Treatment Outcomes of Dialectical Behavior Therapy on the Level of Suicide Severity and Distress Tolerance in Suicidal Patients

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Abstract- According to WHO (2014), suicide is the second leading cause of death among young adults. In Pakistan, the rate has been increasing since 1990. The present study aimed at evaluating the effectiveness of dialectical behavior therapy to reduce the severity and frequency of suicidal ideation and attempts and its effect on distress tolerance among suicidal patients. The study sample included N=10 patients with diagnosis of depression based on DSM V and at least one attempt in the recent one year, single, males and females, aged 20-30 years, who have completed at least 14years of formal education. It was a quantitative study, single group pre and post treatment. Purposive sampling was done and data was collected through informed consent, demographic form along with scales to measure the variables. Paired sample t-test analyzed results which were significant at **P=<.01 for the reduction in severity and frequency of suicidal ideation and attempts and at ***P=<.001 for distress tolerance. Reliable change indices also represented change within each patient.

Keywords- Dialectical Behavior Therapy, Suicide, Distress Tolerance, Patients, Young Adults

1 INTRODUCTION

Today, a large number of evidence-based researches have verified this process among those who have history of self-harm and depression. These vulnerable individuals repeatedly exhibit suicidal symptoms more often than those suffering from any other psychiatric illness [8] (Holloway, Neely, &Tucker, 2014). The fact sheet of World Health Organization recently reported more than 8millions of deaths annually in the world due to suicide [25] [26] (WHO Fact Sheet, 2015).Even within a single urban city of Pakistan, Lahore had the rate of suicide, 1.08 per 100,000 of population in the years of1993-1995(Khan et al., 2008)[10][11].

1.1 Suicide

"Suicidal" refers to any thought or action harmful for life, which is self-directed or impulsive, with or without the intent of dying including suicide attempt, deliberate self-harm, non-suicidal self injury and even suicidal ideation or gestures regardless of psychiatrist or /and diagnosis. The model of suicide proposed by Aaron Beck (1967)[1], proposed that interactions among biological, psychological and environmental factors "Bio Psycho Social" are mixed with suicidal thoughts and actions to make an individual suicidal (Holloway et al., 2014)[9]. The risk factors, which trigger suicidal symptoms, can be seen as psychological, emotional, social and genetic. Individuals with mood disorders are at greater risk than any other mental illness [5] (EL-Sherbini et al., 2009). It is concluded that suicidal behavior appears as a lack of ability to handle unpleasant or negative emotions emerged as a result of stressful situations or events experienced by an individual. The situation can be a poor financial status, lack of employment, relationship issues, absence of problem solving, poor self-esteem or inability to control one's temperament and thoughts (Khan, 2007)[10].

1.2 Dialectical Behavior Therapy (DBT)

Dialectical Behavior Therapy is an extensively developed form of Cognitive Behavior Therapy (CBT), formerly the concept and efforts to provides evidence based treatment, researches were established by Marsha Linehan in 1993[3][13][14][15][16] to treat individuals exhibiting suicidal and non suicidal self-harm[7](Geddes, Dziurawiec,&Lee, 2013;Linehan, Armstrong, Suarez, Allmon, D & Heard, 1991). The origin of Dialectical Behavior Therapy is directly helpful in controlling the symptoms of self- harm, suicidal thoughts and actions. It focuses largely on skill training and behavior strategies rather than changing false beliefs (Evershed, 2011)[6]. A theory called "BioSocial" by Albert Ellis (1962) [5] served as the foundation of this therapy due to the mutual contributions of biological as well as socially learned factors. Literature strongly favors that suicidal mode occurs within dysfunctional family systems made them resistant to treatment because of issues of managing healthy relations from early life (Miller, Rathus, & Linehan, 2007)[18]. Negative self-concept and low self-esteem are found be the strong reason behind distress among suicidal individuals [19] (Putwain, Woods, & Symes, 2010).

1.3 Dialectical Behavior Therapy, Distress Tolerance and Suicidal Patients

Linehan (2015) [16] supplemented that suicidal tendency originates from maladaptive distress tolerance skills leading to impulsivity. The distress is observed when an individual feels disturbed after confronting an emotional moment and failed to resolve that feeling but rather avoids. Moreover, a destructive pattern of interpersonal relationships, anger, jealousy, hostility, shame, lack of social skills and support are already present where suicidal tendencies emerge. A large number of literatures strongly favor the development of suicidal mode within dysfunctional family systems in making them resistant to treatment because of inability to manage their emotions since their early years of life (Miller et al., 2007)[18]. An article by Singh (2013)[24] showed results of his study that dialectical behavior therapy treatment enhanced the level of distress tolerance skills. Nasizadeh et al. (2015) [22] and many other recent researches showed the same results.

1.4 Rationale

The study aimed at highlighting the role of dialectical behavior therapy for suicidal ideation and attempts and distress tolerance among suicidal patients. The application of this treatment results will benefit in the development of suicide prevention program and facilitate future interventions.

