The Quality of Life of children with Developmental Dyslexia in Pakistani context.

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Abstract: Present study was conducted to explore the level of quality of life of children with developmental dyslexia in Pakistani context. Hypothesis of the study were a) there would be significant difference between physical activities & health and general mood & feelings among dyslexics and non-dyslexics. b) School & learning activities, friends and family & leisure time would be significantly different among dyslexics and non-dyslexics. Participants of study were recruited from different English medium school from Lahore, age range was 8-15, and gender was not equated. 120 participants who were mothers of children were participated in the study. Dyslexia checklist was used to identify dyslexics and non-dyslexics and Kidscreen quality of life scale was used to assess the dimensions of quality of life. Findings shows that there are significant differences for both physical activities & health and general mood & feelings t=4.88**, P<.05& t=4.83**, P<.05 among dyslexics and non-dyslexics respectively. Moreover, School & learning activities, friends and family & leisure time would be significantly different at the level of t=3.21**, P<.05, t=2.33**, P<.05, t=4.72**, P<.05, among dyslexics and non-dyslexics respectively. Research findings indicate that dyslexic's quality of life is much more affected than non-dyslexics with respect to quality of life scale's dimensions.

Keywords: Dyslexics, Non-Dyslexics, Quality Of Life

1 INTRODUCTION & LITERATURE REVIEW

In Pakistan, developmental dyslexia has not been given attention, even though worldwide facts stated that it is one of the significant disorders which is affecting of school going children today.

Ott (1997) [5] described the symptoms of dyslexia which include; having problem with reading even misread the simple words, difficulty with well-known words, inability to complete words and omit syllables from words, and add some alphabets/ letters in words, tend to pick starting letter and figure whatever remains of the word, or read the word effectively one time and misread that word next time. Mostly people with dyslexia have difficulty with comprehension as well as they are unable to write the letters / words uniformly, tend to do spelling mistakes as well as inability to understand and execute the sounds properly. People with dyslexia also find it difficult to understand mathematics; they get easily confused with symbols.

Snowling, Margaret, Hulme & Charles (2005)[13]conducted a study on the basic causes of developmental dyslexia by reviewing the previous researches of two to three decades, based on biological, cognitive, environmental and behavioral levels of analysis. The primary concern of the study was to differentiate the manifestation of early reading problems and the causes of these difficulties. The study found that in order to be a proficient reader the child's manifestation of deficiencies and the underlying causes at biological, environmental and cognitive levels need to be understood in term of acquiring knowledge and component skills. Findings suggested that it was important to differentiate the reading problems caused by biologically and cognitively and the reading problems caused by instructional and experiential deficits.

Pennington (1991)[6] described the manifestation of dyslexia which was classified in four sections as, primary, secondary, correlated and artifactual. Primary manifestation of dyslexia constitute on three types of deteriorations such as, reading & spelling, because of defaults in phonological factors of language. Correlate manifestations are problems which contain articulation, rapid naming which generate slow reading particularly on timed reading assessments, lexical short-term memorization, and long-term memorization. Secondary manifestation of dyslexia depict from operationally defined dyslexia by IDA (international dyslexia association), which contain difficulties in reading apprehensions and compressed reading experiences. Another manifestation contains difficulties in memorizing basic arithmetic knowledge, letter and digits retraction and eye movement's discrepancies in reading, and lack of self-esteem. Artifactual manifestation of dyslexia based on indigent organizational proficiency, written output problems, attention difficulties and delinquency. These manifestations also contain visuo-spatial perceptual problems which may lead to visual delinquency such as changing in word's content based on slightly visual closeness to that specific word, (e.g. "Car" as "Cat").

Regardless the increasing facts that suggested dyslexia remains continue throughout the life span, and researches indicates that in late adulthood there are complex elements

DOI: 10.5176/2345-7929_4.1.100

of dyslexia are present. A web based survey was conducted by Carawan, Nalavany, Jenkins (2015)[1], 224 self-reported individuals with dyslexia participated in it. Findings indicate that individual with dyslexia who have negative emotional exposure in their life negatively impacts on self-esteem. Individual with dyslexia having good social support significantly protect the negative emotional exposure on self-esteem in late adulthood.

