00$ ) which was statistically proved at 0.05 level of significance. The findings of the study reveals that there is no significant association with pre-test knowledge scores and selected demographic variables of the samples except attended seminar or lecture on autism. There was significant increase in the knowledge score of pre primary school teachers after administration of the structured Teaching Programme on Identification of Autism and its Management. Hence it is concluded that structured teaching Programme was effective in improving knowledge of pre primary school teachers regarding Identification of Autism and its Management.

**Keywords:** Effectiveness; Structured Teaching Programme; Identification of Autism and its Management.

### Background of the study

Autism is a neurodevelopment disorder characterized by impaired social interaction, verbal and non-verbal communication, and by restricted and repetitive

behaviour. The diagnostic criteria require that symptoms become apparent before a child is three years old. Autism affects information processing in the brain by altering

how nerve cells and their synapses connect and organize; how this occurs is not well understood. It is one of three recognized disorders in the autism spectrum (ASDs), the other two being Asperger syndrome, which lacks delays in cognitive development and language, and pervasive developmental disorder, not otherwise specified (commonly abbreviated as PDD-NOS), which is diagnosed when the full set of criteria for autism or Asperger syndrome are not met.<sup>2</sup>

Autism has a strong genetic basis, although the genetics of autism are complex and it is unclear whether ASD is explained more by rare mutations, or by rare combinations of common genetic variants. In rare cases, autism is strongly associated with agents that cause birth defects. Controversies surround other proposed environmental causes, such as heavy metals, pesticides or childhood vaccines; the vaccine hypotheses are biologically implausible and have been disproven in scientific studies. The prevalence of autism is about 1–2 per 1,000 people worldwide, and it occurs four to five times more often in boys than girls. The Centres for Disease Control and Prevention (CDC) report 1.5% of children in the United States (one in 68) are diagnosed with ASD as of 2014, a 30% increase from one in 88 in 2012. The number of people diagnosed with autism has been increasing dramatically since the 1980s, partly due to changes in diagnostic practice and government-subsidized financial incentives for named diagnoses; the question of whether actual prevalence has increased is unresolved.<sup>1</sup>

Parents usually notice signs in the first two years of their child's life. The signs usually develop gradually, but some autistic children first develop more normally and then regress. Early behavioural, cognitive, or speech interventions can help autistic children gain self-care, social, and communication skills. Although there is no known cure, there have been reported cases of children who recovered. Not many children with autism live independently after reaching adulthood, though some become successful. An autistic child has developed, with some individuals seeking a cure and others believing autism should be accepted as a difference and not treated as a disorder.<sup>3</sup>

Appropriate early intervention is important to treat child with autism. The parents, teachers, physicians, and specialists should discuss what is best for the child. Parents and teachers should be educated regarding behavioural techniques so that they can participate in all aspects of the child's care and treatment. Counselling and support may be helpful for the parents. Special education classes are available for autistic children. Medication can be recommended to treat specific symptoms such as seizures, hyperactivity, extreme mood changes, or self-injurious behaviours.<sup>4</sup>

### Need of the Study

India is a home to almost 19% of the world's children. More than one third of the country's population, around 480 million, is below the age of 25 years (54% of the population). According to an assumption, 40% of these children are in need of care and protection, which indicates the extent of the problem<sup>6</sup>.

The prevalence of autism in India was about 0.5 per 1000 during the 1990's as opposed to today's 1-2 per 1000. Estimated prevalence to be approximately 6.6 per 1,000 (or 1/150) children in the United States, in 2008, and as many as 12 in 1,000 (or 1/80) children with an ASD in Europe and Scandinavia. Among Asian country like Hong Kong reported 1.68 cases of autism per 1000 for children less than 15 years. In Denmark incidence of autism is increasing continuously it was about 0.5 new cases per 10,000 children in 1990's and about 4.5 new per 10,000 children in 2000. In Germany a study found that inpatient admission rates for children with ASD increased to 30% from 2000 to 2005<sup>8</sup>.

