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ANNEXURE I

INFORMED PARENTAL CONSENT FORM

Conducted by the Department of Psychology, Avinashilingam Institute for Home Science and
Higher Education for Women, Coimbatore.

Title of the Project: Efficacy of Expressive Arts Therapy to enhance Academic
Achievement among Learning Disabled Adolescents

Researchers: Ms. R. Vatsala Mirnaalini.,
Ph.D. Research Scholar,
Department of Psychology,
Avinashilingam Institute for Home Science and
Higher Education for Women, Coimbatore.

Research Guide: Dr. S. Gayatridevi,
Professor and Head,
Department of Psychology,
Avinashilingam Institute for Home Science and
Higher Education for Women, Coimbatore.

Introduction

In this consent form I will learn about the proposed research and my rights if I allow my child to participate in it. I will read this form carefully and, if I agree to be interviewed, I will sign this form and receive a copy.

Duration and Location of the Study

If I agree to undergo group intervention, the intervention will take place at my own school and will take about 25 minutes each day.

Procedure

If I agree to undergo group intervention, the intervention will be an interactive session with one exercise and activities. In any report, written about this research, my child's name will not be disclosed without any consent.

Right to refuse and to withdraw

I understand that my child's participation in this research is voluntary. I may agree to an interview or I may decline an interview. If I agree to an interview, I may refuse to answer any question and I may end the interview at any time.

Offer to answer any question

If I have any questions about the study or have any question about my rights as a participant, I may call Ms. R. Vatsala Mirnaalini (Phone Number – 9486581892).

I agree to participate in this research.

Name_____

Date_____

Researcher's Statement: I have explained the nature and purpose of this research. I agree to answer any question regarding the rights of the participant.

Name_____

Date_____

ANNEXURE II
CASE STUDY SCHEDULE / PERSONAL PROFILE SHEET

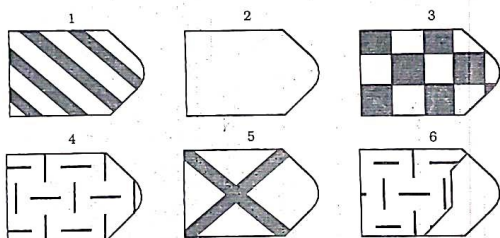
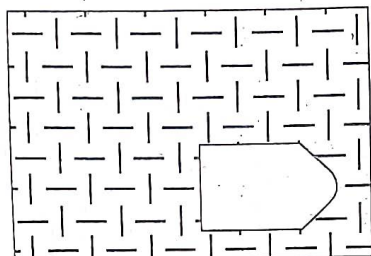
Survey Questionnaire	Date:
General Information: 1. Name of the student; 2. Age: 3. Gender; 4. Class: 5. Name of the School: 6. Any sibling; 7. If Yes, details of class studying: 8. IQ measure; 9. Reading Age: 10. Address: 11. Contact number: 12. Name of the Parent: 13. Occupation of the Parent: 14. Academic Score: 15. Annual Income of the family:	

ANNEXURE III

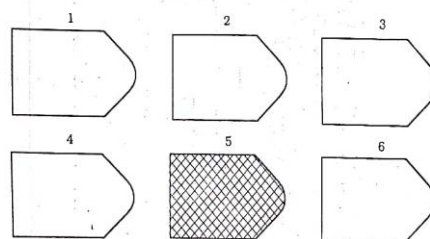
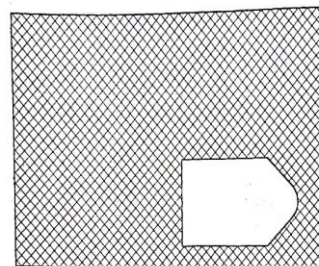
RAVEN'S STANDARD PROGRESSIVE MATRICES

SET A

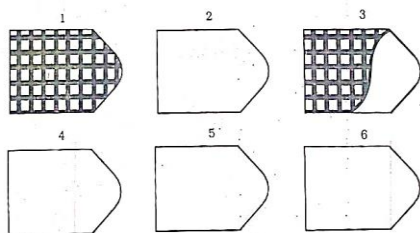
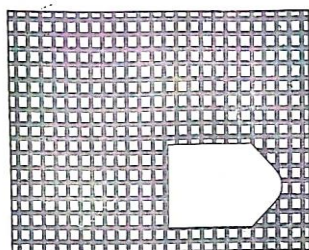
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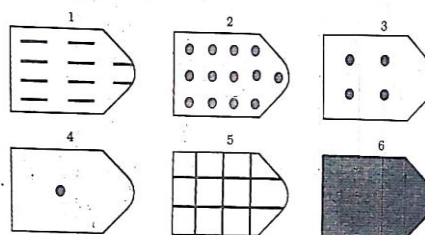
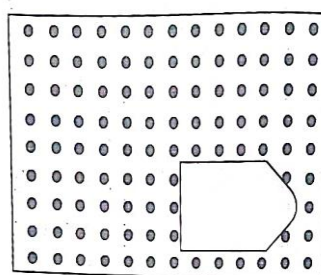
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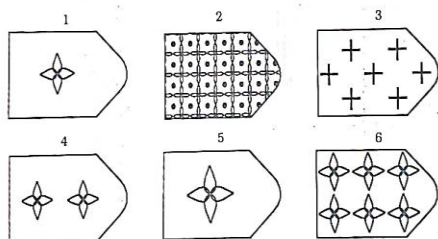
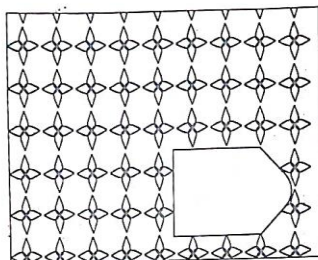
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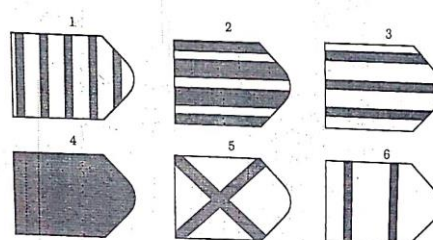
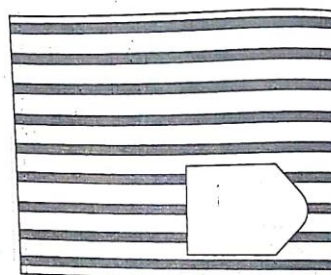
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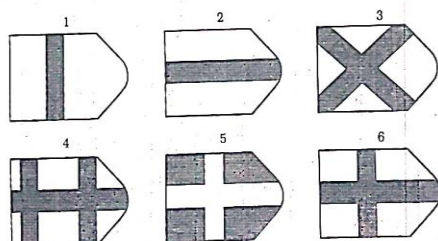
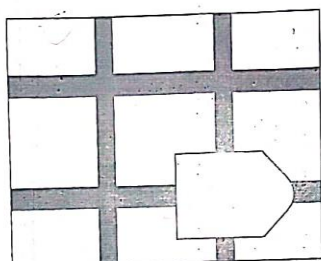
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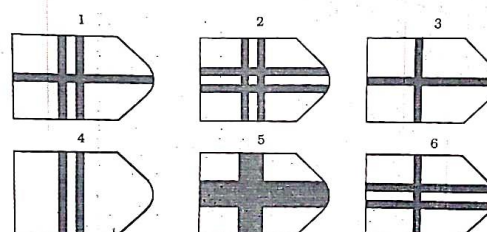
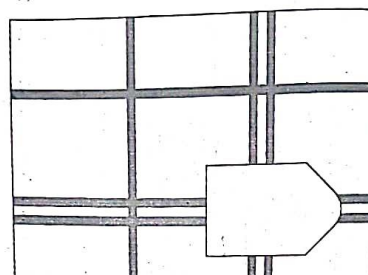
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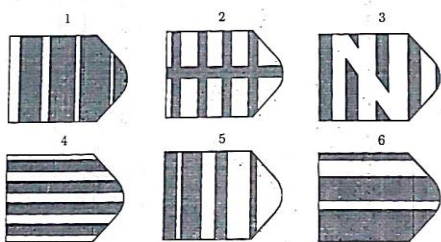
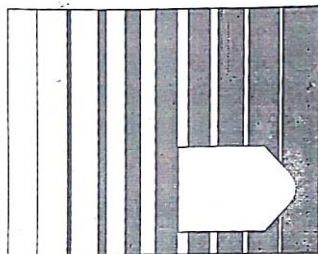
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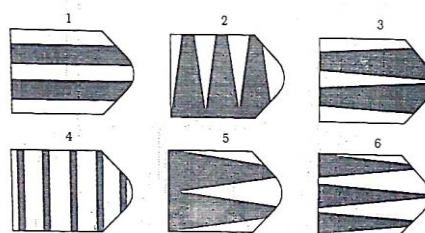
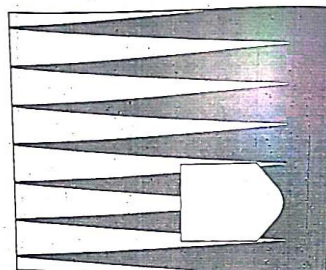
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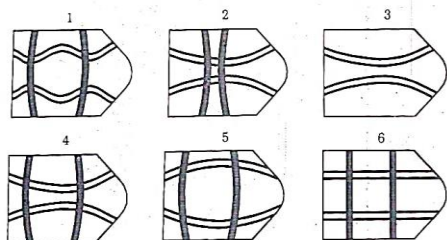
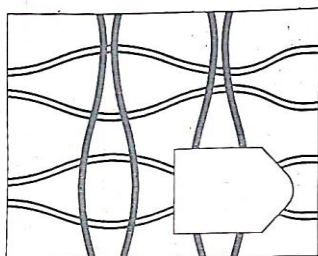
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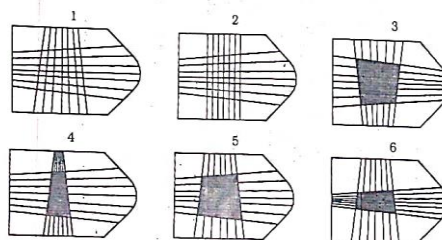
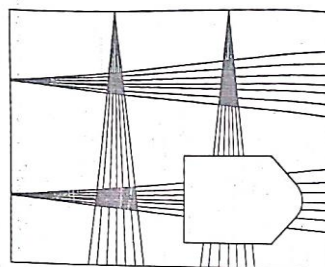
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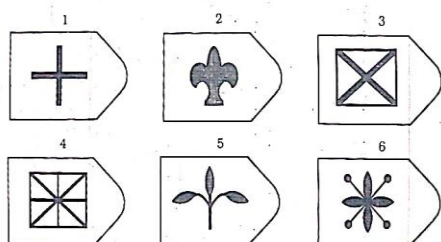
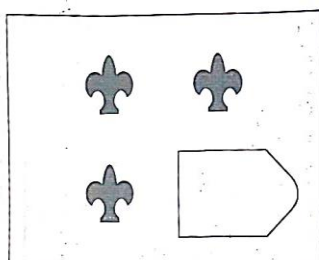


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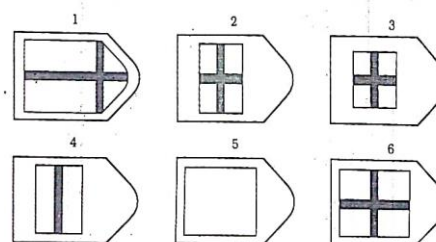
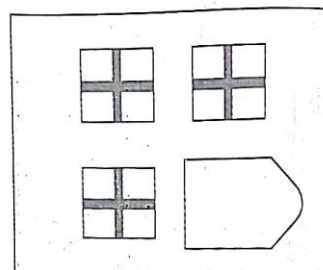