A study was conduct to assess the psychological wellbeing and self-image of 67 children and adults with dyslexia. Beck Youth Inventory was used to assess the participant's symptoms regarding distress and negative self-image. Self-efficacy based tool was also administered on the participants. Results reveal that participants with dyslexia exhibit few symptoms regarding distress but didn't show any negative symptoms regarding self-image. Participants with dyslexia also showed low self-awareness and understanding about their symptoms of dyslexia (Lindeblad, Svensson& Gustafson(2015)[4].

1.1 RATIONALE OF THE STUDY

The review of empirical researches indicates that individuals with dyslexia faced a lot of emotional, behavioral and academic difficulties such as lower academic attainment, self-esteem, self-confidence, interpersonal relationship anxiety, and low quality of life as well as decreased level of psychological well-being which may results poorer mental health.

In Pakistan developmental dyslexia has not been given due attention, even though the world wide statistics indicate it to be one of the significant disorders affecting school going children and as well adults today. Therefore there is need to focus on developmental dyslexia and its effects on individual's Quality of Life. The aim of present study is to investigate the level of quality of life of children with developmental dyslexia and its impact on Children in various contexts.

2 HYPOTHESES

- **A)** There would be significant difference between physical activities & health and general mood & feelings among dyslexics and non-dyslexics.
- **B)** School & learning activities, friends and family & leisure time would be significantly different among dyslexics and non-dyslexics.

3 PARTICIPANTS & METHODS

3.1 Participant: Participants of study were recruited from different English medium school from Lahore, age range was 8-15, and gender was not equated. 120 participants who were mothers of children were participated in the study. Mother's minimum qualification level was graduation.

3.2 Measures:

Following measures were used for study

3.2.1 Dyslexia Checklist: Dyslexia Checklist (DC) is developed by Holly Swinton [14] and published in her book Defeat Dyslexia (2016). Dyslexia checklist based on 76 items on five dimensions: reading (16 items), writing (26 items), math's (9 items), speaking (12 items) and everyday life (23 items). Item's score range from "Yes and "No". Cut off score for dyslexia is 25. If the answer to more than 25 questions on dyslexia checklist is "Yes" there is a chance of dyslexia.

3.2.2 Kidscreen-27 parent version: The KIDSCREEN tools [16] are a group of instruments established and standardized to assess the quality of life of youngsters and teenagers ages 8-18, and has been used in 13 European nations.

KIDSCREEN-27 parent version includes five Rasch scaled measurements: Physical Well-Being (5 items), Psychological Well-Being (7 items), Autonomy and Parents (7 items), Peers and Social Support (4 items) and School Environment (4 items). Construct validity of the scale is satisfactory, computation of factor analysis describe the variance as 56% and reliability of each subscale of all five subscales is Cronbach's Alpha >0.70. Items scored on a 5-point Likert scale [11].

3.3 Procedure: In current study data was taken from the mothers of school going children, Data was collected from English medium schools from Lahore city. Inform Consent was taken from all participants and researcher told them clearly about the purpose of study and assurance of confidentiality was given to all participants. Dyslexia checklist was used to identify dyslexics and non-dyslexics and Kidscreen quality of life scale was used to assess the dimensions of quality of life.

4 RESULTS & DISCUSSION

4.1 Table-1

Reliability analysis of Quality of Life Scale

Cronbach's Alpha	Cronbach's Alpha based on standardized items	No. of item
.942	.940	27

- N=27. Cronbach's Alpha = .94.

The reliability of quality of life scale (KIDSCREEN -27 Parent Version) was carried out as cab be seen in Table # 1 the Cronbach's Alpha is .94, indicating that the scale has excellent level's internal consistency and is reliable for use in the present sample [11][16].

4.2 Table-2

Summary of item statistics of Quality of Life Scale

	M	Min	Max	R	Max/Min	V	N
Item Means	2.635	2.256	2.978	.722	1.320	.031	27

❖ N=27.