The etiology of autism is still unclear but recent studies suggest that genetics play a major role in conferring susceptibility. Recent neuro imaging research studies indicate that autism may be caused by atypical functioning in the central nervous system, particularly in the limbic system: Amygdala and Hippocampus. In autistic children, losses of language and/or social skills occur during the second year of life, usually between 15 and 21 months of age. Co-morbidity with mental retardation, epilepsy, disruptive behaviors and learning difficulty is very common. Although there is currently no known cure for autism there is evidence to suggest that early intervention therapy can improve functioning of autistic children.<sup>7</sup>

Judicious use of psychotropic drugs is necessary to manage associated aggression, hyperactivity, self-mutilation, temper tantrums; but drugs are not a substitute for behavioral and educational interventions. The family physician can play an important role in detecting autism early, coordinating its assessment and treatment, counselling the parents and classroom teacher, and monitoring the child's progress on a long term basis.<sup>6</sup>

### Objectives of the Study

- To assess the knowledge of pre-primary school teachers before and after administration of structured teaching programme on Identification of Autism and Its Management in selected pre-primary schools of the Ahmedabad city.
- To find out association of pre-test knowledge score towards Identification of Autism and Its Management with selected demographic variables of pre-primary school teachers in selected pre-primary schools of Ahmedabad city.

### Hypotheses

**H<sub>1</sub>:** The mean post-test knowledge score of the pre-primary school teachers after structured teaching programme on identification of autism and its management will be significantly higher than their mean pre-test knowledge score as evident from structured knowledge questionnaire at 0.05 level of significance.

**H<sub>2</sub>:** There will be a significant association between pre-test knowledge score on Identification of Autism and Its Management with selected demographic variables of pre-primary school teachers at 0.05 level of significance.

### Operational Definition

**Assess:** It refers to act of ascertaining or judge the worth about structured teaching programme on Identification of Autism and Its Management among pre primary school teachers.

**Effectiveness:** It refers to extent to which the structured teaching programme has achieved the desired effect in improving the knowledge of pre primary school teachers on identification of autism and its management.

**Structured teaching programme:** In the present study teaching programme refers to the systematically developed programme with teaching aids to improve knowledge regarding Identification of Autism and its Management.

**Autism:** Autism is a disorder seen in the Child marked by the problem with impairment in communication, social interaction and by restricted and repetitive behavior and odd responses to the environment who is studying in pre primary school.

**Pre-primary school teachers:** Teachers who teach and provide care to children between three to five years of age in pre primary schools of Ahmedabad city.

### Methodology

Research methodology indicates the general pattern of organizing the procedure for gathering valid and reliable data for an investigation. The content of this chapter includes research approach design description of setting and population, sampling technique, sample size, description of sample, tool selection, construction, description and rationale of the tool, procedure of data collection, and plan for data analysis<sup>3</sup>.

**Table 1:** Frequency and percentage wise distribution of samples based on Demographic Variables.

Demographic variables	Frequency (f)	Percentage (%)
(N=60)		
<b>Age</b>		
21-30 years	9	15.00%
31-40 years	21	35.00%
41-50 years	19	31.70%
51-58 years	11	18.30%
<b>Gender:</b>		
Male	0	0%
Female	60	100%
<b>Educational qualification</b>		
Primary teaching course	20	33.30%
B.A	23	38.3%
M.A	04	6.70%
Any other.	13	21.7%
<b>Total years of teaching experience</b>		
Below 5 years	16	26.7%
5 to 10 years	15	25.0%

11 to 15 years	18	30.0%
Above 15 years	11	18.3%
<b>Have you heard of autism?</b>		
Yes	09	15.00%
No	51	85.00%
<b>Have you come across children with autism?</b>		
Yes	08	13.30%
No	52	86.70%
<b>Have you attended any seminar or lecture on autism?</b>		
Yes	01	1.70%
No	59	98%

Table 1: Shows That out of 60 samples 9 (15.00%) samples are of 21-30 years, 21 (35.00%) samples are in the age group of 31-40 years, 19 (31.70 %) sample is in 41- 50 years of age group, 11 (18.30%) sample is in 51-58 years of age group. In gender 0 (0%) samples were male and 60 (100%) samples were female. In educational qualification 20 (33.30%) samples had done P.T.C, 23 (38.3%) sample had done B.A and 04 (6.70%) sample had done M.A. and 13(21.70%) sample had done other course. In years of teaching experience 16 (26.7%) sample had below 5 years teaching experience, 15 (25.0%) sample had 5-10 years teaching experience, 18 (30.0%) sample had 11-15 years teaching experience and, 11(18.3%) sample had above 15 years teaching experience. In heard of autism 09 (15.00%) sample had heard about autism and 51 (85.00%) sample had never heard about autism. In come across children with autism 08 (13.30%) sample come across children with autism and 52 (86.70%) sample had never come across children with autism. In attended any seminar or lecture on autism 1 (1.70%) sample had attended seminar or lecture on autism and 59 (98%) sample had never attended seminar or lecture on autism.