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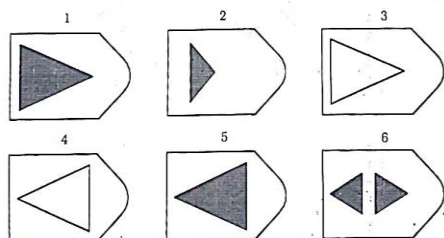
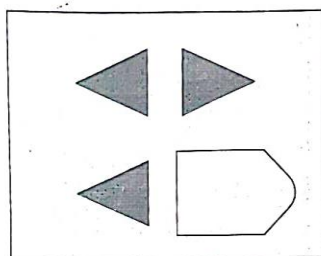
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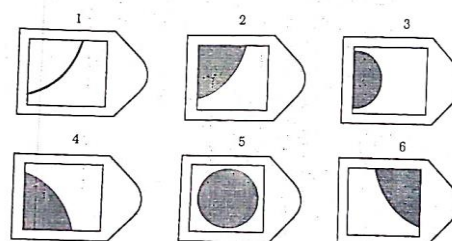
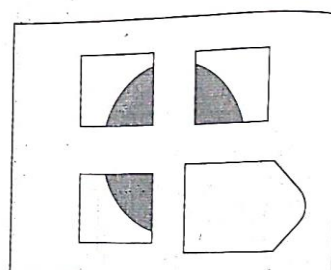
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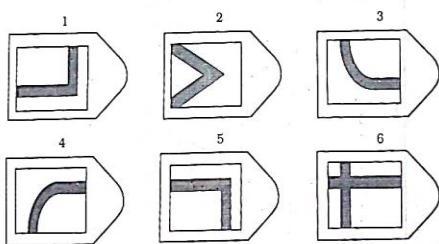
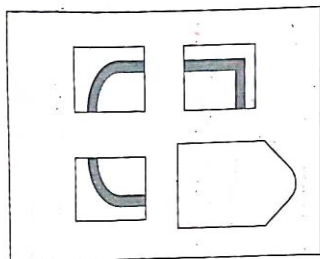
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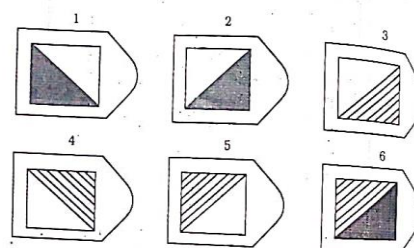
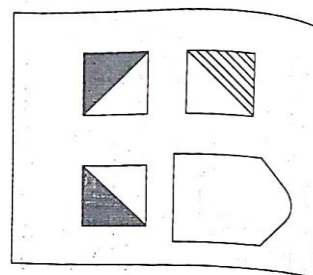
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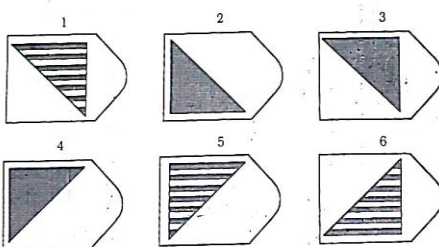
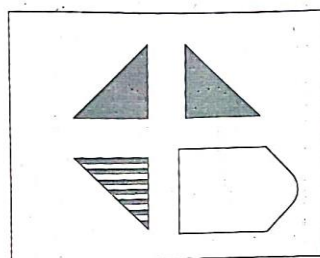
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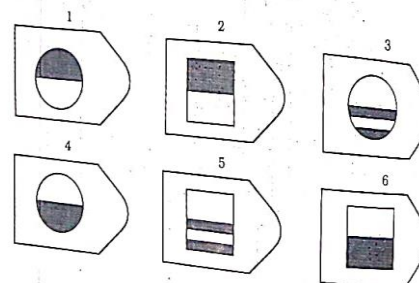
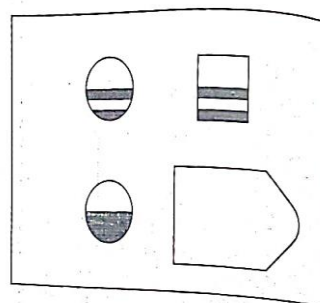
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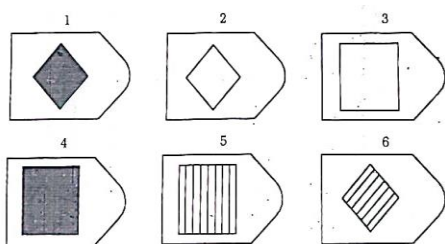
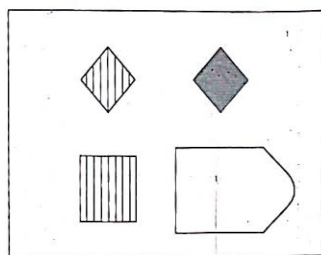
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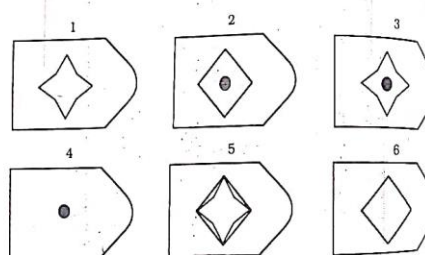
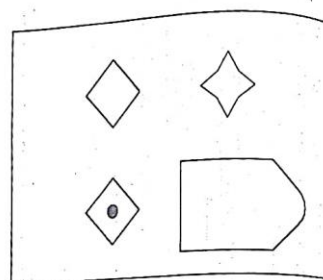
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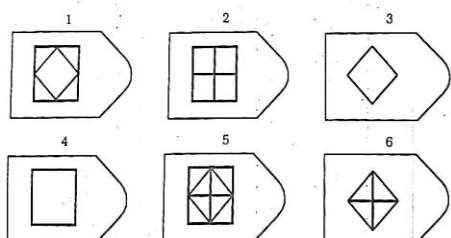
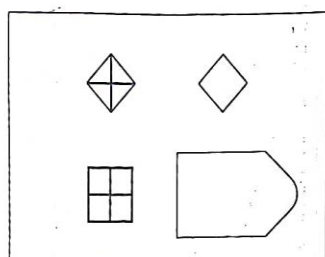
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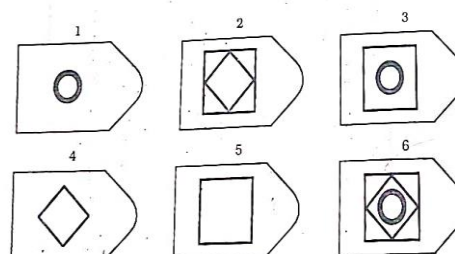
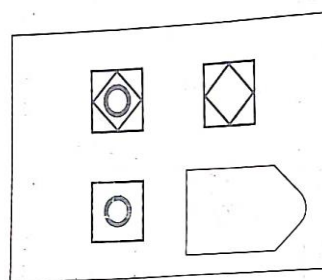
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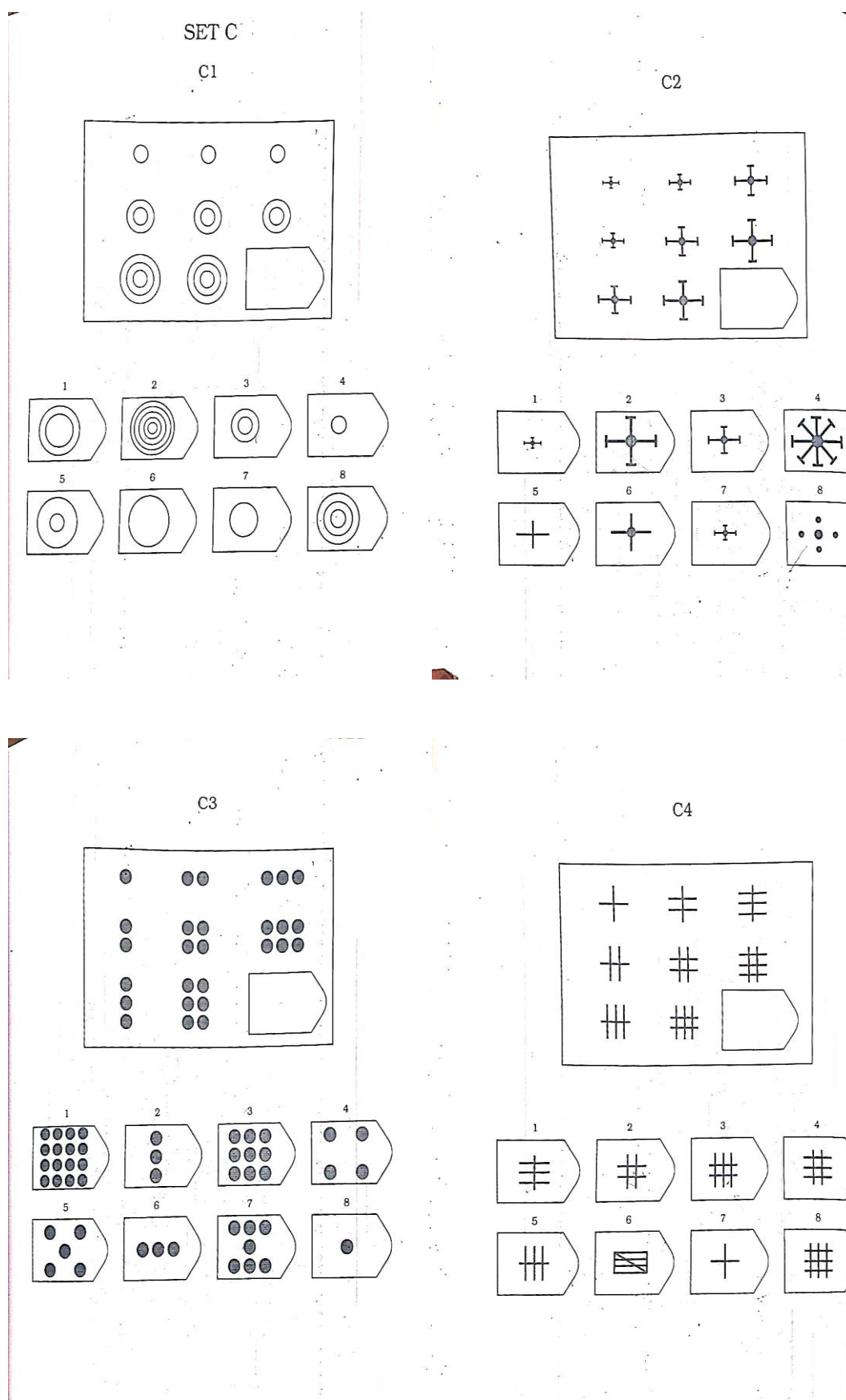


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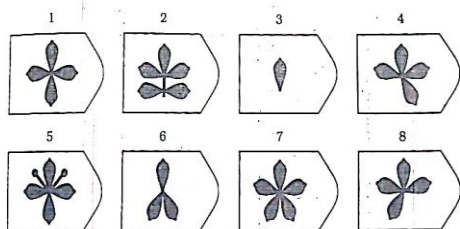
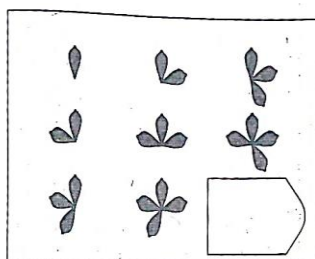


