

EFFECT OF LIFE SKILL TRAINING ON QUALITY OF LIFE AMONG CAREGIVERS WITH BEHAVIOURAL DISORDER CHILDREN: A RANDOMIZED CONTROL TRIAL

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How to cite this article: Anita Paul Samanta, Sasmita Das, Surjeet Sahoo, Saswati Nath, (2023) Effect Of Life Skill Training On Quality Of Life Among Caregivers With Behavioural Disorder Children: A Randomized Control Trial. *Library Progress International*, 43(2), 913-921

ABSTRACT

Introduction: Childhood behavioural disorders like ADHD, CD and ODD not only impacted their development it has an impact on the primary caregivers. Parenting style, coping skill training and caregivers' skill training is the focus of discussion in recent era of research. Quality of life of the parent is jeopardized. Life skill interventions enable the individual to deal the day to day demands and have thought to be able to change the health related quality of life of the caregivers as well as family functioning.

Aims: This study is aimed at evaluation the impact of life skill training on parent's quality of life.

Materials and method: A single blinded randomized controlled trial conducted in the year 2022 to 2023. Outcome variable is measured at baseline, immediately, after 12 weeks and after 16 weeks of intervention respectively. Experimental and control group consisted of 60 parents

in each among 120 participants using systematic random sampling technique. Life skill training intervention administered in 4 sessions with two weeks interval.

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Result: Majority of the caregivers were female in both the group. Association of age in years with group was not statistically significant ($p=0.345$). Mean (\pm SD) quality of life of the caregivers in experimental group was 63.42 (\pm 3.156) and in control group was 62.29 (\pm 5.227), median quality of life of experimental group was 63.194 and control group was 62.5 before LST intervention. Mann-Whitney U test shows that no significant differences found between quality of life (.240), and it's respective domains like health related quality of life (.071), Family functioning (.521); significant difference (0.0467) found in communication domain of the caregivers at baseline. Mann Whitney U Test shows that difference of quality of life between experimental group and control group is significant at 0.05 level of significance immediately after intervention (2.500); (0.500) and (0.500) in three time period. Health related quality of life and family functioning domain of the quality of life is significantly differ within experimental group at <0.001 level of significance.

Discussion: This study shows that selective domains of life skill training results in improving quality of life of the caregivers attending child guidance clinic in different domains like health related quality of life and family functioning along with standard care protocol. The researcher recommended repetition of similar study and outcome assessment for longer period. Life skill training help the caregivers to take care of the children at home and maintain good mental health reduced precipitation of the disorder.

Keywords: Life skill training, Quality of life, Caregivers and Behavioral disorders [CTRI (ICMR-NIMS): NREF/2022/04/053166; Reg. No: CTRI/2022/05/042455].

INTRODUCTION

Around 30% to 40% of caregivers report experiencing high levels of stress, burnout, or emotional strain due to the demands of caregiving. This is especially prevalent among caregivers of individuals with chronic conditions, disabilities, or mental health issues. Therefore, even while providing care is a typical aspect of parenthood, meeting the high standards needed by a kid with long-term functional limitations can be taxing and have an adverse effect on the physical and mental well-being of those who provide it. According to studies, parents of children with a range of developmental disabilities face increased stress [1,2], social isolation and burden [3], feelings of guilt [4], and fatigue or weariness [5]. According to Talley and Crews [6], who note that the health outcomes of caregivers of people with developmental disabilities have received little attention, caregiving is a problem that needs to be taken into account in the context of physical and psychological health, which varies throughout the lifespan depending on the traits and developmental stages of both caregivers and care recipients. Three primary concerns are involved: 1) stress and the burden of caregiving and quality of life, 2) effects on family dynamics, and 3) eco-cultural adaptability. Children's behavioral disorders refer to patterns of disruptive behaviors that are persistent, inappropriate for their age, and interfere with daily functioning at home, school, or in social settings. Common disorders include ADHD, oppositional defiant disorder (ODD), and conduct disorder (CD). Symptoms can range from inattention, impulsivity, and hyperactivity to aggression, defiance, or rule-breaking. These conditions often result from a combination of genetic, environmental, and psychological factors. Early intervention, therapy, and sometimes medication can help manage these behaviors and improve outcomes for affected children. To mitigate these challenges, caregivers require access to mental health resources, adequate respite care, support networks, and training to manage the demands of caregiving effectively. Recognizing and addressing these issues early is crucial to ensure the well-being of both the caregiver and the care recipient.