Analysis and interpretation of the data related to the knowledge of the samples before and after administration of a structured teaching programme.

**Table 2:** Frequency and percentage distribution of the knowledge scores of the samples before and after administration of structured teaching programme.

Level of knowledge	Pre test		Post test	
	Frequency	Percentage	Frequency	Percentage
Poor (1-10)	48	80%	0	0%
Average (11-20)	12	20%	13	21.7%
Good (21-30)	0	0%	47	78.3%
Total	60	100%	60	100%

Table 2 Shows that 48 (80%) samples had poor, 12 (20%) samples had average knowledge as per their pre test

knowledge scores whereas 13 (21.7%) samples had average, 47 (78.3) samples had good knowledge as per their post test knowledge scores.

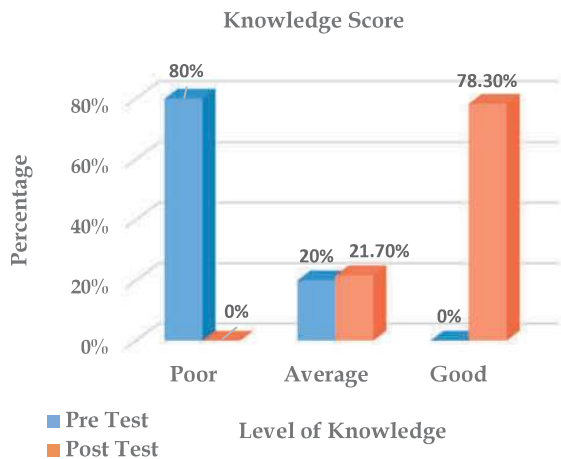


Fig. 1: Bar Graph Showing the Comparison of Pre Test and Post Test Knowledge Frequency of Samples on Identification of Autism and its Management.

Table 3 shows the mean pre test knowledge score of area related to Introduction and definition was 0.33 (16.50%), and the mean post test knowledge score was

1.73 (86.50%), with mean difference 1.40. The mean pre test knowledge score of epidemiology was 0.67 (33.50%), and the mean post test knowledge score was 1.57 (78.50%), with mean difference 0.90. The mean pre test knowledge score of area related to causes was 1.45 (24.17%), and the mean post test knowledge score was 4.65 (77.50%), with mean Difference 3.20. The mean pre test knowledge score of red flags was 0.48 (48.00), and the mean post test knowledge score was 0.88 (88.00%), with mean difference 0.40. The mean pre test knowledge score of sign and symptoms was 4.20 (38.18%), and the mean post test knowledge score was 9.48 (86.18%), with mean difference 5.28. The mean pre test knowledge score of area related to management was 3.10 (38.75%), and the mean post test knowledge score was 6.82 (85.25%), with mean difference 3.72.

Above table shows the percentage gain in the area related to Introduction and Definition was 70.00 and in the area related to epidemiology was 45.00, in the area related to causes was 53.33, in the area related to res flags was 40.00, in the area related to sign and symptoms was 48.00 and in the area of management and treatment of autism was 46.50. So the investigator concluded that there was significance increase in the mean post test knowledge score as compared to mean pre test knowledge score of samples after the administration of a Planned Teaching Programme on Identification of Autism and its Management.