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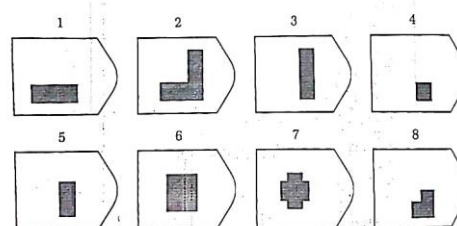
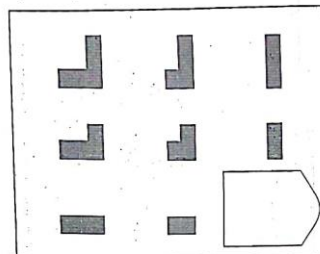




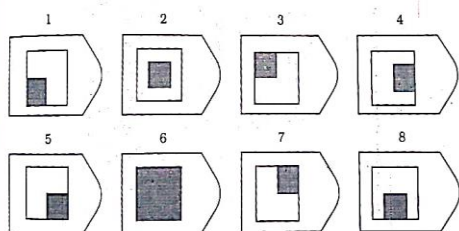
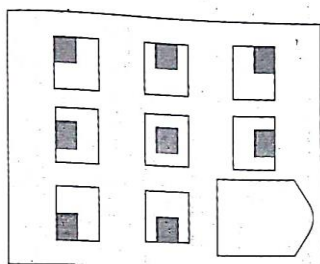
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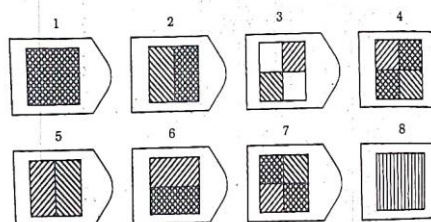
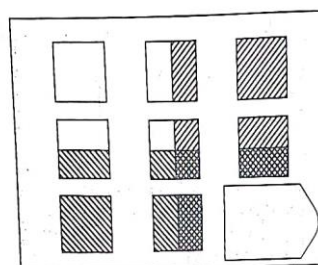
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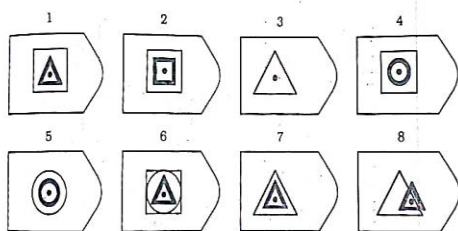
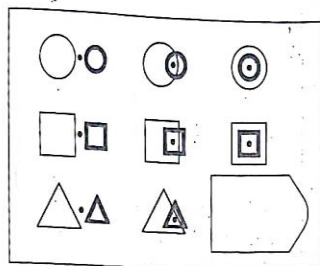
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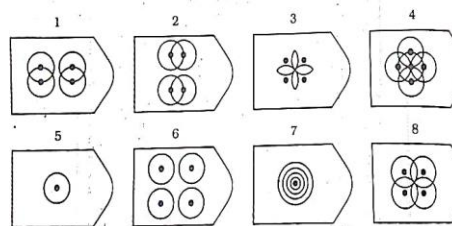
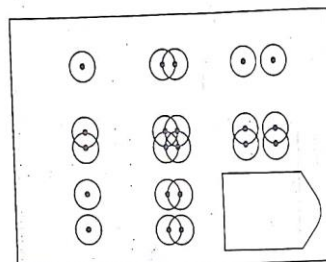
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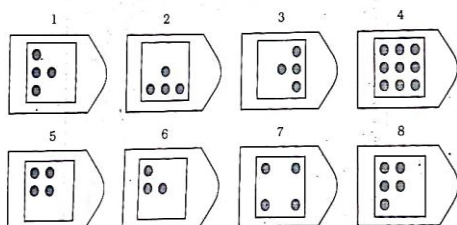
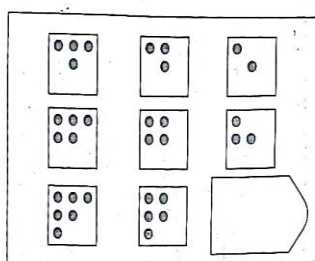
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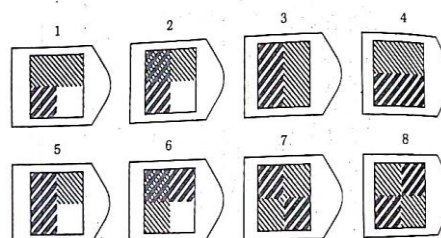
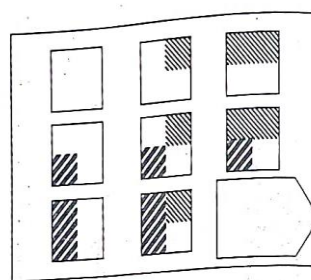
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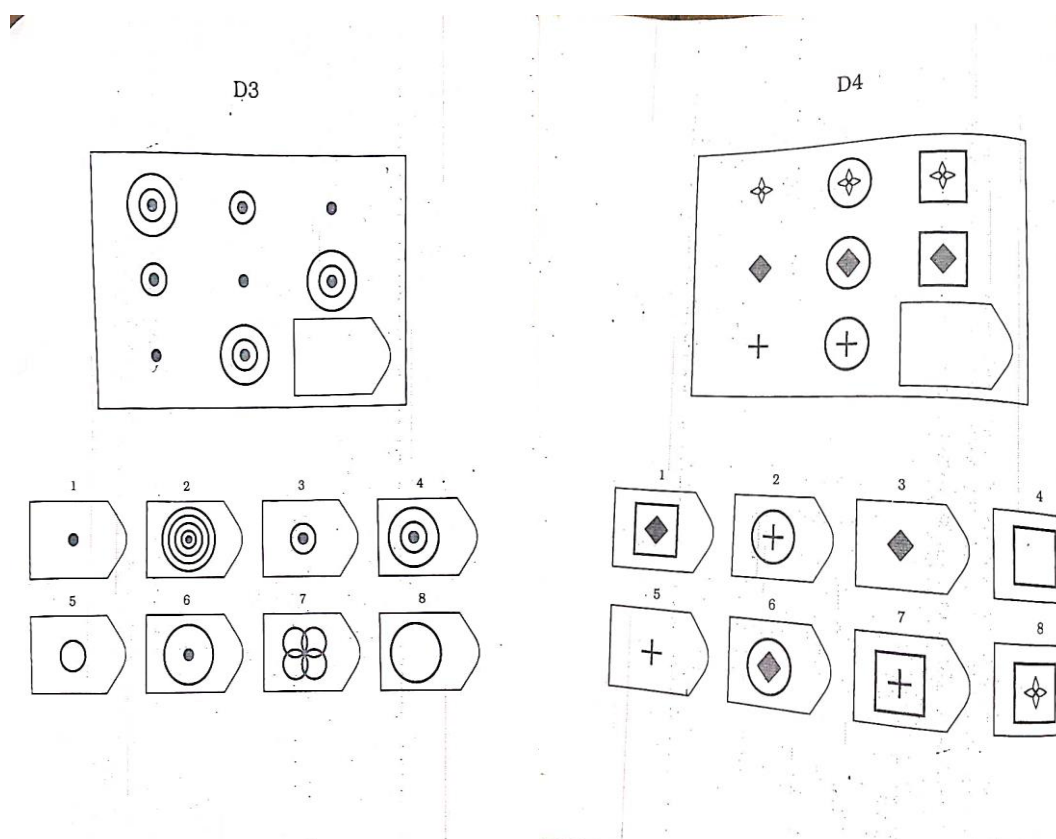
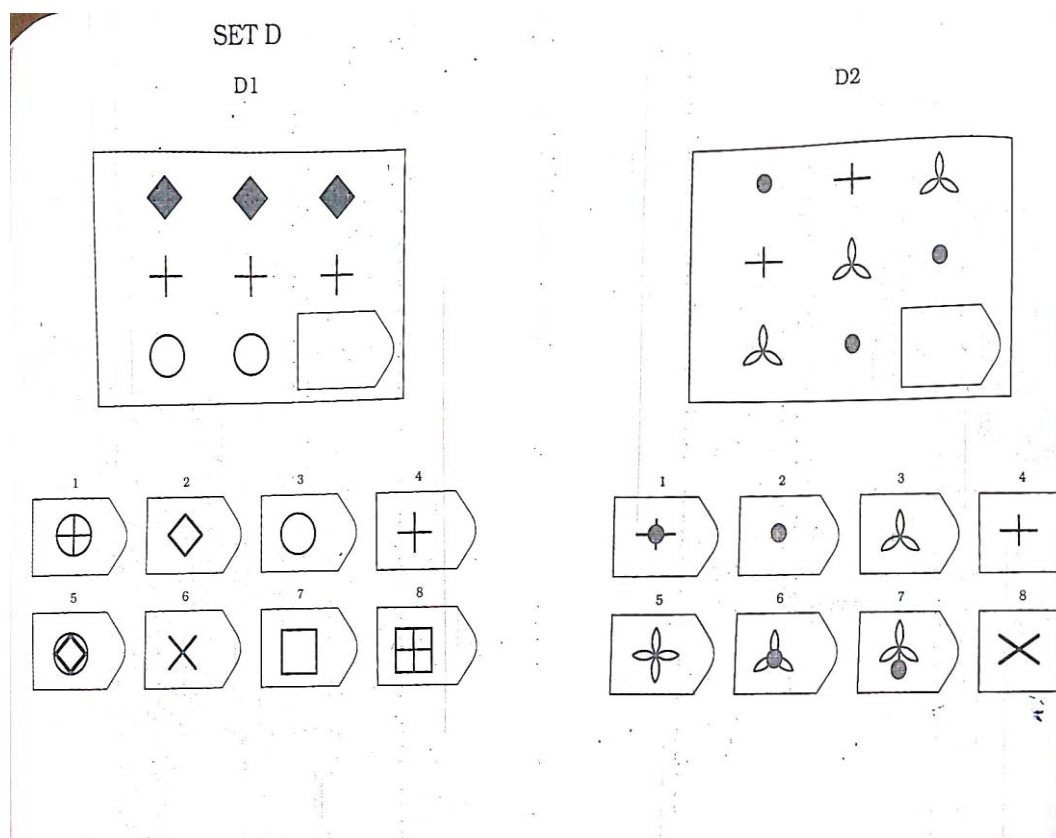


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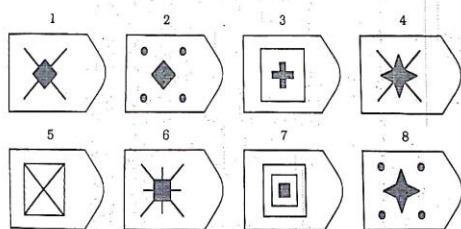
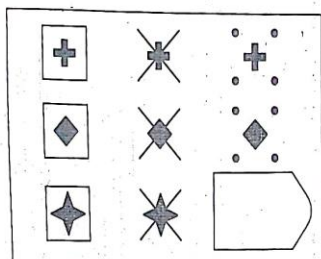


