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EFFECTIVENESS OF SCHEMA THERAPY ON MALADAPTIVE SCHEMA MODES OF YOUNG ADULTS WITH BORDERLINE PERSONALITY FEATURES

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ABSTRACT

The present research aimed to investigate the effectiveness of schema therapy on maladaptive schema modes of young adults with borderline personality features. It included 17 female participants from Karachi who were screened for borderline personality features through Borderline Symptom List-95 (Bohus et al., 2005). Experimental group had 9 and wait-list control group had 8 participants. It was hypothesized that experimental group participants' innate child modes (vulnerable, angry, impulsive) and dysfunctional parent modes (punitive, demanding) would differ significantly from wait-list control group after receiving 12 individual schema therapy sessions. To assess their modes, Schema Mode Inventory-1st Edition (Young et al., 2014) was administered at pretest and posttest. The results showed that experimental group's maladaptive modes significantly reduced and differed from wait-list control group in post-test, except for punitive parent mode. Additional results and implications are also mentioned.

Keywords: *Schema Therapy, Borderline Personality Features, Innate Child Modes, Dysfunctional Parent Modes*

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INTRODUCTION

Borderline personality disorder (BPD) is a widely prevalent disorder (Luyten et al., 2020). Many researchers have explored the etiology, diagnosis and treatment of this disorder. However, many mental health practitioners come across clients in their clinical practice who do not appear to meet the diagnostic criteria of BPD or any other disorder, rather they seem to possess borderline personality features. The widespread occurrence of these features can also be seen in a study conducted in Lahore. Hayee along with his colleagues (2019) assessed the prevalence of symptoms of BPD in young adults by collecting data from three universities. Their study outcomes revealed that 62% of the sample had BPD symptoms. The results emphasize that borderline personality symptoms can be observed commonly in young adults.

Nevertheless, the construct of borderline personality features is rarely highlighted in practice and documented as studies relevant to its incidence and prevalence can be scarcely found in Western and Pakistani literature. The availability of weak database on borderline personality features hinders the process of developing new and effective treatment approaches to treat people with these features. Bohus and colleagues (2007) developed a self-report measure, Borderline Symptom List-95 (BSL-95), to quantitatively assess BPD-related subjective complaints. The scale comprised of seven characteristics to evaluate client's concerns. The current research includes the same characteristics as borderline personality features. The features include, affect regulation difficulty, unstable self-perception, self-destructive behavior, hostile attitude, negative intrusive thoughts, and feelings of dysphoria and loneliness.

Despite having weak literature database on borderline personality features, mental health practitioners utilize different psychotherapeutic approaches to treat BPD-relevant features in Pakistani clinical setting. The current research aimed to present quasi experiment-based evidence for the effectiveness of schema therapy with people having borderline personality features. Schema therapy is a highly integrated approach of psychotherapy. It has shown significant results in both individual and group formats with moderate to large effect size for treatment of different personality disorders, especially BPD, and a range of other clinical disorders, for example, post-traumatic stress disorder, agoraphobia, eating disorders, etc. (Cockram et al., 2010; Gude & Hoffart, 2008; Nordahl & Nysaeter, 2005; Simpson et al., 2010).

Schema therapy has been developed by Dr. Jeffrey Young (Young et al., 2003). It has its roots in different therapeutic approaches including, cognitive behavioral, psychodynamic, interpersonal and gestalt therapies. It focuses on schema level and the emphasis is shifted to lifelong patterns from present-day issues. The main goals of schema therapy comprise of the essential task of personality modification. This change requires lowering the severity of maladaptive schemas. The schema therapy model states that maladaptive schemas are psychological themes which comprise of beliefs an individual has about oneself, other people, and the world. These schemas result from interactions of an individual's innate temperament, unmet core needs of childhood, and the environment (Farrell et al., 2014). Maladaptive schemas activate over-or under-regulated action and emotion states referred to as schema modes or modes, which effects the application of adaptive interpersonal or coping skills. Dysfunctional modes occur generally once several maladaptive schemas are activated (Farrell & Shaw, 2012).