Item statistics are used to assess the performance of individual test items on the assumption that the overall quality of a test derives from the quality of its items. As seen in table # 2, the mean score of item means is 2.63 with the minimum and maximum range of 2.25 and 2.97 respectively. The variance score .031 indicated the chances of variation in item's mean score.

4.3 Hypotheses I: It was hypothesized that**,** there would be significant difference between physical activities & health and general mood & feelings among dyslexics and non-dyslexics. Results of Table-3 & 4 suggested that there is a significant difference between quality of life of dyslexics and non-dyslexics on both dimension. Regardless the increasing facts that suggested dyslexia remains continue throughout the life span, and researches indicates that in late adulthood there are complex elements of dyslexia are present. A web based survey was conducted by Carawan, Nalavany, Jenkins (2015)[1], 224 self-reported individuals with dyslexia participated in it. Findings indicate that individual with dyslexia who have negative emotional exposure in their life negatively impacts on self-esteem. Individual with dyslexia having good social support significantly protect the negative emotional exposure on self-esteem in late adulthood.

4.3.1 Table-3

Showing physical activities & Health as reported by mothers of Dyslexics and Non Dyslexics

Variable	Groups	N	M	SD	SEM	Df	Sig	t	St.Error difference
Quality of Life	Dyslexics	60	10.26	2.4	.31	118	.001	4.88	.61
	Non Dyslexics	60	13.26	4.1	.53				

N=120. P<.001

As we seen in Table # 3, the difference between two groups of dyslexics (60) and non-dyslexics (60) is significant at the level of .001. The mean, S.D, and standard error mean of both groups Dyslexics and non-dyslexics on the dimension of physical activities and health are as M= 10.26, S.D= 2.4, and SEM= .31 and M= 13.26, S.D=4.1, and SEM= .53 respectively, indicating the quantity.

4.3.2 Table-4

Showing General Mood & Feelings as reported by mothers of Dyslexics and Non Dyslexics

Variable	Groups	N	M	SD	SEM	Df	Sig	t	St.Error difference
Quality of Life	Dyslexics	60	15.53	3.7	.48	118	.001	-4.83	.95
	Non Dyslexics	60	20.16	6.3	.82				

N=120. P<.001

As we seen in Table # 4, the difference between two groups of dyslexics (60) and non-dyslexics (60) is significant at the level of .001. The mean, S.D, and standard error mean of both groups Dyslexics and non-dyslexics on the dimension of general mood and feelings of children are as M= 15.53, S.D= 3.7, and SEM= .48 and M= 20.16, S.D=6.3, and SEM= 8.2 respectively, indicating the quantity. A study was conduct to assess the psychological wellbeing and self-image of 67 children and adults with dyslexia. Beck Youth Inventory was used to assess the participant's symptoms regarding distress and negative self-image. Self- efficacy based tool was also administered on the participants. Results reveal that participants with dyslexia exhibit few symptoms regarding distress but didn't show any negative symptoms regarding self-image. Participants with dyslexia also showed low self-awareness and understanding about their symptoms of dyslexia (Lindeblad, Svensson & Gustafson, 2015)[4].

4.4 Hypotheses II: It was hypothesized that**,** School & learning activities, friends and family & leisure time would be significantly different among dyslexics and non-dyslexics. Results of Table-5, 6 & 7 suggested that there is a significant difference between quality of life of dyslexics and non-dyslexics on all dimensions. Temple et al., (2001)[15] explains the congenital dysfunction of particular cortical regions in brain, cognitive dysfunction may emerge through a congenital impairment of that particular cortical regions those are involved in reading and phonological functions. However, many researches acknowledge the notion of phonological impairment but take it in account as

a secondary to a further basic auditory dysfunction and a factor of common sensorimotor impairment [7][8][9][10](Ramus, 2003). Pennington (1991)[6] described the manifestation of dyslexia which was classified in four sections as, primary, secondary, correlated and artifactual. Primary manifestation of dyslexia constitute on three types of deteriorations such as, reading & spelling, because of defaults in phonological factors of language. Correlate manifestations are problems which contain articulation, rapid naming which generate slow reading particularly on timed reading assessments, lexical short-term memorization, and long-term memorization. Secondary manifestation of dyslexia depict from operationally defined dyslexia by IDA (international dyslexia association), which contain difficulties in reading apprehensions and compressed reading experiences. Another manifestation contains difficulties in memorizing basic arithmetic knowledge, letter and digits retraction and eye movement's discrepancies in reading, and lack of self-esteem. Artifactual manifestation of dyslexia based on indigent organizational proficiency, written output problems, attention difficulties and delinquency. These manifestations also contain visuo-spatial perceptual problems which may lead to visual delinquency such as changing in word's content based on slightly visual closeness to that specific word, (e.g. "Car" as "Cat").