According to World Health Organization the perception of an individual's position in the context of culture and value in relation their goals, concern and expectation. Families and family members are in great trouble to tackle their day to day life along with the problem of taking care of the chronic illness of the children like ADHD, CD and ODD; the behavioural disorder

Primary informal caregivers are adult relatives living with a patient, in the same environment, for at least 12 months, who are involved directly in giving care to the patient and support either emotionally or financially, i.e, feel most responsible for the patient.[7] Efforts to fulfill the demands of the affected individuals can bring a significant level of stress for the caregivers and can affect their overall perception of their position in life in the context of the culture and value systems in which they live and with their goals, expectations, standards, and concerns, i.e., affect their health-related quality of life (HRQoL). HRQoL is an important indicator when evaluating the impact of chronic illnesses on patients and caregivers.[8]

Different studies have concluded that parents of children with various developmental disabilities experience heightened stress, overburden and marginalization in society, sense of self-blame, and tiredness.

Intellectual disability is one of the most prevalent developmental disabilities, characterized by impairments of skills manifested during the developmental period, contributing to the overall level of intelligence.

Attention-deficit/hyperactivity disorder (ADHD), a common neurobehavioral disorder of childhood, is characterized by developmentally inappropriate inattention, hyperactivity, and

impulsivity, often leading to serious impairments in academic performance and social adaptive behavioral functioning. ADHD harms HRQoL and adds to the stress of parents/family members. [9] Research indicates that between 40-70% of family caregivers experience clinically significant symptoms of depression, with many meeting diagnostic criteria for major depression. Furthermore, caregivers are often at higher risk for physical health problems, with one study showing that nearly 20% of caregivers rate their health as fair or poor.

MATERIALS AND METHODS

STUDY AREA: R G Kar Medical College and Hospital and Nil Ratan Sarkar Medical College and Hospital.

STUDY DESIGN: Interventional study. Prospective in nature.

3) STUDY PERIOD: July 2022 to August 2023

INCLUSION CRITERIA:

1. Parent of the children with diagnosed behavioural disorders.
2. Primary caregiver of children with behavioural disorders consisted of ADHD, CD, ODD with or without borderline mental retardation aged upto 15 years.
3. Providing care at least 3 months after the diagnosis
4. Children receiving standard mental health care
5. Parents willing to participate in the study
6. Able to communicate in local language

EXCLUSION CRITERIA:

1. Caregivers diagnosed with severe mental health illness like severe depression, acute psychosis and schizophrenia.
2. Children with psychological disorders, co morbid medical, surgical or neurological illnesses.
3. Missed one session of interventions
4. Caregivers taking care of seriously ill parent or family members.
5. Caregivers participated in another study.

SAMPLE SIZE: A total of 120 samples have been included in this study.

INSTRUMENT: 1. Semi structured interview schedule on sample characteristics in part A and part B. 2. PedsQL Family Impact Module developed by J W Varni to measure the quality of life.

Ethical consideration: Recommendation from the respective institutional ethics committee obtained and CTRI registration done [CTRI (ICMR-NIMS): NREF/2022/04/053166; Reg. No: CTRI/2022/05/042455].