Schema modes or modes can be defined as the present cognitive, emotional and behavioral state that an individual is in. They can also be viewed as individual's moods prevalent for short or longer time periods which can alternate quickly (van Vreeswijk et al., 2014). Schema therapy approaches treatment by aiming the maladaptive schemas, modes and coping strategies rather than particular symptoms or disorders (Farrell et al., 2014). Examples of maladaptive schemas include, abandonment, social isolation, mistrust, self-sacrifice, pessimism, etc. (van Vreeswijk et al., 2012).

There are four basic types of modes; innate child modes, dysfunctional parent modes, dysfunctional coping modes and healthy modes. Innate child modes, for example, impulsive child mode, vulnerable child mode and angry child mode, develop when primary emotional needs of childhood are not met adequately. These child modes are characterized by intense feelings such as impatience, loneliness, rage, and entail innate reactions a child has. Dysfunctional parent modes such as, demanding parent mode and punitive parent mode, make up the second mode category. This category reflects the negative aspects of internalized attachment figures while being a child and an adolescent. The third category of modes is dysfunctional coping modes. It involves overusing unhealthy coping styles. The three coping styles are fight, flight and freeze. Fight includes overcompensation, flight refers to avoidance and freeze implies to surrender. The functional modes make up the fourth category which includes happy child mode and healthy adult mode (Farrell & Shaw, 2012).

The happy child mode includes enjoyable and playful activities in social networks especially. The healthy adult mode plays a very important role and helps an individual meet their core needs. This mode nurtures the vulnerable child mode, moderates the parent and coping modes, and also sets healthy limits for angry and impulsive child modes. Therefore, the therapist focuses on enhancing healthy adult mode in client and acts as a good parent by demonstrating the healthy adult mode for client in schema therapy sessions. The client eventually internalizes this good parent role and starts fulfilling their core needs on their own (Kellogg & Young, 2006).

The Pakistani literature database highlights the presence of characteristics specific to the above-mentioned maladaptive child, parent and coping modes in young adults. For example, a study conducted on medical students of Karachi found a significant association between exposure to violence and symptoms of aggression (Hussain et al., 2019). The noteworthy aspect is that a large percentage of medical students reported experience of violent events and it was significantly associated with hostility and higher level of physical aggression. The findings of another study highlighted anger and emotional distress to be main predictors of suicidal ideation in late adolescents and emerging adults with psychological problems (Khan et al., 2020). Their findings suggest that extended exposure to anger and emotional distress can eventually lead to harming oneself or even suicidal attempts. A study conducted at a tertiary care hospital in Karachi investigated the function of impulsivity in suicidal behavior of patients. They found out that patients who attempted suicide tended to possess greater level of the characteristic of impulsivity. Moreover, their study outcomes revealed that the age group of 21 to 30 years seemed to be more impulsive as compared to other age groups (Hameed et al., 2017). Another study stated that some feelings of loneliness were reported by 51% students, moderate level by 35.5% and high level by 13.5% of the entire sample of undergraduate students from South-Punjab (Saleem et al., 2015). Therefore, some intervention is crucial to curtail anger and emotional distress in young adults as these seemingly harmless symptoms can turn into something lethal over time.

Thus, the purpose of present research was to empirically demonstrate the application of individual schema therapy through a brief therapeutic plan to attenuate maladaptive modes in young adults with borderline personality features.

The hypotheses were formulated as:

1. Innate child modes (vulnerable, angry, impulsive) of experimental group participants would show a significant difference at posttest after schema therapy intervention as compared to wait-list control group participants.
2. Dysfunctional parent modes (punitive, demanding) of experimental group participants would differ significantly at posttest after schema therapy intervention as compared to wait-list control group participants

METHOD

Participants

The design of the current research is pretest-posttest quasi experimental research design. There were total 17 female participants, 9 in experimental group and 8 in wait-list control group. Purposive sampling was used to select participants from Karachi. They all were unmarried and their age ranged between 20 to 28 years with mean age of 23.05 years. Sixteen participants were enrolled in undergraduate/postgraduate degree programs and 4 were also working in different organizations.