Table 3: Area wise mean, mean percentage and percentage gain of pre-test and post test knowledge of the samples. (N=60)

Area of Content	Max. Score	Pre-Test Knowledge Score		Post-Test Knowledge Score		Percentage (%) Gain	Mean Difference
		Mean score	Mean %	Mean score	Mean %		
Introduction and definition of autism	2	0.33	16.50	1.73	86.50	70.00	1.40
Epidemiology of autism	2	0.67	33.50	1.57	78.50	45.00	0.90
Causes of autism	6	1.45	24.17	4.65	77.50	53.33	3.20
Red flags of autism	1	0.48	48.00	0.88	88.00	40.00	0.40
Sign and symptoms of autism	11	4.20	38.18	9.48	86.18	48.00	5.28
Management and treatment of autism	8	3.10	38.75	6.82	85.25	46.50	3.72
Total	30	9.75	32.50	24.25	80.83	48.33	14.50

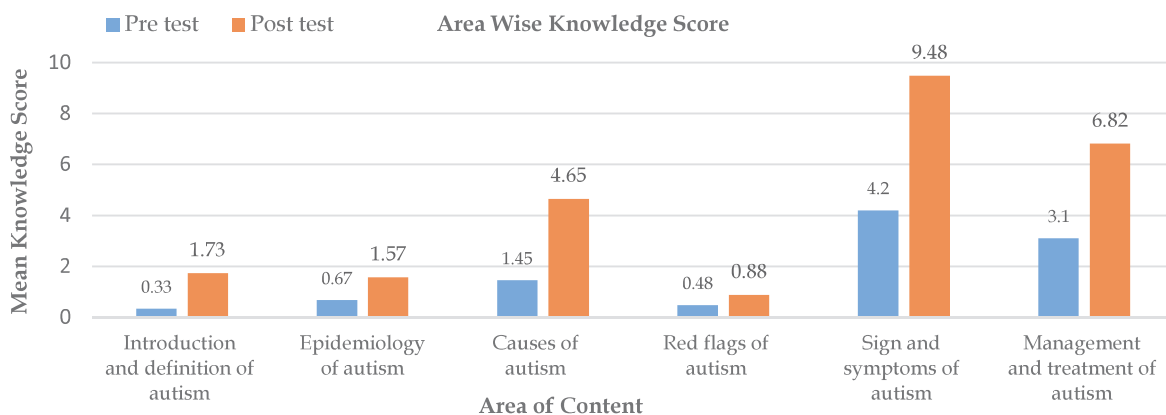


Fig. 2: Bar Graph Showing the Comparison of Area Wise Mean Sore of Pre Test and Post Test Knowledge Scores of Samples on Identification of Autism and its Management.

Table 4 shows the comparison between Pre-test and Post-test Knowledge scores obtained by the respondents on Identification of Autism and its Management. The mean Pre-test score was 9.75 and the mean post test score was 24.25. The mean difference between Pre-test and post-test Knowledge score was 14.5. The table also shows that the Standard deviation of Pre-test score of Knowledge was 1.93 and Standard deviation of post test score of knowledge was 3.18. The calculated "t" was 34.399 and the tabulated "t" was 2 at 0.05 level of significance at for 59 df.

Above table reveals that the mean post-test Knowledge score was significantly higher than the mean Pre-test Knowledge scores. The calculated, "t" value ( $t = 34.399$ ) was greater than the tabulated, "t" ( $t = 2$ ). Therefore the null hypothesis H01 was rejected and research hypothesis H1 was accepted and it reveals that the structured Teaching Programme was effective in terms of knowledge among the samples. Investigator concluded that there was significant increase in the mean post test knowledge score as compared to the mean pre test knowledge score after administration of a Structured Teaching Programme on Identification of Autism and its Management.

Table 4: Mean, Mean Difference, Standard Deviation (SD) and 't' test value of the Pre-test and Post-test Knowledge scores of samples.

Knowledge test	Mean	Mean Difference	SD	Calculated 't' value	Table 't' value	DF	Level of significance
Pre-test	9.75	14.5	1.93	34.399	2	59	0.05
Post-test	24.25		3.18				

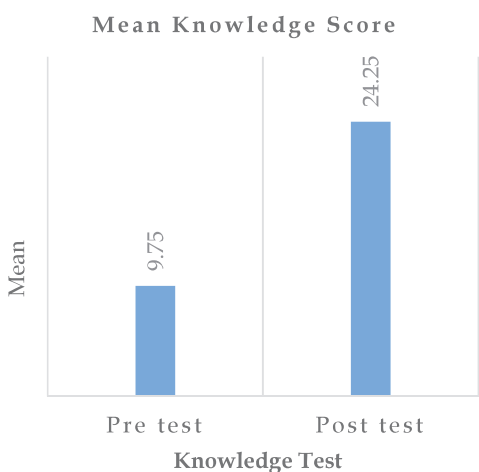


Fig. 3: Bar Graph Showing the Comparison of Mean Pre Test and Mean Post Test Knowledge Scores of Samples on Identification of Autism and Its Management.