2 Hypotheses

1. Dialectical behavior therapy would decrease the severity and frequency of suicidal ideation and attempts among suicidal patients.
2. Dialectical behavior therapy would increase the level of distress tolerance among suicidal patients.

3 Method

3.1 Participants- *Inclusion Criteria and Exclusion Criteria*

The sample size was 10 participants, males (N=5) and females (N=5), aged 20-30 years with a diagnosis of depression criteria met for DSM-V with one suicide attempt in the last one year. The sample was taken from two public psychiatric setting (inpatient and outpatient, Jinnah Hospital and Services Hospital). Permission to conduct the research was requested by authorities of the institutions. Patients were single and residents of Lahore. The patients who were suffering from an organic disease, co morbidity of any psychiatric disorder were excluded. Those who did not complete treatment were also not considered as a part of the study.

3.2 Research Design, Measures and Procedure

This study was quantitative, single group pre and post treatment. Non-probability purposive sampling technique was used to define sample and recruitment of participants. A demographic information form and the following scales were used; Columbia-Suicide Severity Rating Scale (C-SSRS) Baseline/Screening Version [20](Posner, 2008), the scale measured severity and frequency of suicidal thoughts and behaviors; Distress Tolerance Scale (DTS-Simons and Gaher, 2005)[23], this self-report 15 items likert scale measured the level of distress tolerance among young adults suicidal patients. After permission, the higher authorities assigned patients; firstly the benefit of therapy was briefed. Every patient signed informed consent. Fifteen patients were recruited; 10 completed the sessions. Then, pretesting was done. Instructions were provided and help was offered where needed. The patients took sessions thrice week for 45 minutes each. The material incorporated worksheets, demonstrations of the concepts and exercises for practice between the duration of sessions.

Table-1

Initial Phase (1-3 sessions)	History Taking, Rapport Building (Validation), Pretesting, Distract yourself from self-destructive behaviors, List of coping thoughts, Radical acceptance coping statements
Middle Phase (4-7 sessions)	Distract yourself with pleasurable activities, Cutting/self-mutilation (identify rewards and consequences), Distract yourself by paying attention to someone else, Recognizing your self-destructive behaviors, Distract yourself by counting, Create a distraction plan, The way emotions work, Relax and soothe yourself (using five senses), Create a distraction plan to use at home/away from home, Finding willingness, Reality acceptance, Distress tolerance pro's and con's
Termination Phase (8-10 sessions)	Opposite to emotion action, Urge management, Mastering my world, Post-testing, Discussion/Feedback/Summarizing therapy, Termination

4 Results and Discussion

Majority of them fall into 21-23 years old. This age range of young adulthood is determined as the critical time period for experiencing distress. A summary of the demographics of the suicidal patients is given in Table 2. Most of the patients included in the study belong to single parent families due to death or divorce of a parent. The triggering events of the patients included psychosocial stress, violence within family and lack of support from parents and significant others.

Table-2

Frequencies and Percentages of Age, Gender, Education, Occupation, Total number of siblings, Birth order, Family income, Family system and Family psychiatric history of the participants (N=10)

Variables	F	Percentage
Age (in years)		
21-23	4	40%
24-26	3	30%
27-29	3	30%
Gender		
Male	5	50%
Female	5	50%
Education (Degree)		
Bachelors	50	50%
Masters	40	40%
Other	10	10%
Occupation		
Unemployed	6	60%
Employed	2	20%
Student	2	20%
Total number of siblings		
1-3	1	10%
4-6	6	60%
7-9	3	30%
Birth order		
2nd	5	50%
3rd&4th	5	50%
Family income (in PKR)		
<50,000	3	30%
50,000-100,000	6	60%
>100,000	1	10%
Family system		
Nuclear	4	40%
Joint	6	60%
Family psychiatric history		
Present	3	30%
Not present	7	70%
N=	**10**	**100%**

First hypothesis of the study has proved successfully that dialectical behavior therapy is an efficacious treatment for severity and frequency of suicidal ideation and attempts among suicidal patients. The treatment assisted patients in coping with their suicidal thoughts through various techniques including a list of coping thoughts. Other methods included distracting them from self-destructive behaviors and directing them towards pleasurable activities. The patients came to know about the enjoyable activities for the management of suicidal thoughts to control over their suicidal urges. Table 3 showed scores are significant at ***p=<.001 (pretest-Mean=3.700, SD=.8232; posttest-Mean=.2000, SD=.4216). The frequency of suicidal ideation among suicidal patients' scores are significant at **p=<.01 (pretest-Mean=3.00, SD=1.633; posttest-Mean=.50, SD=1.269). The findings of the present study within the Pakistani culture are consistent with many other studies that support the prevention of suicide in the long term as an outcome of dialectical behavior therapy (McMain et al., 2009)[17].