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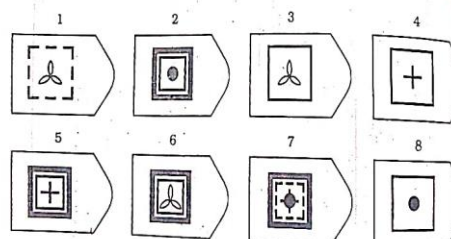
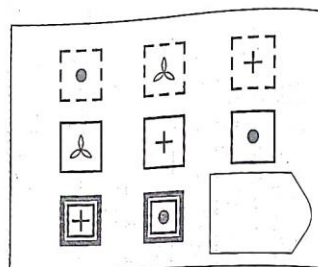




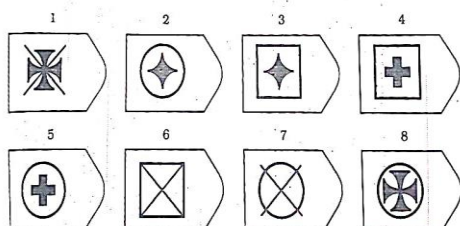
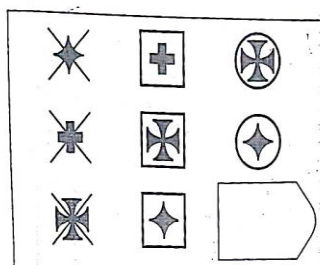
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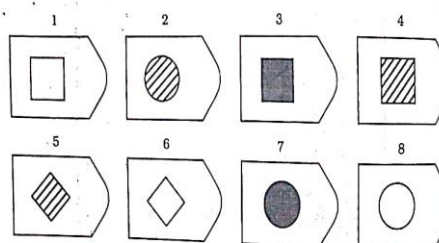
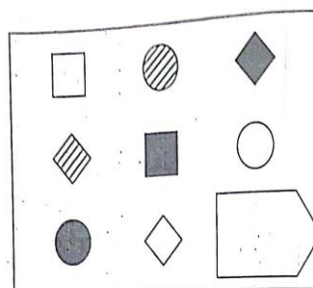
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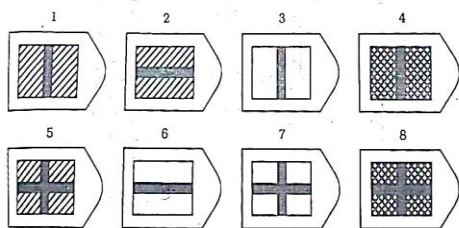
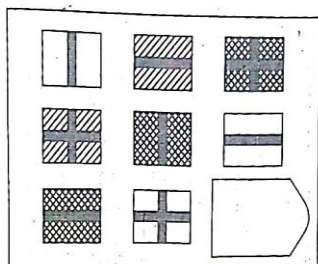
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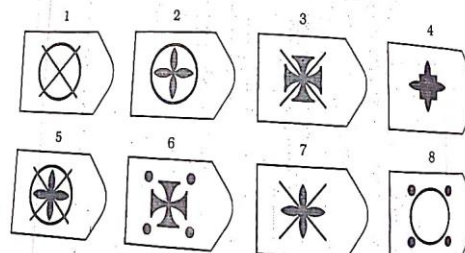
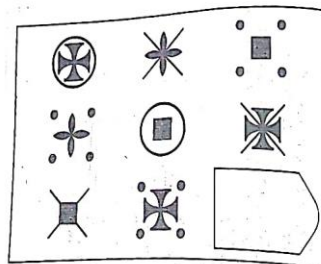
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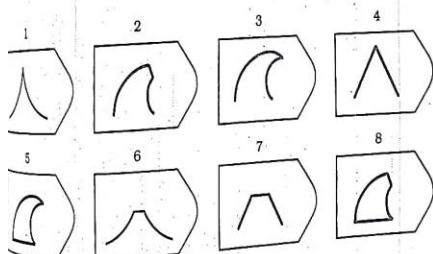
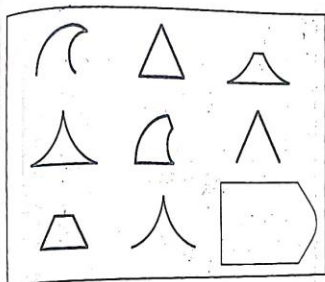
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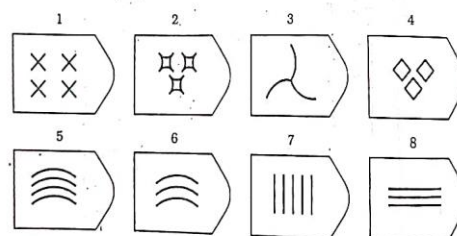
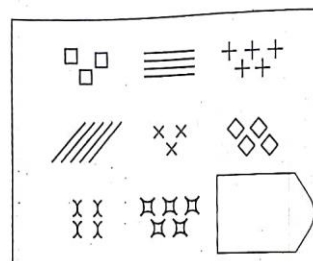
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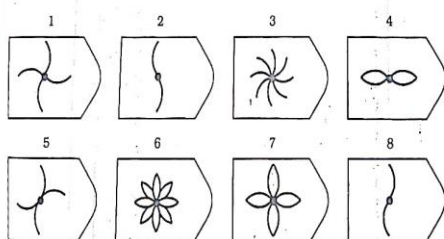
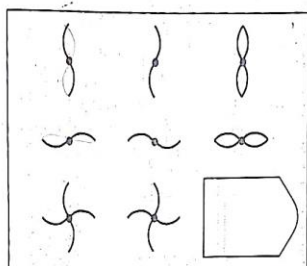


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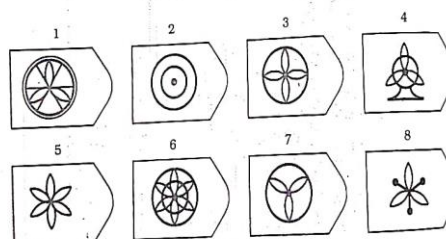
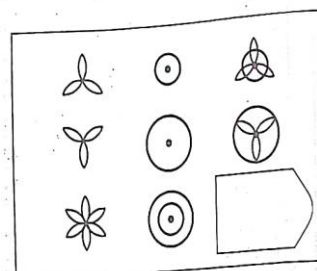


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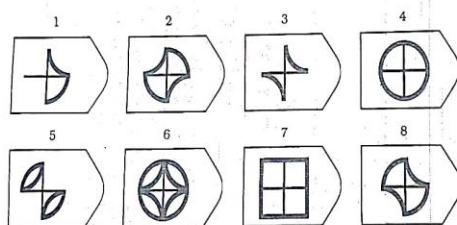
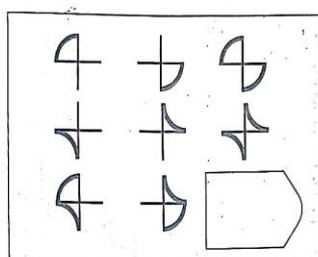
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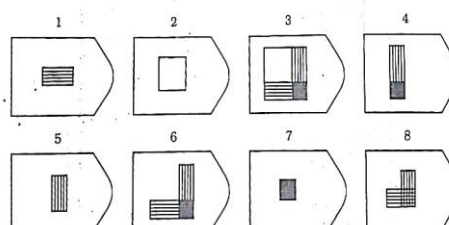
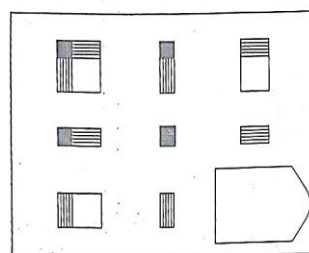
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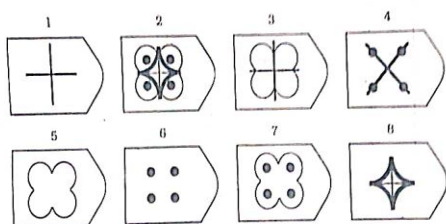
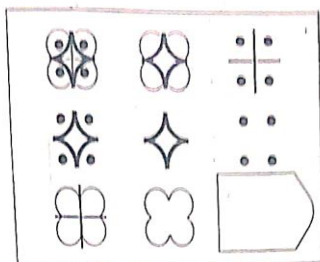
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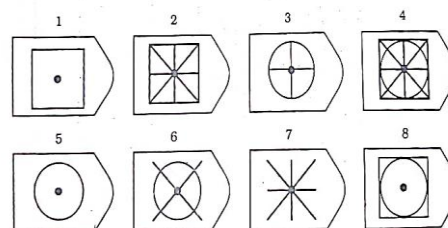
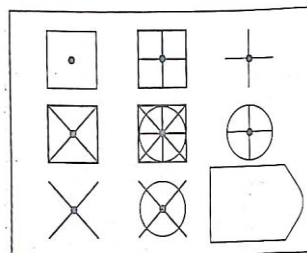
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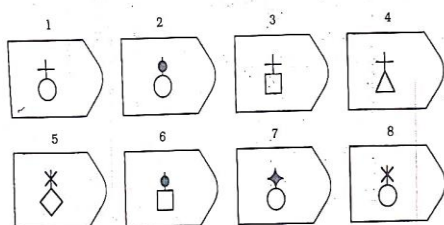
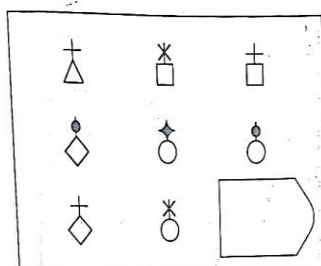
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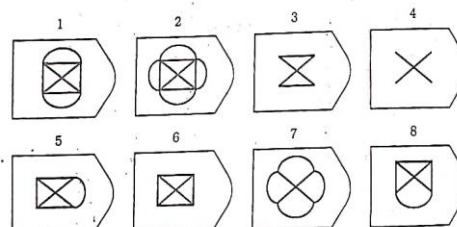
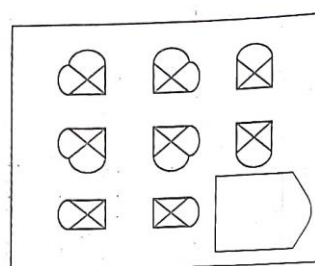
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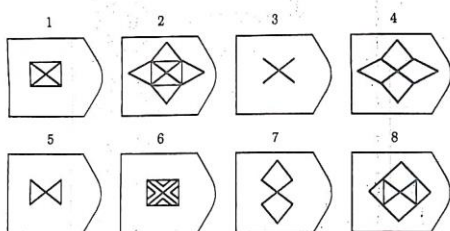
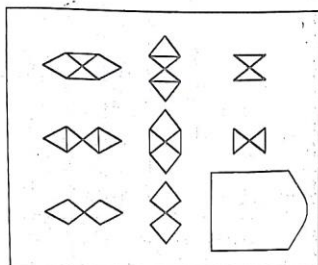
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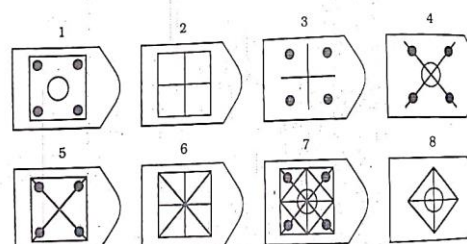
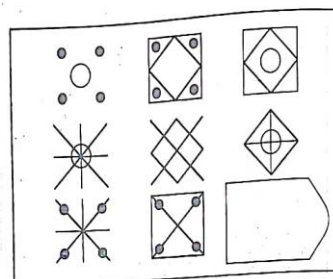
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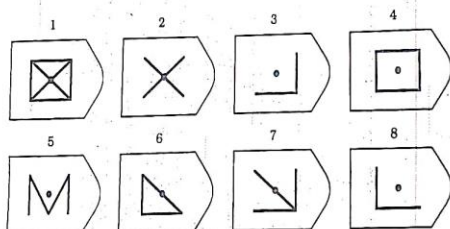
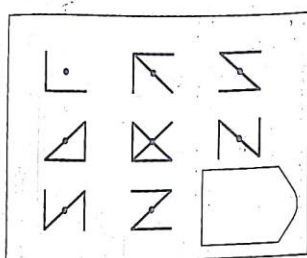
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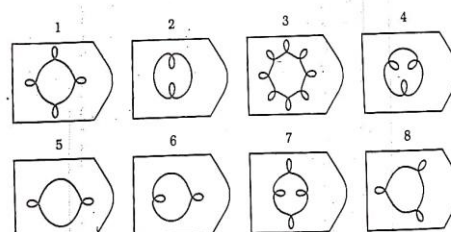
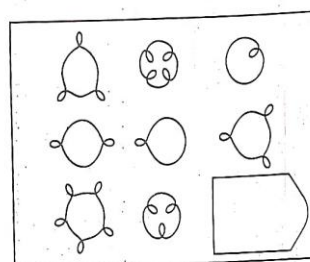
E10



E11



E12



ANNEXURE IV

SCHONELL: GRADED READING TEST

TEST 6
Schonell: graded word reading test

Schonell tests are standardized for British children. Alternative tests can be used in USA etc.