The participants' selection was based on following inclusion and exclusion criteria:

- Those participants who obtained percentile rank of 20 to 60 on Borderline Symptom List-95 (BSL-95; Bohus et al., 2005) were included.
- Those who did not have a pre-diagnosed psychological condition and had not attended therapy sessions in recent 6 months were included in the research.
- At least 12 years of education and the ability of comprehending Urdu and English languages were also part of inclusion criterion.
- Those participants with a pre-diagnosed psychotic condition, acute cognitive deficits, bipolar disorder, intellectual deficiency and unavailability of participants for regular sessions were excluded from the research.

Measures

Demographic Information Form

Participants' basic demographics were inquired in the demographic information form. Confidentiality for their information was ensured. They were asked to fill in their name, age, gender, birth-order, marital status, qualification, work experience, and diagnosed medical and psychological conditions (if any).

Borderline Symptom List-95

Borderline Symptom List-95 (BSL-95) (Bohus et al., 2005) is a self-report questionnaire to measure borderline personality disorder-based subjective complaints of test takers. The scale consists of 95 items and has a 5-point Likert scale ranging from *not at all* to *very strong*. It asseses a participant on seven aspects of affect regulation, self-perception, dysphoria, self-destruction, loneliness, hostility and intrusions. Total score is calculated by adding up scores of all the subscales. Cronbach's alpha for pre-test was calculated as .77 and .96 for post-test.

Schema Mode Inventory

Schema Mode Inventory – 1st Edition (SMI-1.1) (Young et al., 2014) helps to identify the most dominant modes of participant. It comprises of 14 mode categories. It has 124 items with 6-point Likert Type scale ranging from *never* or *almost never* to *all of the time*. The score is calculated by determining mean of all the subscales. Cronbach's alpha came out to be .87 for pre-test and .96 for post-test.

Procedure

First of all, permission was taken from the authors and clinic authorities to conduct therapy sessions for research purpose. In the first phase, people were invited to participate in the research by circulating a flyer on social media pages. Those who registered for participation, were screened for borderline personality features by administering BSL-95 (Bohus et al., 2005) on them. All those participants who scored between 20 to 60 percentile ranks were included in the research. Participants were divided into experimental group and wait-list control group.

In the second phase, all participants were given consent form, demographic information form and SMI-1.1 (Young et al., 2014) to fill for the pre-test. The consent form included purpose of the research, introduction to the researchers, and participants' rights of withdrawal from research and confidentiality of their personal data. After pre-test, 12 individual schema therapy sessions of 45 minutes each were provided to experimental group participants once a week. Following the intervention phase, post-test with SMI-1.1 (Young et al., 2014) was conducted on both experimental and wait-list control groups. Schema therapy sessions were then given to the wait-list control group participants.

Scoring & Statistical Analysis

Scoring of the research measures was done following standard procedures. Statistical analysis of the data was performed by running descriptive analysis on SPSS-22 software. Paired samples *t*-test was conducted to assess pretest-posttest differences and independent samples *t*-test was done to evaluate differences between both experimental and wait-list control groups.

Therapeutic Plan

'*The schema therapy: Clinician's guide'* by Farrell and colleagues (2014) was adapted to develop the treatment plan in current research. The structure of therapeutic plan is mentioned below:

Psychoeducation

At different points of schema therapy sessions, the participants were psychoeducated about some important concepts such as, borderline personality features, their dominant categories of schemas, types of modes, mode flipping, thoughts, feelings, physical sensations, behaviors, etc.

Case Conceptualization and Goal Setting

Case conceptualization was done through a technique of pie chart drawing in which the participants showed prevalence of different types of modes (vulnerable child, impulsive child, angry child, punitive parent, demanding parent, healthy adult, happy child and maladaptive coping modes) in their lives as per their subjective perception. Their dominant modes were connected to life history. Goals

for therapy were set by writing down their struggles and desired outcomes of dominant modes.