Table-3

Paired Sample t-test of severity and frequency of suicidal ideation and attempts among suicidal patients who received dialectical behavior therapy treatment

Variable	Pretest		Posttest				95% CI	
	M	SD	M	SD	t-value	p-value	LL	UL
SI (severity)	3.70	.82	.20	.42	13.02	.001	2.89	4.10
SI (Frequency)	3.00	1.63	.50	1.26	5.00	.001	1.36	3.63
SA (Severity)	1.90	1.37	.00	.00	4.38	.002	.91	2.88
SA(Frequency)	1.80	.63	.00	.00	9.00	.001	1.34	2.25

Note- CI=Confidence Interval, LL=Lower Limit, UL= Upper Limit, SI=Suicidal Ideation, SA=Suicidal Attempts

Note: *p=<.05; **p=<.01; ***p=<.001

Comparative analysis of the level of distress tolerance between pretest and posttest results of suicidal patients after dialectical behavior therapy treatment highlighted that the level of distress tolerance is low among those with severe and frequent suicidal ideation and attempts. It is a perceived ability; low self-esteem behind distress is one of the factors contributing towards the suicidal ideation and attempts. Any change through the treatment is gradual and process in the form of stages. Sanderson (2008) [21] research paper extensively discussed the five stages of the process of change occurred through dialectical behavior therapy. The elimination of distress is the last stage of this change process where the patient completely connects to awareness about self and achieves internal peace. According to the results of the present study (in the Table 4) showed that the level of distress tolerance did not increase (posttest-Mean=3.429, SD=.3475; pretest-Mean=4.250, SD=.4321) after the given treatment. The findings did not support the hypothesis made that dialectical behavior therapy would increase the level of

distress tolerance among suicidal patients. Singh (2013)[24] favored that dialectical behavior therapy improves distress tolerance among suicidal patients in a study with large number of participants in which the researchers provided treatment for long duration (Anestis et al., 2012; Denckla et al., 2014*)[2].*

Table-4

Paired Sample t-test of the level of distress tolerance among suicidal patients who received dialectical behavior therapy treatment

Variable	Pretest		Posttest				95% CI	
	M	*SD*	*M*	*SD*	*t-value*	*p-value*	*LL*	*UL*
DT	4.25	.432	3.42	.347	8.072	.001	.590	1.05

Note- CI=Confidence Interval, LL=Lower Limit, UL= Upper Limit, DT=Distress Tolerance

Note: *p=<.05; **p=<.01; ***p=<.001

Table 5 showed the case wise statistical analysis of all the patients included in the study. The change in patients' pretest and posttest scores are presented individually. Reliable change index (RCI) developed by Jacobson and Truax (1991) [14] is used for this purpose. Majority of the scores appear significant according to the cutoff scores for the formula computed to calculate values for each participant (Zahra & Hedge, 2010) [27].Most of the results derived through this analysis are concurrent with those of paired sample t-test.

Table-5

Reliable Change Index of the participant' scores-

ID	A	B	C	D	E	F	G	H	I	J
Severity of suicidal Ideation (pre)	4	4	5	5	4	5	5	5	5	5
Severity of Suicidal Ideation (post)	1	1	0	0	0	0	0	0	0	0
RCI	-2.67	-2.67	-2.86	-4.77	-3.22	-4.77	-2.86	-2.86	-2.86	-2.86
Frequency of Suicidal Ideation (pre)	5	5	1	1	2	1	5	4	4	4
Frequency of Suicidal Ideation (post)	4	1	0	0	0	0	0	0	0	0
RCI	-0.57	-1.14	-0.57	-1.14	0.57	0.57	-2.86	-2.29	-2.29	-2.29
Severity of Suicidal Attempts (pre)	2	1	5	1	2	0	5	2	1	2
Severity of Suicidal Attempts (post)	0	0	0	0	0	0	0	0	0	0
RCI	-1.03	-0.51	-1.54	-0.51	-1.03	0	-2.58	-1.03	-0.51	-1.03
Frequency of Suicidal Attempts (pre)	2	1	2	1	2	2	3	1	2	2
Frequency of Suicidal Attempts (post)	0	0	0	0	0	0	0	0	0	0
RCI	-2.23	-1.11	-2.23	-1.11	-2.23	-2.23	-3.35	-4.11	-2.23	-2.23
Distress Tolerance (pre)	3.75	3.88	4.0	4.5	5	4.38	4.63	4.4	3.85	4.5
Distress Tolerance (post)	3.21	3.46	3.3	3.2	4	3.38	3.63	3.8	3.08	3
RCI	-1.56	-1.21	-2.20	-3.76	-2.80	-2.02	-2.80	-4.73	-2.17	-3.76

Note- RCI= Reliable Change Index, *RCI=>+/-1.96 | p=<.05 |

5 Limitations, Implications and Recommendations

One limitation of the study was the study was conducted only with the residents of the Lahore city. Only patients with depression were the sample of the study. This study presented several important clinical implications; one of these is the results attained through the statistical analysis of this research will become a motivation for future researchers to compare the variables used in the study with suicidal patients with diagnoses other than depressive disorders in the new studies. This study shall utilize treatment used in this research for immediate and time limited improvement among suicidal patients. The information focused in this study will help in building new policies for legal assistance regarding control over the rate

of suicide. Preventive programs targeting suicide related awareness should be established through the support of the present research. This research introduced and evaluated an evidence-based intervention to combine treatment of suicidal patient along with skill enhancement opportunity.

6 References

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