Task
The child is required to read out aloud a series of graded words, to obtain a reading age.

Material required
The reverse of this test card.

Method
The test should be given in a friendly atmosphere in which the child is thoroughly at ease. It should not take place within the hearing of other children. Younger children or weaker readers should start the test at the beginning. Better readers can start at a later group of 10 words. If any word is failed, however, the preceding Credit is then given for all words preceding this point. Testing is discontinued when 10 consecutive words are failed (but see below).

The temptation to help the child should be resisted. He should not, for example, be asked to repeat a word he has almost but not quite pronounced correctly nor should he be given any clues as to how to attack a particular word. Credit should not be given unless the word is clearly correct, e.g. 'flowers' for 'flower' is incorrect as is 'postage' when the last syllable is pronounced as the word 'age'.

Language
I have a lot of words here and I want to see how many you can read. Some of the words are easy but they do get a little harder. Just see how many you can read.
Read across the page. Begin here. (Indicate 'read' and follow finger along first line.)
Right? Off you go then. (No hurry; allow the child time to build, etc. If he wishes. No prompting, after trying and Well, never mind that one. Try this one - or this one ... etc.)
(Continue until the child has missed 10 words.) Then say Yes, they are getting harder - just look down the page and see if you can spot any others you know. There might be another.
If not, say Well, that's it then. Good.

LEVEL 2
only

Scoring

It is suggested that the tester record a tick on the score sheet for each successful response, as the child is reading. The score is the total number of words correctly read. Use the norms provided below to derive the reading age. The reading age is then entered in the score sheet and on the profile of General Underlying Ability.

Revised norms (1971) for Schonell, graded word reading test
Established by Geoffrey Bookbinder, based on the testing of 10,000 children in Salford and adjusted to the national norms. See Schonell and Goodacre, *The Psychology and Teaching of Reading* (3rd edition, Oliver & Boyd 1974), pp 216-17.

No. of words read correctly	R.A. (Months)	No. of words read correctly	R.A. (Months)	No. of words read correctly	R.A. (Months)
0-1	0.0	33	8.7	61	10.4
2	0.1	34	8.8	62	10.5
3	0.2	35	8.9	63	10.6
4	0.3	36	9.0	64	10.7
5	0.4	37	9.1	65	10.8
6	0.5	38	9.2	66	10.9
7	0.6	39	9.3	67	11.0
8	0.7	40	9.4	68	11.1
9	0.8	41	9.5	69	11.2
10	0.9	42	9.6	70	11.3
11	1.0	43	9.7	71	11.4
12	1.1	44	9.8	72	11.5
13	1.2	45	9.9	73	11.6
14	1.3	46	10.0	74	11.7
15	1.4	47	10.1	75	11.8
16	1.5	48	10.2	76	11.9
17	1.6	49	10.3	77	12.0
18	1.7	50	10.4	78	12.1
19	1.8	51	10.5	79	12.2
20	1.9	52	10.6	80	12.3
21	2.0	53	10.7	81	12.4
22	2.1	54	10.8	82	12.5
23	2.2	55	10.9	83	12.6
24	2.3	56	11.0	84	12.7
25	2.4	57	11.1	85	12.8
26	2.5	58	11.2	86	12.9
27	2.6	59	11.3	87	13.0
28	2.7	60	11.4	88	13.1
29	2.8	61	11.5	89	13.2
30	2.9	62	11.6	90	13.3
31	3.0	63	11.7	91	13.4
32	3.1	64	11.8	92	13.5
33	3.2	65	11.9	93	13.6
34	3.3	66	12.0	94	13.7
35	3.4	67	12.1	95	13.8
36	3.5	68	12.2	96	13.9
37	3.6	69	12.3	97	14.0
38	3.7	70	12.4	98	14.1
39	3.8	71	12.5	99	14.2
40	3.9	72	12.6	100	14.3

Norms for reading age
derived from the
7-11 year age
population.

Test Card overleaf



tree	little	milk	egg	book
school	sit	frog	playing	bun
flower	road	clock	train	light
picture	think	summer	people	something
dream	downstairs	biscuit	shepherd	thirsty
crowd	sandwich	beginning	postage	island
saucer	angel	ceiling	appeared	knife
canary	attractive	imagine	nephew	gradually
smoulder	applaud	disposal	nourished	diseased
university	orchestra	knowledge	audience	situated
physics	campaign	choir	intercede	fascinate
forfeit	siege	recent	plausible	prophecy
colonel	soloist	systematic	slovenly	classification
genuine	institution	pivot	conscience	heroic
pneumonia	preliminary	antique	susceptible	enigma
oblivion	scintillate	satirical	sabre	beguile
terrestrial	belligerent	adamant	sepulchre	statistics
miscellaneous	procrastinate	tyrannical	evangelical	grotesque
ineradicable	judicature	preferential	homonym	fictitious
rescind	metamorphosis	somnambulist	bibliography	idiosyncrasy

Asion Index

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ANNEXURE V

SCHONELL: GRADED SPELLING TEST



Task
The child is required to spell a number of graded words to give a spelling age.

Material required
Paper and pencil for each child.
The reverse of this test card provides the list of words used in the graded spelling test.

Method
Words from the Schonell graded spelling test are said aloud, followed by the word said in a sentence, followed by the word said on its own once more. The child is then required to write the word down. Testing is discontinued when 10 consecutive words are incorrect. It is not necessary to start at the first group of 10. If however a child fails a word in any group of 10, the previous 10 words must be given and so on until 10 consecutive words are correct.

Language
Now I'm going to ask you to spell some words for me – not very hard words really. Write them across the page. Write five in a row across the page. I will tell you when to start a fresh line.
Are you ready then?
Listen hard...
next...
To make sure that the child hears correctly, dictate the word, then include it in a short sentence, then repeat the word singly. Make up your own short sentences, e.g. 'net... you go fishing with a net... net'.
If the child can be directed to miss a space after each 10, it will help the marking.

Scoring
The spelling age can be obtained by the following formula
Spelling age (S.A.) = $\frac{\text{number of words correctly spell} + 5}{10}$
Thus 25 words count: S.A. = $\frac{25}{10} + 5 = 7.5$ years
The score should be noted on the score sheet and plotted on the profile of General Underlying Ability.



Test Card overleaf

Schonell graded spelling test

see	cut	mat	in	tin
bag	ten	hat	dad	bed
leg	dot	pen	yet	key
good	till	be	with	from
time	call	help	week	pie
boat	mind	sooner	year	dream
sight	mouth	large	might	brown
mistake	pair	white	skate	stayed
yolk	island	nerve	join	fire
iron	health	direct	calm	beetle
final	circus	increase	slippery	lodge
style	bargain	copies	guest	policy
view	library	cushion	safety	patient
account	earliest	institution	similar	generous
orchestra	equally	individual	merely	enthusiastic
appreciate	familiar	source	immediate	breath
permanent	sufficient	broach	customary	especially
materially	cemetery	leisure	accredited	fraternally
subterranean	apparatus	potpourri	politician	miscellaneous
mortgage	equipped	exaggerate	amateur	committee



ANNEXURE VI

THE SCHUTTE SELF-REPORT EMOTIONAL INTELLIGENCE SCALE

Instructions: Indicate the extent to which each item applies to you using the following scale:

1 = strongly disagree 2 = disagree 3 = neither disagree nor agree 4 = agree 5 = strongly agree

1. I know when to speak about my personal problems to others
2. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them
3. I expect that I will do well on most things I try
4. Other people find it easy to confide in me
5. I find it hard to understand the non-verbal messages of other people*
6. Some of the major events of my life have led me to re-evaluate what is important and not important
7. When my mood changes, I see new possibilities
8. Emotions are one of the things that make my life worth living
9. I am aware of my emotions as I experience them
10. I expect good things to happen
11. I like to share my emotions with others
12. When I experience a positive emotion, I know how to make it last
13. I arrange events others enjoy
14. I seek out activities that make me happy
15. I am aware of the non-verbal messages I send to others
16. I present myself in a way that makes a good impression on others
17. When I am in a positive mood, solving problems is easy for me
18. By looking at their facial expressions, I recognize the emotions people are experiencing
19. I know why my emotions change
20. When I am in a positive mood, I am able to come up with new ideas
21. I have control over my emotions
22. I easily recognize my emotions as I experience them
23. I motivate myself by imagining a good outcome to tasks I take on
24. I compliment others when they have done something well
25. I am aware of the non-verbal messages other people send
26. When another person tells me about an important event in his or her life, I almost feel as

though I have experienced this event myself

27. When I feel a change in emotions, I tend to come up with new ideas

28. When I am faced with a challenge, I give up because I believe I will fail*

29. I know what other people are feeling just by looking at them

30. I help other people feel better when they are down

31. I use good moods to help myself keep trying in the face of obstacles

32. I can tell how people are feeling by listening to the tone of their voice 2

33. It is difficult for me to understand why people feel the way they do

ANNEXURE VII

SOCIAL COMPETENCE SCALE (SCS)

Prof. K.C.Vashistha

Radhika Agarwal

Faculty of Education

Dayalbagh Educational Institute

Dayalbagh, AGRA-282005

GENERAL INFORMATION

Name Age.....
Sex.....
School Qualification
Religion.....
Father's Qualification.....father's
Occupation
Mother's Qualification Mother's
Occupation
Address

INSTRUCTIONS

The Scale contains 50 items. A candidate has to attempt all the questions. Rate each of the following statements from 1-5 using the rating below to indicate how often you feel as the statement says.

Please write your responses in the given columns.

1. Almost Never (A)
2. Rarely (R)
3. Sometimes (S)
4. Often (O)
5. Most of the time (M)

S.No	Items	M	O	S	R	N
1	I am a patient person.					
2	I consider now others will be affected by my words and actions.					