4.4.1 Table-5

Showing School & Learning Activities as reported by mothers of Dyslexics and Non Dyslexics

Variable	Groups	N	M	SD	SEM	Df	Sig	t	St.Error difference
Quality of Life	Dyslexics	60	8.9	1.8	.23	118	.001	-2.9	.64
	Non Dyslexics	60	11.8	4.6	.60				

N=120. P<.001

As we seen in Table # 5, the difference between two groups of dyslexics (60) and non-dyslexics (60) is significant at the level of .001. The mean, S.D, and standard error mean of both groups Dyslexics and non-dyslexics on dimension of School & learning activities are as M= 8.9, S.D= 1.8, and SEM= .23 and M= 11.8, S.D=4.6, and SEM= .60 respectively, indicating the quantity. Salman (2015) [12] investigated the facilities given by school heads and teachers to pupils with dyslexia. Findings suggest that pupils with dyslexia faced a lot of emotional and academic difficulties, and there are few school administrators who facilitate the dyslexics.

4.4.2 Table-6

Showing Friends as reported by mothers of Dyslexics and Non Dyslexics

Variable	Groups	N	M	SD	SEM	Df	Sig	t	St.Error difference
Quality of Life	Dyslexics	60	9.1	2.85	.26	118	.021	1.5	.64
	Non Dyslexics	60	10.61	4.07	.52				

N=120. P<.005

As we seen in Table # 6, the difference between two groups of dyslexics (60) and non-dyslexics (60) is significant at the level of .001. The mean, S.D, and standard error mean of both groups Dyslexics and non-dyslexics on dimension of Friends are as M= 9.1, S.D= 2.85, and SEM= .26 and M= 10.61, S.D=4.07, and SEM= .52 respectively, indicating the quantity. Habib & Naz(2015)[2] studied children with dyslexia to investigate association between cognitive failure, TR (teacher's rejection), SD (signs of dyslexia) and IRA (interpersonal relationship anxiety).Findings indicate that there was a positive correlation between cognitive failures; TR, IRA and SD. Teacher's rejection, interpersonal relationship anxiety and dyslexia arise as a predictor of cognitive failure.

4.4.3 Table-7

Showing Family and leisure time as reported by mothers of Dyslexics and Non Dyslexics

Variable	Groups	N	M	SD	SEM	Df	Sig	t	St.Error difference
Quality of Life	Dyslexics	60	16.91	3.9	.51	118	.002	3.21	.99
	Non Dyslexics	60	20.2	6.5	.84				

N=120. P<.005

As we seen in Table # 7, the difference between two groups of dyslexics (60) and non-dyslexics (60) is significant at the level of .001. The mean, S.D, and standard error mean of both groups Dyslexics and non-dyslexics on dimension of family and leisure time are as M= 16.91, S.D= 3.9, and SEM= .51 and M= 20.2, S.D=6.5, and SEM= .84 respectively, indicating the quantity. Irshad (2005)[3] investigated a sample of school girls of 3rd , 4th and 5thclass for prevalence of specific learning problems. His Results revealed that 75 girls out of 200 were facing learning problems as well as emotional issues such as poor self-image, aggression, anxiety and depression.

4.5 CONCLUSION

In respect of current study it is concluded that the quality of life of dyslexics and non-dyslexics is significantly different on all dimensions of KIDSCREEN quality of life scale.

Findings suggested that the quality of life of dyslexics is much more effected on all dimensions either it is general health and mood, friends, family and leisure time, physical activities & health as well as school activities and learning.

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