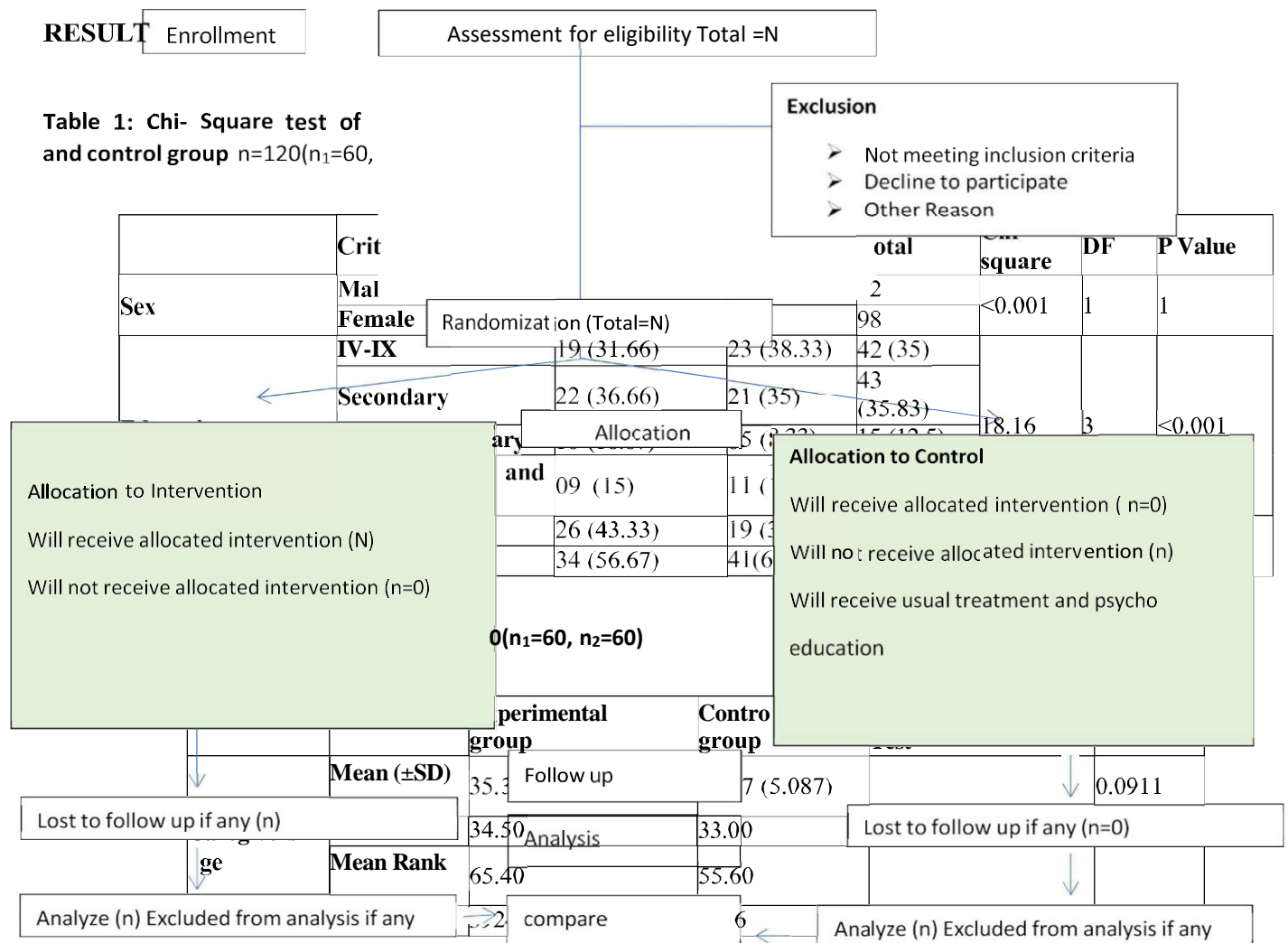
The primary investigator enrolled the study participants based on inclusion and exclusion criteria. Participants were randomly allocated to the experimental group and control group by another allocator through block randomization (in a block of 6). Random numbers were generated using random numbers table. Sample size required for this study were calculated using previous studies. Assessor administered

the translated and validated PedsQL Family Impact Module of J W Varni.