3	I find it easy to see things from someone else's point of view.					
4	I run into obstacles that keep me from reaching my goals.					
5	When talking to people, I pay attention to their body language.					
6	Even when I do my best, I feel guilty about the things that were not done perfectly.					
7	I misinterpret what other people say.					
8	I can calm myself down when I am under stress.					
9	I try to adjust my behavior according to what I think.					
10	I perform what the situation calls for when under pressure.					
11	I am able to control a bad mood when necessary.					
12	I get angry over things that others would consider minor.					
13	I feel like I worry about things that others don't even think					
14	I interact non-verbally with other children with smiles, waves, nods etc.					
15	I expect a positive response when approaching others.					
16	I do functions well even with distractions.					
17	I can accept things not going according to my way.					
18	I express wishes and preferences clearly and give reasons.					
19	I assert own rights and needs appropriately.					
20	I cope well with failure.					
21	I can express needs and feelings appropriately.					
22	I express frustrations & anger effectively, without escalating disagreements or harming others.					
23	I gain access to ongoing groups at play and work.					
24	I enter ongoing discussion on a topic; makes relevant contributions to ongoing activities.					
25	I usually think before acting.					
26	I usually stay on task.					
27	I take turns fairly easily.					
28	I have positive relationships with one or two peers and show the capacity to really care about them and miss them if they are absent.					
29	I am a self-starter.					

30	I control my temper when there is a disagreement.					
31	I have "give-and-take" exchanges of information, feedback, or materials with others.					
32	I negotiate and compromise with others appropriately.					
33	I can give suggestions and opinions without being busy.					
34	I am able to maintain friendship with one or more peers, even after disagreements.					
35	I do not draw inappropriate attention to self.					
36	I accept and enjoy peers and adults who have special needs.					
37	I accept and enjoy peers and adults who belong to ethnic groups other than of my own.					
38	I usually accepted versus neglected or rejected by other children.					
39	I usually respected rather than feared or avoided by other children.					
40	I sometimes invited by other children to join them in play, friendship, and work.					
41	I named by other children as someone they are friends with or like to play and work with.					
42	I can resolve peer on my own.					
43	I can wait in line patiently when necessary.					
44	I am very good at understanding other people's feeling.					
45	I am aware of the effect my behavior on others.					
46	I can work well in a group.					
47	I cooperate with peers without prompting.					
48	I follow teacher's verbal directions.					
49	I listen to others' point of view.					
50	I share materials with others.					

ANNEXURE VIII

DIGIT SPAN TEST – SUBSCALE OF MALIN'S INTELLIGENCE SCALE FOR INDIAN CHILDREN

VI DIGIT SPAN TEST (Alternate)

DIGIT SPAN FORWARDS

Directions : " I am going to say some numbers. Listen carefully and when I am finished repeat them after me" (one per second). If subject repeats trail I of a series then go on to next higher number in same Trial. If he fails then give a second chance from Trail II. Do not continue if fails on both Trails of a given series.

Scoring : His score is the highest number of digits repeated without error. Thus if he only repeated five digits his score is 5. Total score combines forward and backward.

Series	Trial I	Trial II
3	3-8-6	6-1-2
4	3-4-1-7	6-1-5-8
5	8-4-2-3-9	5-2-1-8-9
6	3-8-9-1-7-4	7-9-6-4-8-3
7	5-1-7-4-2-3-8	9-8-5-2-1-6-3
8	1-6-4-5-9-7-6-3	2-9-7-6-3-1-5-4
9	5-3-8-7-1-2-4-6-9	4-2-6-9-1-7-8-3-5

DIGIT SPAN BACKWARDS

Directions : "Now I am going to say some more number but this time when I stop you say them backwards." Give an example and let the subject try. Scoring and directions as in the above.

Series	Trial I	Trial II
2	2-5	6-3
3	5-7-4	2-5-9
4	7-2-9-6	8-4-9-3
5	4-1-3-5-7	9-7-8-5-2
6	1-6-5-2-9-8	3-6-7-1-9-4
7	8-5-9-2-3-4-2	4-5-7-9-2-8-1
8	6-9-1-6-3-2-5-8	3-1-7-9-5-4-8-2

ANNEXURE IX
MOSS ATTENTION RATING SCALE

Subject's name _____ ID# _____

Person doing rating _____ Discipline: OT / PT / Sp / Nursing (circle) Other: _____

Complete the ratings based on two of the following three days of observations:

_____, _____, _____, _____

*Note: If you have worked with the patient all three days, base your ratings on the second & third day.

Write the 2 dates on which your ratings are based on here. _____ & _____ .

Did any of the observations you made over the 2 days involve co-treatment with another rater? Y / N (circle)

.....

Using the number key below, please indicate to what degree each descriptor applies to the person you are rating. If any of your sessions during the 2 days were done in co-treatment with another rater, please note this above, and please make sure that you don't discuss the rating scale at all with your co-rater until both of you have filled it out independently.

Please don't leave any items blank. If you are not sure how to answer, just make your best guess.

1 = Definitely false

2 = False, for the most part

3 = Sometimes true, sometimes false

4 = True, for the most part

5 = Definitely true

1. _____ Is restless or fidgety when unoccupied
2. _____ Sustains conversation without interjecting irrelevant or off-topic comments
3. _____ Persists at a task or conversation for several minutes without stopping or "drifting off"
4. _____ Stops performing a task when given something else to do or to think about
5. _____ Misses materials needed for tasks even though they are within sight and reach
6. _____ Performance is best early in the day or after a rest
7. _____ Initiates communication with others
8. _____ Fails to return to a task after an interruption unless prompted to do so
9. _____ Looks toward people approaching

10. _____ Persists with an activity or response after being told to stop
11. _____ Has no difficulty stopping one task or step in order to begin the next one
12. _____ Attends to nearby conversations rather than the current task or conversation
13. _____ Tends not to initiate tasks which are within his/her capabilities
14. _____ Speed or accuracy deteriorates over several minutes on a task, but improves after a break
15. _____ Performance of comparable activities is inconsistent from one day to the next
16. _____ Fails to notice situations affecting current performance, e.g., wheelchair hitting against table
17. _____ Perseverates on previous topics of conversation or previous actions
18. _____ Detects errors in his/ her own performance
19. _____ Initiates activity (whether appropriate or not) without cuing
20. _____ Reacts to objects being directed toward him /her
21. _____ Performs better on tasks when directions are given slowly
22. _____ Begins to touch or manipulate nearby objects not related to task.

ANNEXURE X

YOUTH DISABILITY SCREENER (YDS) – SEATTLE QUALITY OF LIFE GROUP

ID # _____

YOUR ABILITIES

Center for Disability Policy and Research – Disability Screener



Donald L. Patrick, PhD, MSPH
Todd C. Edwards, PhD
Tari D. Topolski, PhD

Seattle Quality of Life Group
University of Washington
Box 359455
Seattle, Washington 98195-9455
(800) 291-2193

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Your Health and Disabilities

Following are some questions about your health and any disabilities that you might have. Please circle the answer that best describes how closely the statement applies to you. NOTE: "LONG-TERM" REFERS TO DIFFICULTIES THAT HAVE LASTED OR ARE EXPECTED TO LAST 6 MONTHS OR MORE.

- | | | | |
|---|----|-----|--------------|
| 1. Do you have any physical disabilities or long-term health problems? <i>(please circle your answer)</i> | No | YES | I DON'T KNOW |
| 2. Do you have any long-term emotional problems or learning disabilities? <i>(please circle your answer)</i> | No | YES | I DON'T KNOW |
| 3. Would other people consider you to have ANY disabilities or long-term health problems, including physical health, emotional, or learning problems? <i>(please circle your answer)</i> | No | YES | I DON'T KNOW |
| 4. Are you limited in any activities because of ANY disabilities or long-term health problems, including physical health, emotional, or learning problems? <i>(please circle your answer)</i> | No | YES | I DON'T KNOW |

ANNEXURE XI
INSTITUTIONAL HUMAN ETHICS COMMITTEE

INSTITUTIONAL HUMAN ETHICS COMMITTEE



Avinashilingam

Institute for Home Science and Higher Education for Women
(Deemed to be university under Category 'A' by MHRD, Estd. u/s 3
of UGC Act 1956) Re-accredited with 'A++' Grade by NAAC.
Recognised by UGC Under Section 12 B
Coimbatore- 641043, Tamil Nadu, India

05.01.2023

Chairman

Dr. Sudha Ramalingam
Director – Research and Innovation
Professor- Community Medicine,
PSG Institute of Medical Sciences
& Research, Coimbatore

Member Secretary

Dr. A Thirumani Devi
Professor
Department of Food Science and
Nutrition

Members

Mr. K. Arulmoli (Legal Expert)
Dr. Subashini K. Sripathi
Dr. A Saraswathy (Medical Officer)
Ms. D. Kavitha
Dr. A R Sudamani Ramasamy
Dr. G. Victoria Naomi
Dr. Judith Justin
Dr. Anitha Subash
Dr. K. Sampath Rani

To

Ms. R. Vatsala Mirnaalini
Department of Psychology
Avinashilingam Institute for Home Science and
Higher Education for Women
Coimbatore- 641043

Dear Vatsala Mirnaalini,

Ref: Your proposal No. IHEC/22-23/PSY-26 entitled
"Efficacy of Expressive Art Therapy and Brain Gym Exercises in
Enhancing Academic Achievement among Learning Disabled
Students" submitted for approval of IHEC on 19.11.2022.

The Institutional Human Ethics Committee of our
University hereby grants approval to your research proposal
No. IHEC/22-23/PSY-26 entitled "Efficacy of Expressive Art
Therapy and Brain Gym Exercises in Enhancing Academic
Achievement among Learning Disabled Students" submitted by
you. The Approval number for the same is AUW/IHEC/PSY-22-
23/XMT-26.

We wish you all the best in your research endeavours.

Regards


5.1.23.
Dr. A Thirumani Devi
Member Secretary



ANNEXURE XII
PLAGIARISM CHECK REPORT



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD)
Re-accredited with 'A++' Grade by NAAC.CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

PLAGIARISM CHECK REPORT (THESES)

1.	Name of the Research Scholar	R. Vatsala Mirnaalini
2.	Roll No. and Year of Registration	21PHCPP003, 2021
3.	Department	Psychology
4.	Name of the Research Guide	Dr. S. Gayatri Devi
5.	Title of the Thesis / Dissertation	Efficacy of Expressive Arts Therapy to enhance Academic Achievement among Learning Disabled Adolescents
6.	Similarity Content (%) Identified	3%
7.	Software Used	Turnitin
8.	Date of Verification	28-10-2024

Note : The report is excluding 14 Consecutive words, Review of Literature and Quoted Materials.

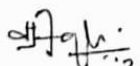
Checked by :


28/10/24

Information Scientist



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CHAPTER I

INTRODUCTION

"The first page of the paper must be typed on the last line of the document."

Dr. A.P. Subash Kumar

Education is not the learning of facts, but the training of the mind to think.

Albert Einstein

Learning disability can be explained as having difficulty in comprehending the contents of the learning process, academically. It is a difficulty with psychological processes that affect the fields related to writing, reading and mathematics. The psychological process includes trouble with perception, memory and expressive language.

Learning disability ranges from mild to severe. For some individuals with learning disabilities, they are capable of being independent in taking care of themselves whereas in severe cases, they need constant and care (Learning Disabilities, 2021).

Now, Learning Disability is a term with varied definition and often confused with ADHD or ASD. The prevalence of the disorder is fairly accurate and the statistical incidence rate could be found in many sources. Hence, the statistical data should serve as the reference and for further conclusion the definition given by the author to be considered.