Cognitive Techniques

A record sheet of thoughts, feelings, physical sensations and behaviors was maintained by participants throughout therapy. The record sheet was expanded gradually by adding more columns with subsequent sessions. The participants noted their dominant maladaptive schemas and types of modes as they gradually began to catch themselves functioning on those schemas and modes. They also recorded relevant childhood memories, and a good parent point of view by writing down alternative explanation of events and the skills they wanted to add in their repertoire of healthy adult mode. Flashcards of reminders for healthy adult mode were also made in sessions.

Cognitive distortions based on dysfunctional parent modes of participants were also explored in sessions. These distortions were refuted by exploring achievements-based facts of participants' lives. Furthermore, participants identified their core childhood needs, fears of vulnerable child mode, and needs of angry and impulsive child modes. Healthy ways of soothing these modes and fulfilling their needs were discussed in depth. Participants were also facilitated to identify likes of happy child mode and their preferred future of healthy adult mode.

Behavioral Techniques

Participants practiced good parent point of view by applying new skills in daily life. They tried to adapt their behavior according to the new insights they gained (from the record sheet) about their parent and child modes. They also utilized transitional objects before saying goodbye to them. This technique gradually made their vulnerable child mode feel more secure and independent.

Participants were asked in homework to give positive feedback or compliments to themselves by appreciating little aspects about their personality or appearance. They also practiced some activities which their happy child mode enjoyed. These techniques strengthened their healthy adult mode and nurtured their child modes.

Experiential Techniques

Imagery rescripting was done in which participants recalled any recent image where they felt like a vulnerable child. This image was bridged with the same nature of image from their childhood. They were given an opportunity to soothe their vulnerable child mode by entering as a healthy adult in their imagery.

Mode dialogue was conducted by placing five chairs representing vulnerable child mode, angry child mode/impulsive child mode, dysfunctional parent modes, maladaptive coping modes and healthy adult mode. The participants sat on each chair one by one and expressed needs and feelings of the respective mode. They gave validation and support to all the modes when they sat on healthy adult mode chair. This technique helped them accept all modes of their personality.

RESULTS

Table 1
Frequencies and Percentages of Demographic Variable (N=17)

Variables	*f*	%
Marital Status		
Single	17	100
Married	0	0
Education		
Post-Graduate	5	29.41
Undergraduate	12	70.59
Occupational Status		
Employed	4	23.53
Students	13	76.47
Age	*M*	*SD*
18-30 years	23.05	2.26

Table 2
Paired Samples t-test on Mode Scores of Experimental Group Participants between Pretest and Posttest (n=9)

Variables	*Pretest*		*Posttest*		*t(8)*	*p*
	M	*SD*	*M*	*SD*		
Vulnerable Child	3.51	.78	2.53	1.07	2.54	.03*
Angry Child	3.27	.91	2.55	1.01	2.79	.02*
Impulsive Child	3.20	.77	2.54	.87	2.43	.04*
Punitive Parent	2.88	1.00	2.30	1.09	1.19	.27
Demanding Parent	3.94	.58	3.19	.72	4.94	.00*
Healthy Adult	3.15	.76	2.71	.45	1.59	.15
Happy Child	4.13	.43	3.25	.91	2.82	.02*

*p <.05

Table 3
Paired Samples t-test on Mode Scores of Wait-List Control Group Participants between Pretest and Posttest (n=8)

Variables	*Pretest*		*Posttest*		*t(7)*	*p*
	M	*SD*	*M*	*SD*		
Vulnerable Child	3.71	.92	3.81	.90	-.97	.36
Angry Child	3.52	.62	3.53	.50	-.05	.96
Impulsive Child	3.56	1.04	3.56	1.06	-.01	.99
Punitive Parent	2.87	.66	2.81	.61	.29	.77
Demanding Parent	4.25	.59	4.28	.66	-.12	.91
Healthy Adult	3.36	.70	3.40	.70	-.18	.86
Happy Child	4.02	.50	3.82	.57	1.52	.17

p >.05

Table 4
Independent Samples t-test showing Difference in Mode Scores between Experimental Group and Wait-List Control Group Participants at Posttest (N=17)