RESULT

Enrollment

Assessment for eligibility Total =N

Table 1: Chi- Square test of and control group n=120(n₁=60,**Table 3; Distribution of the children by their sample characteristics n₁=60, n₂=60)**

	Sample Characteristics	Experimental group N (%)	Control group N (%)	Total N (%)	
Age in year	4-7	13 (21.67)	20 (33.33)	33 (27.5)	
	8-11	30 (50)	28 (46.67)	58 (48.33)	
	12-15	17 (28.33)	Nil	29 (24.17)	
Gender	Male	43 (71.66)	42 (70)	85 (70.83)	
	Female	17 (28.33)	18 (30)	35 (29.17)	
Diagnosis of the child	ADHD	32 (53.33)	30 (50)	62 (51.66)	
	ADHD with CD	4 (6.67)	8 (13.33)	12 (10)	
	CD	10 (16.67)	9 (15)	19 (15.87)	
	ODD	8 (13.33)	5 (8.34)	13 (10.8)	
	ADHD with BMR	6 (10)	8 (13.33)	14 (11.67)	
Quality of life	Experimental	63.42 (±3.156)	63.194 (4.16)	64.22	- P value
	Control	62.29 (±5.227)	62.5 (2.95)	56.78	
				3853.5	
				3406.5	
				1576.5	0.24

Health related quality of life	Experimental	63.72 (± 5.31)	63.75 (6.25)	66.21	3972.5	1.458	0.071
	Control	61.66 (± 7.036)	62.5 (6.25)	54.79	3287.5		
Communication	Experimental	73.33 (± 9.33)	75 (8.33)	85.16	5109.5	6.08	0.046
	Control	69.30 (± 10.348)	70.83 (4.16)	45.84	3199.5		
Worry	Experimental	54.33 (± 7.727)	55 (11.25)	39.98	2398.5	1.469	0.968
	Control	55.91 (± 9.136)	55 (10)	55.4	3424		
Family functioning	Experimental	64.63 (± 8.34)	64.06 (9.375)	58.48	3509	1.679	0.521
	Control	65.20 (± 9.069)	65.62 (3.906)	62.52	3751		

Table 5: Comparison of quality of life of caregivers between experimental and control group at different time period

n=120

(n₁

=60,

n₂=60)

Variable	Time period	Group	Mean (\pm SD)	Median	Mean rank	Sum rank	Mann Whitney test	P value
Quality of life	Base line	Experimental	63.42 (± 3.156)	63.194 (4.16)	64.27	3856	1576.5	.240
		Control	62.29 (± 5.227)	62.5 (2.95)	56.73	3404		
	Immediately after intervention (8 weeks)	Experiment	75.798 (± 3.291)	76.388 (3)	90.46	5427.5	2.5	<0.001
		Control	63.402 (± 2.208)	62.847 (2.777)	30.54	1832.5		
	one month after intervention (after 12 weeks)	Experimental	76.423 (± 2.894)	76.736 (2.430)	90.5	5430	0.5	<0.001
		Control	61.192 (± 2.439)	60.416 (2.777)	30.5	1830		
	2 month after intervention	Experimental	75.208 (± 2.554)	75.694 (2.083)	90.3	5422	0.5	<0.001
		Control	60.000 (± 1.968)	59.722 (.694)	29.5	1824		

Table 6: comparison of health related quality of life and family functioning between experimental and control group immediately after, one month after and 2 months after the intervention

n=120

(n₁=60, n₂=60)

Variable		Group	Mean (\pm SD)	Median (IQR)	Mean rank	Sum rank	Mann Whitney test	P value
Health related	Post-test 1 immediately after intervention	Experiment	76.145 (± 3.961)	76.25 (2.5)	89.92	5395.5	34.5	<.001
		Control	62.520 (± 3.671)	61.25 (3.125)	31.08	1864.5		
	Post-test 2	Experimental	77.229 (± 4.168)	77.5 (3.75)	90.46	5427.5		