Analysis and Interpretation of the Data Related to Association of Pre-Test Knowledge Score with Selected Demographic Variables.

Table 5: Association of Pre-test Knowledge score with selected Demographic Variables of samples. (N = 60)

Demographic variables	Freq.	$\chi^2$		DF	Significance
		Calculated value	Table value		
<b>Age</b>					
21-30 years	9	1.843	7.82	3	Non significant
31-40 years	21				
41-50 years	19				
51-58 years	11				
<b>Gender</b>					
Male	0	-	-	-	Non significant
Female	60	-	-	-	Non significant

<b>Educational qualification</b>					
Primary teaching course	20	1.826	7.82	3	Non significant
B.A	23				
M.A	04				
Any other	13				
<b>Total years of teaching experience</b>					
Below 5 years	16	4.287	7.82	3	Non significant
5 to 10 years	15				
11 to 15 years	18				
Above 15 years	11				
<b>Have you heard of autism?</b>					
Yes	09	0.033	3.84	1	Non significant
No	51				
<b>Have you come across children with autism?</b>					
Yes	08	0.325	3.84	1	Non significant
No	52				
<b>Have you attended any seminar or lecture on autism?</b>					
Yes	01	4.068	3.84	1	Significant
No	59				

\*significance at 0.05 level

Table 5 shows the association of the Demographic Variables of samples such as Age, Gender, Educational Qualification, total teaching experience, heard of autism, contact with autistic children, attended seminar or lecture on autism.

For Age groups with the pre-test knowledge scores, the calculated value of chi-square ( $\chi^2$ ) 1.843 is less than 7.82, the table value of chi-square ( $\chi^2$ ) at the 3 degree of freedom and 0.05 level of significance. Therefore, Age has no significant association with the knowledge of the samples.



For Gender with the pre-test knowledge scores, the calculated value of chi square ( $\chi^2$ ).

0. Therefore, Gender has no significant association with the knowledge of the samples.

Regarding, Educational qualification of the samples with the pre test knowledge scores, the calculated value of chi square ( $\chi^2$ ) was 1.826 and table value of  $\chi^2$  was 7.82 at 3 degree of freedom. Hence, educational qualification has no significant association with the knowledge of samples.

The association of teaching experience with the pre-test level of knowledge score, the calculated value of chi-square ( $\chi^2$ ) was 4.287 and it was less than table value of  $\chi^2$  7.82 at 3 degree of freedom, and 0.05 levels of significance. Hence, it can be inferred that year of experience has no significant association with the knowledge of the samples.

For heard of autism with the pre-test knowledge scores in which the calculated value of chi-square ( $\chi^2$ ) was 0.033 and it was less than 3.84, the table value of  $\chi^2$  at 1 degree of freedom and 0.05 levels of significance. Hence, it has no significant association with the knowledge of the samples.

For come across children with autism with the pre-test knowledge scores in which the calculated value of chi-square ( $\chi^2$ ) was 0.325 and it was less than 3.84, the table value of  $\chi^2$  at 1 degree of freedom and 0.05 levels of significance. Hence, it has no significant association with the knowledge of the samples.

For attended seminar or lecture on autism with the pre-test knowledge scores in which the calculated value of chi-square ( $\chi^2$ ) was 4.068 and it was greater than 3.84, the table value of  $\chi^2$  at 1 degree of freedom and 0.05 levels of significance. Hence, it has significant association with the knowledge of the samples.

This indicates that the selected demographic variable such as attended seminar or lecture on autism have significant association with the Knowledge of the samples and so research hypothesis  $H_2$  was accepted and null hypothesis  $H_{02}$  was rejected. For rest of all demographic variables have no significant association with the knowledge of the samples so for that research hypothesis  $H_2$  was rejected and null hypothesis  $H_{02}$  was accepted.

## Summary

The main aim of the study was to assess the effectiveness of Structured Teaching Programme on Identification of Autism and Its Management in terms of knowledge among pre primary school teachers in selected schools of Ahmedabad city.