Diagnosing learning disability or highlighting the various reasons that it is extremely hard to find learning disability to the public at large. The main problem is well understood in the majority of cases, despite understanding the prevailing aspects of learning disability in the general population (Fuchs, 2021).

Prevalence of Learning Disability

Earlier, the prevalence rate of learning disability is taken as 14 people among 1000 in the general population, which was considered to be excessively common. Consequently, these learning disabled people had an 8% of general. To which, in consideration could be considered that it is an over-estimated and learning disabled people to prevent learning disability, research for different and necessary intervention as well as behavioural difficulties (Fuchs, 2021).

Learning disability prevalence is higher in developing countries, higher in women than in men. Children from poor backgrounds and also among ethnic minority people (Learning and Developmental Disabilities: Research and Reviews, 2019).

According to National Council for Education Statistics (NCES) around 7.5 million school children (15%) were provided with special education services that falls under the category under Individuals with Disabilities Education Act (IDEA) in the year 2019-20

Efficacy of Expressive Arts Therapy to enhance Academic Achievement among Learning Disabled Adolescents

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Appendix L (Item No 5 of Check List) Details of Research Publications

S.No	Article	Journal	Other Details Vol/No/Page No/Year	Published in UGC-CARE / Scopus Indexed/ Web of Science
1	Post Pandemic Literacy Scores among Learning Disabled Adolescents	Indian Journal of Clinical Psychology	49(4), 38-41, 2022	UGC - CARE
2	Internalizing Problems among Learning Disabled Adolescents	Journal of the Indian Academy of Applied Psychology	50, 187-191, 2024	UGC - CARE

*Proof of list of Journals from Internet to be attached along with copies of reprints.

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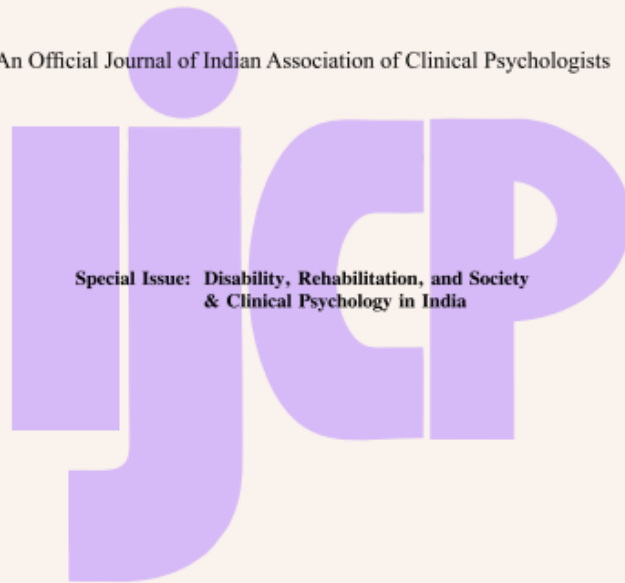
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Post Pandemic Literacy Scores among Learning Disabled Adolescents

R. Vatsala Mirnaalini¹ and S. Gayatri Devi²

ABSTRACT

A study was conducted among Learning Disabled Adolescents (N=51) with age ranging from 11 to 16 years by administering Raven's Standard Progressive Matrices, Schonell's Reading Test and Schonell's Spelling Test. The study aimed to test whether IQ score is dependent on reading score and spelling score. The hypothesis of the study is that there is no significant difference between IQ score and reading and spelling score. A regression analysis was performed and the result proved that the IQ score is dependent on reading score and spelling score with a p value at 0.01 level; thus hypothesis was rejected. Observations of the study concluded that reading score and spelling score act as a predictor to measure intelligence among Learning Disabled Adolescents. Though learning disabled adolescents are intellectually average, there is likelihood that the pandemic has reduced their literacy level leading to poor intelligence quotient and hence, contributing to the Matthew effect that poor readers get poorer. Further studies are required to analyze the pattern of scores before covid and post covid situations.

Keywords: *Intelligence Test, Learning Disability, Schonell's Reading Test, Adolescents*

INTRODUCTION

Learning Disabilities Association of Canada, 2015 defines Learning Disabilities as a disorder resulting due to impairment in one or more processes related to perceiving, thinking, remembering or learning. These include, but are not limited to language processing; phonological processing; visual spatial processing; processing speed; memory and attention; and executive functions (e.g., planning and decision making).

With covid 19 outbreak, a massive increase in virtual online classes happened during the past 2 years from 2020 to 2022. As a part of the new norms, new behaviors have emerged like work from home, virtual classes among people in every part of the world.

In India, the entire education turned to online classes during pandemic (Mishra et al., 2020). Students with learning disabilities faced problems pertaining to attention, distractions, lack of physical development during the pandemic (Khanna & Kareem, 2021).

But, a question needs to be answered i.e. the effectiveness of virtual classes in improving the basic skills like reading (Spector, 2021)? As we are treading towards an era under the influence of technology, the impact of the same in academics is an issue of concern. The question to be addressed is the influence of virtual classes on reading and spelling areas of academics especially among learning disabled adolescents. The concern is on the learning outcome of the curriculum due to pandemic and virtual classes (Navaneeth & Siddiqui, 2022).

Adolescents with learning disabilities have trouble in reading and spelling which contributes to poor performance in academics. With remote learning, the standard of education faced a reduced reach to cater to the needs of learning disabled adolescents. During the

covid 19 pandemic, the education system has seen an increase in the number of learning disabled adolescents as well (Angode & Ressa, 2021). It can be related to the surge to remote learning for the significant increase in the troubled reading and spelling activities.

The core of academic success rely greatly on reading and spelling activities. Reading and spelling contributes to the overall literacy, academic writing and a good communication. Online learning has affected the areas of concentration especially among learning disabled secondary school students (Walters et al., 2022).

Poor reading and spelling scores could also affect the intellectual level of a child (Thomson, 2003). Though intellectual level is not dependent on the literacy level, the ability to communicate, solve a problem and make a decision might get hampered if literacy level is poor leading to poor socio-psychometrics (Stanovich, 1999).

OBJECTIVES

Aim of the current study was to find out whether reading and spelling could predict intelligence among learning disabled adolescents. Adolescents with learning disabilities are identified with normal intelligence but with a troubled academic background. Thus with the virtual classes and two years of study pattern at home, the ability to communicate, solve problems and make a decision have been challenged. This is a major concern to predict intelligence among both normal and learning disabled adolescents. Since learning disabled adolescents are poor in academics in general, the covid 19 situation has worsened their intellectual level as well. Hence their intellectual level could be predicted with reading and spelling scores.

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Theory and Need for the Study

In Sri Lanka, students with dyslexia are on the verge of becoming poor readers further, thus contributing to the Matthew Effect (Hettiarachchi, 2021). The Matthew effect was first coined by Walberg and Tsai in 1983 but it was first used by Stanovich in 1986. Stanovich said that those who read well will continue to do so and those who do not read well are unlikely to continue to become good readers (Hempstead, 2022). Reading and literacy variances relate much to the cognitive differences especially verbal intelligence (Stanovich, 1993). The Matthew effect is strongly with learning disability (Tzouriadou & Tzivinikou, 2021).

With the pandemic and virtual classes, one can be apprehensive over the development of this Matthew effect affecting adolescents with learning disability in becoming poorer in reading and spelling which is affecting their intellectual level as well.

HYPOTHESIS

There is no significant relationship between reading and spelling scores and intelligence score.

Al-Qadri et al (2021) summed up the classification of learning difficulties such as reading difficulties, writing difficulties, expression difficulties, calculation difficulties, and general study difficulties among the school students at primary level in Sana'a City, Yemen accounting to be prevalence factors for various academic learning difficulties.

Peterson et al (2021) identified learning disabled faced difficulties in 5 academic domains such as basic reading, reading comprehension, basic math, math problem solving and written expression.

Capin et al (2021) analyzed the reading comprehension levels of fourth grade students who also experienced cognitive difficulties. The results showed that poor performance on reading factors could be a predictor for cognitive attributes.

Soriano-Ferrer et al (2021) examined the psychoeducational impact of Covid 19 quarantine in Spain among learning disabled children and it was identified that the children had less reading activity and less reading motivation during quarantine.

According to Stanovich (1986), the Matthew effect is the ability of a child, who reads well will read more and they obtain higher IQ scores whereas poor readers score low in reading and in IQ. Stanovich has also specified that IQ scores reduce overtime for reading disabled children. There are possibilities that children with learning disabilities score low in intelligence but perform well in reading tests (Siegel, 1999).

METHOD

The aim of this study was to identify whether reading and spelling scores predict intelligence among learning disabled adolescents.

TOOLS USED

The tools used for the study were Raven's Standard Progressive Matrices (Raven, 1936), Schonell Reading Test (Schonell, 1942) and Schonell Spelling Test (Schonell & Goodacre, 1971).

Study was conducted at Wisdoms Special School and Learning Centre, Chennai and Saraswathi Kendra Learning Centre for Children, Chennai. Students with Learning disability of these two schools were selected for the action research for the following reasons

1. Availability of the participants.
2. Permission and Cooperation provided by School's authorities.

Sample

Fifty-one Learning Disabled adolescents (34 from Saraswathi Kendra Learning Centre for Children, Chennai and 17 from Wisdoms Special School and Learning Centre, Chennai) were selected and screened for reading score, spelling score and intelligence score. The age range of the participants were 11 to 16 years. Purposive sampling method was used to select the sample.

PROCEDURE

Fifty-one adolescents with learning disability were assessed using Raven's Standard Progressive Matrices, Schonell Reading Test and Schonell Spelling Test to test their Intelligence Quotient, reading score and spelling score.

Students were asked to sit comfortably in a classroom with individual chairs. Each student was given a questionnaire. Since the participants were students in the age group of 11 to 16 years, the items in the questionnaire were instructed in a student friendly manner. The students showed great interest in answering the questionnaire.

RESULTS AND DISCUSSION

Table I presents the descriptive and inferential statistics for assessing the reading score, spelling score and intelligence score using explanatory survey design.

Table 1: Mean and Standard Deviation for Age, Intelligence Score, Reading Score and Spelling Score

Variables	N	Mean	Standard Deviation
Age	51	13.35	1.60
Intelligence Score	51	28.94	8.47
Spelling Score	51	7.98	2.08
Reading Score	51	8.49	2.06

Table 1 shows that the mean IQ score is 28.94 which indicates that the participants were intellectually

impaired with the mean age of 13.35' the mean reading age is 8.49 and mean spelling age is 7.98 respectively. It implies that the participants were very poor in reading, spelling and intelligence.

Table 2: shows the regression analysis with intelligence score as the dependent variable and reading score, spelling score as independent variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate			
1	.519 ^a	.269	.239	7.39287			
Model	Sum of Squares		df	Mean Square	F	Sig.	
	Regression	967.405	2	483.703	8.850	.001**	
	Residual	2623.418	48	54.655			
	Total	3590.824	50				
**= Significant at .01 level							
Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B	Std. Error	Beta			
	READING SCORE	3.153	1.721	.765		1.831	.073
	SPELLING SCORE	-1.074	1.702	-.263		-.631	.531

Table II shows a simple regression that predicts the reading score and spelling score from intelligence score. Reading score and spelling score indicates a significant relation between intelligence score with $F(2,48) 8.850$, $p 0.001$, $R^2 0.27$, $R^2_{adjusted} = 0.24$. The regression coefficient (B -1.07) for spelling score indicates that for an increase in intelligence score, there is a decrease in spelling score. The regression coefficient (B 3.15) for reading score indicates that for an increase in reading score, there is an increase in intelligence score.