Quality of life	one month after	Control	58.916(\pm 3.678)	58.75(2.5)	30.54	1832.5	2.5	<.001
	Post-test 3 2 month after intervention	Experimental	77.270(\pm 3.806)	77.5(1.562)	90.49	5429.5	0.5	<0.001
		Control	58.06(\pm 3.38)	58.125(3.12)	30.51	1830.5		
Family function	Post-test 1 immediately after intervention	Experimental	72.031(\pm 6.720)	71.875(3.125)	81.59	4895.5	534.5	<0.001
		Control	64.010(\pm 3.794)	65.625(3.25)	39.41	2364.5		
	Post-test 2 one month after intervention	Experimental	72.083(\pm 5.863)	71.875(3.125)	83.64	5018.5	411.5	<0.001
		Control	63.437(\pm 4.160)	62.5(3.125)	37.36	2241.5		
	Post-test 3 2 month after intervention	Experimental control	72.124(\pm 5.125)	71.875(3.125)	82.18	4931	499	<0.001
		Control	63.33(\pm 4.704)	62.5(3.125)	38.82	2329		

Table 7: Friedman test of analysis related to quality of life of the caregivers in both group at different time period

n₁=60, n₂=60

Variable	Group	Time period	Mean Rank	Friedman test	Df	P value
Quality Of Life	Experimental	Baseline	1	120.756	3	<0.001
		Immediately after intervention	3.02			
		One month after intervention	3.37			
		Two month after intervention	2.62			
	Control	Baseline	2.73	56.013	3	0.01
		Immediately after intervention	3.32			
		One month after intervention	2.24			
		Two month after Intervention	1.7			
Health related Quality Of life	Experimental	Baseline	1.08	109.43	3	<0.001
		Immediately after intervention	2.72			
		One month after intervention	3.12			
		Two month after Intervention	3.08			
	Control	Baseline	2.85	40.456	3	0.01
		Immediately after intervention	3.14			
		One month after intervention	2.05			
		Two months after intervention	1.96			
Family functioning	Experimental	Baseline	1.67	41.097	3	<0.001
		Immediately after intervention	2.76			
		One month after intervention	2.88			
		Two month after Intervention	2.7			
	Control	Baseline	2.68	2.835	3	0.418
		Immediately after intervention	2.55			
		One month after intervention	2.33			
		Two month after intervention	2.44			

n₁=60, n₂=60

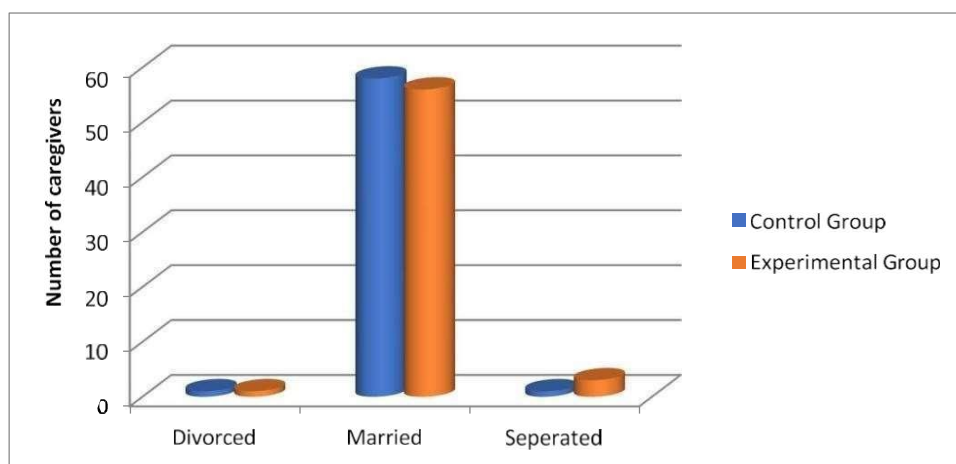


Fig.1: Frequency and percentage distribution of caregiver's marital status in both groups