## Conclusions

From the above finding the conclusion can be drawn that samples are aware about autism and how to find autistic children in school after exposure to Structured Teaching Programme. Thus the Planned Teaching Programme was found effective in enhancing the knowledge of the pre primary school teachers on Identification of Autism and its Management. There is association between pre test knowledge score with selected demographic variable such as attended any seminar or lecture on autism.

## References

1. Ahuja N (2006). "A Short Text Book of Psychiatry", 6th edition, New Delhi, JP publications. Pp.: 100-105
2. Baswanrhappa B.T. (2007). Psychiatric Mental Health nursing. 3rd edition New Delhi, Jaypee Brothers. Pp.: 476-488
3. Baswanrhappa B.T (2005). "Nursing research." 2nd edition. New Delhi: Jaypee brothers. Pp.: 289-293
4. Bhatia (2006) "Essential of Psychiatry" 5th edition, New Delhi -1, GBS publication.Pp.: 431-437
5. Gail W. Stuart Michele, T. Laraia, "Principles and Practice of Psychiatric nursing" 8th edition. Published by Mosby. Pp.: 987-994
6. Gelder M, Gath D, Mayou R, Cowen P. (2004) new oxford text book of psychiatry 4thed.Oxford. Oxford university press. Pp.: 564-576
7. Kaplan and sadock (1996) "Comprehensive Text Book of Psychiatry" Vol-2, William and Wilking publication. Pp.: 398-403
8. Kliegman, Behrman, Jenson and Stanton, Nelson's Text Book of Paediatrics, 18th Ed. Elsevier publishers; Vol.-1, 2008. Pp.: 723-72.

*Journal of Emergency and Trauma Nursing* intends to publish research, Review and short articles related to Emergency care and Management. The Journal intends to aim in an area that is one of the most challenging area of medicine and invites research review, short articles and case studies

---

---

### **Subscription Information**

#### **India**

**Institutional** (1 year) (Print+Online): INR 6000

#### **Rest of the World**

**Institutional** (1 year) (Print+Online): \$469

#### **Payment instructions**

##### *Online payment link:*

<http://rfppl.co.in/payment.php?mid=15>

##### *Cheque/DD:*

Please send the US dollar check from outside India and INR check from India made. Payable to 'Red Flower Publication Private Limited'. Drawn on Delhi branch

##### *Wire transfer/NEFT/RTGS:*

Complete Bank Account No. 604320110000467

Beneficiary Name: Red Flower Publication Pvt. Ltd.

Bank & Branch Name: Bank of India; Mayur Vihar

MICR Code: 110013045

Branch Code: 6043

IFSC Code: BKID0006043 (used for RTGS and NEFT transactions)

Swift Code: BKIDINBBDOS

**Send all Orders to:** Subscription and Marketing Manager, Red Flower Publication Pvt. Ltd., 48/41-42, DSIDC, Pocket-II, Mayur Vihar Phase-I, Delhi - 110 091(India), Phone: 91-11-79695648, 22754205, 22756995, E-mail: [sales@rfppl.co.in](mailto:sales@rfppl.co.in), Website: [www.rfppl.co.in](http://www.rfppl.co.in)

## Instructions to Authors

Submission to the journal must comply with the Guidelines for Authors.  
Non-compliant submission will be returned to the author for correction.

To access the online submission system and for the most up-to-date version of the Guide  
for Authors please visit:

<http://www.rfppl.co.in>

Technical problems or general questions on publishing with JD are supported by Red  
Flower Publication Pvt. Ltd's Author Support team ([http://rfppl.co.in/article\\_submission\\_](http://rfppl.co.in/article_submission_system.php?mid=5#)  
[system.php?mid=5#](http://rfppl.co.in/article_submission_system.php?mid=5#))

Alternatively, please contact the Journal's Editorial Office for further assistance.

Editorial Manager  
Red Flower Publication Pvt. Ltd.  
48/41-42, DSIDC, Pocket-II  
Mayur Vihar Phase-I  
Delhi - 110 091(India)  
Mobile: 9821671871, Phone: 91-11-22754205, 45796900, 22756995  
E-mail: [author@rfppl.co.in](mailto:author@rfppl.co.in)