Thus, the hypothesis that there is no significant relationship between reading and spelling scores and intelligence score is rejected. The reading score and spelling score predicts intelligence score. The poor reading and spelling leading to intellectual impairment among learning disabled adolescents are displaying Matthew effect. The learning gap has widened between low achievers and high achievers during pandemic due to online classes (Grewenig et al., 2020). Thus, the participants with learning disability are affected due to pandemic although further studies are required to analyze the pattern of scores pre covid and post covid situation.

CONCLUSION

The results imply that the learning disabled adolescents had a mean age of 13 and indicates that they are intellectually inferior (mean IQ score 28.94), had poor reading score (mean 8.49) and poor spelling score (mean 7.98). The regression analysis demonstrated that there was a significant relationship between intelligence and reading and spelling score. Thus, for every increase in reading score, there was an increase in intelligence score (B 3.15) and for every decrease in spelling score, there was increase in intelligence score (B -1.074).

From the explanatory survey design with learning disabled adolescents, we can understand that post pandemic phase has influenced the intellectual level of adolescents

As per the criteria for learning disability, the adolescents with learning disability possess normal intelligence but poor literacy levels (Frye, 2016). Through the study, observed that adolescents with learning disabilities are having poor reading, spelling scores and intelligence scores. This can be due to the pandemic situation that has divided the gap between low achievers and high achievers and hence, priority to facilitate literacy among learning disabled adolescents is vital now, otherwise it might lead to Matthew effect by making poor readers poorer.

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Internalizing Problems among Learning Disabled Adolescents

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Researches in Quality of Life and internalizing problems has increased in the recent past and many evident based researches share the prevalence of low quality of life among learning disabled adolescents. Low quality of life is majorly due to internalizing problems among autistic adolescents (Andersen et al., 2023). The objective of this study is to identify gender differences in quality of life in internalizing problems among learning disabled adolescents. Sixty six learning disabled adolescents in the age range of 11 to 15 years were selected through purposive sampling and administered by The Youth Disability Screener (YDS) and the data was analyzed by Independent Sample t test. The results showed that there was no significant mean difference between adolescent boys and girls in quality of life among learning disabled adolescents. Many studies stressed that internalizing problems were more in girls rather than boys but this study proves that there was no significant mean difference between boys and girls. It may be due to equal importance given to the children by their parents or social media or education. The study recommends the application of intervention strategies to improve quality of life and since there is homogeneity in gender, the intervention might be effective.

Keywords: Quality of Life, Internalizing Problems Learning Disability, Adolescent, Gender

Adolescents with learning disability face academic problems and the related academic emotions like low self esteem and high anxiety (Sainio et al., 2019). They internalize low self esteem and social skills difficulties which indirectly affects literacy related achievement (Boyes et al., 2020). Such internalizations contributes to poor quality of life (Giovagnoli et al., 2020). Internalizing problems such as anxiety and depression are linked to gender differences (Khan & Avan, 2020; Lau et al., 2021; Salavera et al., 2019). There is gender difference in quality of life among reading disorder students ((Balazs et al., 2016) and the current study aims to identify the presence of gender difference in quality of life among learning disabled adolescents.

Internalizing Problems

Internalizing problems are defined as a set of emotional symptoms experienced by an individual that reveals more feelings of sadness, fears, behavioural inhibition and low self esteem (Novak et al., 2018). Internalizing problems identified in adolescents include depression, anxiety and social anxiety (Salavera et al., 2019). This internalizing problem is prevalent in both boys and girls equally and there is no gender difference (Luijten et al., 2021).

Quality of Life

Quality of life can be defined as the total combination of objectively measurable experiences of an individual that includes physical health, social relationships, societal and economic influences, personal circumstances and functional activities as

well as subjective personal satisfaction with life. The term satisfaction with life includes many domains like health, work, material comforts, recreation, creative expression, social relations, family, society, education and learning (Felce & Perry, 1995). The current study focuses on the quality of life in internalizing problems among adolescents with learning disability.

Learning Disability

Students with normal intellectual functioning but with a difficulty in cognitive processes and academic achievement are suffering with Learning Disability (LD). Students with LD are identified to be underachievers with poor performance in reading, writing and mathematics due to unexpectedness because of external factors and/or their learning potential (Büttner & Hasselhorn, 2011). Gyereh and Shukla (2023) asserted that children with learning disability suffer with mental health problems like anxiety and depression. These mental health issues demand the need to consider the quality of life in a learning disabled student and the present study aims to find out the differences between Learning Disabled boys and girls in their quality of life in internalizing problems.

Gender Difference and Internalizing Problems

Few researches support gender difference in internalizing problems among adolescents and few otherwise. Though aggression is assumed to be more in boys (Card et al., 2008), researches showed the evolving change of girls scoring more in aggression (Choe & Yu, 2022) and that there are no gender difference in internalizing problems ((Babicka-Wirkus et al., 2023). Gender difference were limited in internalizing problems such as loneliness, depressive symptoms and social anxiety among adolescents ((Danneel et al., 2020) and the gender difference for loneliness is

similar for both male and female ((Maes et al., 2019). Internalizing problems leads to low academic performance ((Ende et al., 2016) and poor quality of life.

The prevalence of internalizing problems among adolescent girls is increasing affecting the quality of life (Philipsson et al., 2013). Providing interventions to reduce internalizing problems might result in higher quality of life (Arslan & Renshaw, 2019). Louzado et al. (2021) showed that men and women workers exhibited different levels of quality of life. Barbieri et al. (2022) confirmed that gender acts as a predictor variable to measure quality of life.

Children with dyslexia measured low on factors like teacher student relationship, parent child relationship, peer relation, learning ability and attitude of homework (Huang et al., 2020) that had an negative impact on quality of life. Children with dyslexia showed poor quality of life that manifested due to teacher student distrust, peer tension, poor learning ability and poor academic performance. The quality of life among dyslexics was comparatively lower than non dyslexic children that poor quality of life was determined by the psychosocial domain, physical and mental health domain and living satisfaction domain (Bing et al, 2019).

Need for Study

From the above literature, it is evident that the adolescent boys and girls face internalizing problems. These internalizing problems affect the quality of life of the students. Learning disabled adolescent boys and girls are aware of their learning problems but they are not aware of the emotions they experience internally. Awareness on learning problems means that the learning disabled students know that they have academic problem and that they are treated differently by the family, school and community. The accompanying emotions due to this awareness are anxiety, depression, social

anxiety and withdrawal. Thus, these latent internalizing problems contribute to poor quality of life. Though gender difference is seen in internalizing problem and quality of life as per many research studies, the awareness on the presence of having learning problems contributing to emotional symptoms such as anxiety and depression have not been studied. As both learning disabled boys and girls are aware of their learning problems, it is intriguing to know the existence of gender difference in internalizing problems and quality of life. The implication of this study can be used to develop an intervention programme that reduces internalizing problems to moderate the quality of life of learning disabled adolescents.

Objective

To identify the gender differences in quality of life among learning disabled adolescents.

Hypothesis

There will be no significant difference between Boys and Girls in Quality of Life among Learning Disabled Adolescents.

Method

Sample

A comparative research design was used in this study. Purposive Sampling Methods was used to collect data from 66 learning disabled adolescents comprising 34 girls and 32 boys in the age group 11 to 15 years from Saraswathi Kendra Learning Centre for Children, Alwarpet, Chennai and Wisdomms Special School and Learning Centre, Annanagar, Chennai. The participants were administered by Youth Disability Screener and demographic data sheet.

Tool

Youth Disability Screener is based on the assumption that disability not just includes health factors but also the level of functioning, activity and participation of the youth. This

implies a broader perspective that includes environmental and personal factors. It is a self reported, 4 items screener with 3 responses, "Yes", "No" or "Don't Know". It has identified 62% with Attention Deficit Hyperactivity Disorder (ADHD) and 19% of adolescents with emotional disability (Topolski et al., 2002).

Results

Table 1. Mean and Standard Deviation of Gender Difference in Quality of Life

Gender	N	Mean	Standard Deviation
Boys	32	1.81	1.49
Girls	34	1.91	1.08

Table 1 shows the Mean and Standard Deviation in Quality of Life among Learning Disabled Adolescent Boys and Girls. Quality of Life among girls was 1.91 and boys were 1.81 and there is a negligible difference in standard deviation clearly indicates that the group is homogeneous. But the slight variation could be due to the presence of low level of internalizing problem prevalent among girls than boys. Although this is contradictory to the study by Philipsson et al. (2013) that the prevalence of internalizing problem is increasing among adolescent girls affecting quality of life, the fact that the gender difference is inconspicuous. Further study is recommended to suggest on this.

An independent sample t test was conducted to compare the quality of life scores for boys and girls of learning disabled adolescents. There was no significant difference in scores for boys ($M = 1.81$, $SD = 1.49$) and girls ($M = 1.91$, $SD = 1.08$; $t(64) = 0.311$, $p = 0.76$, two-tailed). The magnitude of the differences in the means (mean difference = 0.01, 95% CI: 0.74 to 0.54) is very small. Table II demonstrate that the t value is 0.31 is statistically not significant and there is no difference between boys and girls in Quality of Life. Although the Youth Disability

Screeners measured adolescents' awareness on learning problem and its impact on the quality of life, the possible impact of social factors such as economic conditions, social support and family relation as an extraneous variable influencing the quality of life is to be

considered in future studies. Hence the Null Hypothesis "There will be no significant mean difference between Boys and Girls in Quality of Life among Learning Disabled Adolescents" is accepted.

Table 2. Independent Sample t Test for Gender Difference in Quality of Life (QoL)

Levene's Test for Equality of Variances					t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence interval of the Difference	
								Lower	Upper
QoL Equal variances assumed	6.55	0.013	0.31	64	0.76	0.01	0.32	0.74	0.54
Equal variances not assumed			0.31	56.40	0.76	0.01	0.32	0.75	0.55

N.S. = Not Significant

Discussion

The study aims to identify the gender differences in Quality of Life among Learning Disabled Adolescents due to internalizing problems. The study offers opportunity to understand the amount of awareness that the learning disabled students have on their learning problems. The finding of the study shows that learning disabled adolescent girls have slightly higher quality of life than learning disabled adolescent boys. This means that the awareness about learning disability and its impact on their well being is slightly more among learning disabled girls than boys. Learning disabled adolescent girls have a better understanding on their learning problems than learning disabled adolescent boys. This iterates that learning disabled adolescent girls show slightly low internalizing problems than learning disabled adolescent boys. Nowadays, girls are empowered by being assertive in expressing their emotions, feelings and thinking due to rise in gender parity and internalizing problem is dependent on the emotional intelligence and social skills of a person (Salavera et al., 2019).

Based on the supporting literature, quality of life might also be influenced by economic factors, social relations and family relations besides awareness on learning problem. Hence, further research is recommended by considering the extraneous variable such as economic factors, social relations and family relations affecting quality of life.

Implications and Limitations

The study is useful in understanding the introspection that the learning disabled adolescent girls have on their learning problems than boys. The study offers an opportunity to provide intervention in expressing internalizing problems towards a better quality of life for learning disabled adolescent boys more than girls. Hence, the study suggests that the school authorities to provide customized learning platform with gender specifications. As there are possibilities of the economic factors, social relations and family relations influencing the quality of life, these extraneous variables can be considered in the future study. A larger sample size can be considered in the future study.

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