There is a statistically significant association between the caregivers education at <0.001 level of significance at df 3. In experimental group, the mean age (mean \pm S.D) of caregiver was 35.35 ± 6.268 and in control group the mean age (mean \pm s.d.) of caregiver was 33.57 ± 5.086 . Mann Whitney U Test value is 1506 for age of the caregivers at p value 0.122. Distribution of caregivers age with control group and experimental group was not statistically significant ($p=0.0911$).

Data depicted in table shows that in experimental group 50 % of the children belongs to age group of 8-11 yrs and 46.67 % of the control group belongs to 8-11 years age group and 71.66

% of the experimental group were male whereas 70% of them were male in control group. In both group majority of them had diagnosed with ADHD.

Association of child age (years) in experimental group with control group was not statistically significant ($p=0.3066$). Association of child gender with group was not statistically significant ($p=0.8408$).

Non parametric test were considered as the distribution of the quality of life score tested by Kolmogorov-Smirnov test found non normal and hypothesis were tested at <0.05 level of significance. Mann -Whitney Test and Friedman test of analysis were applied to test significance.

The caregiver's perception of health related quality of life is not better than total quality of life . Mean and median value of quality of life score is nearly same in experimental group and control group, Mann -Whitney test shows no significant difference between experimental group and control group before life skill training intervention. Mean (\pm sd) quality of life of the caregivers in experimental group was $75.798 (\pm 3.291)$, $76.423 (\pm 2.894)$ and $75.208 (\pm 2.554)$ Immediately after intervention (8 wks.), one month after intervention (after 12 wks) 2 month and 2 months after intervention (after 16 wks.) respectively. Mann Whitney U Test shows that difference of quality of life between experimental group and control group is significant at <0.001 level of significance after intervention in three time period. Hence it may infer that the intervention is effective. This table also shows that mean quality of life of the participant in the control group improved after 8 weeks whereas gradually decreased after 12 wks. and 16 wks. of baseline assessment. Data represented in table 6 depicted that health related quality of life and family functioning of the caregivers is significantly different between experimental group and control group in all three measures after intervention at <0.001 level of significance. Hence it may infer that the intervention has an impact on the health related quality of life and family functioning of the caregivers. So this may conclude that giving support through life skill training along with normal protocol will improve the quality of life of the caregivers.

Quality of life of the caregivers is significantly differ within group of caregivers belong to experimental and control group at <0.001 and 0.01 level of significance respectively. It also depict that health related quality of life and family functioning domain of the quality of life is significantly differ within experimental group at <0.001 level of significance. Whereas significant difference found in relation to health related quality of life only within control group

Mean (\pm SD) quality of life of the caregivers in experimental group was $75.798 (\pm 3.291)$,

76.423 (± 2.894) and 75.208 (± 2.554) Immediately after intervention (8 wks), one month after intervention (after 12 wks) 2 month and 2 months after intervention (after 16 wks) respectively. The difference of quality of life between experimental group and control group is significant at 0.05 level of significance after intervention in three time period. Hence it may infer that the intervention is effective. Mean quality of life of the participant in the control group improved after 8 weeks whereas gradually decreased after 12 wks and 16 wks of baseline assessment. So

it may conclude that administration of life skill training to the caregiver is improving their quality of life.

Data represented that health related quality of life of the caregivers is significantly different between experimental group and control group in all three measures after intervention at <0.001 level of significance. Hence it may infer that the intervention has an impact on the health related quality of life of the caregivers. So this may conclude that giving support through life skill training along with normal protocol will improve the quality of life of the caregivers. This is to be noted that there is a difference in health related quality of life (0.071) of the caregivers between groups at baseline.

Quality of life of the caregivers is significantly differ within group of caregivers belong to experimental and control group at <0.001 and 0.01 level of significance respectively.

The findings indicate that quality of life of the caregivers in experimental group significantly improved than baseline after 8 wks , after 12 wks and after 16 wks at <0.001 level of significance. There is a significant difference between and after 16 wks as well as after 8 wks and after 16 wks within control group too.

DISCUSSION

In this study, out of 120 caregivers 69 caregivers were 31-40 years old but this was not statistically significant ($p=0.345$). The quality of life of the caregivers improved in experimental group and changes in one month interval are not significant. Whereas quality of the life of the caregivers significantly decreases in control group at 0.01 and <0.001 level of significance except baseline versus immediately after intervention at 0.07 level of significance. Family functioning improved in experimental group in all occasion than baseline. No changes happened in control group. Hence it may be concluded that life skill training has an impact on improving quality of life of the caregivers. It also depict that health related quality of life and family functioning domain of the quality of life is significantly differ within experimental group at <0.001 level of significance. Whereas significant difference found in relation to health related quality of life only within control group.

In a study conducted in West Bengal findings showed that quality of the life of the caregivers of children and adolescents lowered in physical health, leisure time activities, ability to function in daily life, sexual drive or interest, living and housing situation (1.5 ± 0.5 , 1.7 ± 0.5 , 1.3 ± 0.5 , 1.5 ± 0.5 , 1.5 ± 0.5 and 1.2 ± 0.4) respectively (Dubey MJ 2023)[10].

Study findings reveal that quality of life related to two domains; anxiety/depression and disruption in daily activities of the mothers of adolescents with childhood ADHD is significantly worse than the mother of children without ADHD (Age of the children ranges from 13 to 18 years, $M=16.09$, 92% male). ADHD acts as a predictor of quality of life of the caregivers. And the researcher recommended to consider parental quality of life during conceptualization of the negative and financial impact of ADHD. [9] (2022).

Shah R et al [10] (2021) found that A person's chronic health condition or disability can have a huge impact on the quality of life (QoL) of the whole family, but this important impact is often ignored. Although most instruments demonstrated good reliability and validity, only 11 reported responsiveness and only one reported the minimal clinically important difference. Family members QoL is greatly impacted by a relatives condition also Gisladdottir M et al [11] (2017) observed that Caregivers of adolescents with Attention Deficit Hyperactivity Disorder are burdened with tasks and many suffer from distress. Adolescents with ADHD may develop antisocial behaviour and caregivers group can empower caregiver's supporting role. The results showed that primary caregiver's quality of life significantly improved in relation to worry, daily activities and family functioning after the intervention and in follow up. Samanta AP et al [12] (2023) found her study, the majority (75%) of the participants were parents, and the majority of them were female. The participants' mean age was 28 years. A small proportion of them had never received any life skill training. The knowledge questionnaire shows a statistically significant mean

difference.

We found that, female population was higher than the male population. Male: Female ratio was 4.3:1 but this was not statistically significant ($p=1$).

Our study showed that, most of caregivers were IV-IX pass in Control Group [23 (38.33%)] compared to Experimental Group [19 (31.66%)] but this was statistically significant ($p<0.001$). Ara JE showed in his study on 2014 [13] that, the control group did not receive the psycho- education session and the experimental group received the psycho- education session.

CONCLUSION

In conclusion, children with behavioural disorders face unique challenges that affect their development, learning, and social interactions which have direct impact on family functioning

and caregivers quality of life. Early identification and appropriate interventions are crucial to help them manage their symptoms and build essential life skills. Selected life skills interventions improved the physical, emotional, cognitive and social domains of health related quality of life and family functioning of the caregivers. The intervention is beneficial to empower the caregivers along with standard care protocol followed in child guidance clinic. This may bridge the gap of needed intervention and prevent precipitation of mental illness among caregivers involved in caring children with behavioural disorder.

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