Variables	*Experimental Group*		*Control Group*		*t(15)*	*p*	Hedges' *g*
	M	*SD*	*M*	*SD*			
Vulnerable Child	2.53	1.07	3.81	.90	-2.62	.02*	1.28
Angry Child	2.55	1.01	3.53	.50	-2.47	.03*	1.20
Impulsive Child	2.54	.87	3.56	1.06	-2.17	.04*	1.05
Punitive Parent	2.30	1.09	2.81	.61	-1.16	.26	0.56
Demanding Parent	3.19	.72	4.28	.66	-3.20	.01*	1.57
Healthy Adult	2.71	.45	3.40	.70	-2.42	.03*	1.18
Happy Child	3.25	.91	3.82	.57	-1.49	.15	0.74

*$p<.05$

DISCUSSION

The aim of the current research was to explore the effectiveness of schema therapy for reducing the dominance of innate child and dysfunctional parent modes in participants with borderline personality features. It was hypothesized that innate child modes of experimental group participants would show a significant difference at posttest after schema therapy intervention as compared to wait-list control group participants. The results of present research support this hypothesis as a significant decrease in mean scores of vulnerable, angry and impulsive child modes can be seen from pretest to posttest in experimental group participants (Tables 2). The control group results do not reflect a statistically significant decrease in posttest mean scores, in fact, the dominance of vulnerable and angry child modes seems to have increased in the posttest (Tables 3). Moreover, a significant difference in post-test results of both experimental and control group participants is also visible with a large effect size for all three vulnerable, angry and impulsive child modes (Table 4). Therefore, the results of first hypothesis reveal that participants who received schema therapy sessions were better able to manage their innate child modes (vulnerable, angry and impulsive child modes), and those participants who did not receive the intervention of schema therapy were not able to cope well with the difficulties of these three modes.

The second hypothesis stated that dysfunctional parent modes of experimental group participants would differ significantly at posttest after schema therapy intervention as compared to wait-list control group participants. The results in Table 4 show that demanding parent mode of experimental group participants differed significantly from control group participants with a large effect size at posttest, however, punitive parent mode did not show significant difference between both groups. The results also indicate that mean score of demanding parent mode dropped significantly from pretest to posttest for experimental group only (Tables 2). The reduction was not seen for control group participants (Tables 3). In case of punitive parent mode, the results are not significant for both groups (Tables 4). Nevertheless, it can be deduced from the mean scores of both groups (Tables 2 and 3) that reduction in punitive parent mode was greater for experimental group participants (Pre-test: *M*=2.88; Post-test: *M*=2.30) as compared to control group participants (Pre-test: *M*=2.87; Post-test: *M*=2.81) with a moderate effect size (Hedges' $g = 0.56$) (Table 4). The results suggest that participants who took schema therapy sessions regulated their demanding parent mode markedly better than control group participants. The regulation of punitive parent mode was still relatively better for experimental group participants. Therefore, the results partially support the second hypothesis.

Additional findings on healthy adult mode and happy child mode can also be assessed from the results section. The items of both modes were reverse scored thus, lower scores reflect improved healthy adult mode and happy child mode. The results depict that experimental group participants' healthy adult mode increased after schema therapy intervention (Tables 2) and showed a large effect size with significant difference from control group at posttest (Table 4). The participants of experimental group also exhibit significant improvement on happy child mode from pretest to posttest after schema therapy sessions (Tables 2), and control group participants do not show significant change on this mode (Tables 3). The difference of posttest results (Table 2 & 3) is not significant for happy child mode but the difference between mean scores is greater for experimental group (Pretest: *M*=4.13; Posttest: *M*=3.25) than control group (Pretest: *M*=4.02; Posttest: *M*=3.82) and shows a moderate effect size (Hedges' $g = 0.74$) (Table 4). Therefore, in the present research schema therapy intervention was also able to improve adaptive modes of healthy adult mode and happy child mode in young adults with borderline personality features.

Most of the past studies conducted on schema therapy have elaborated on the changes in psychopathology and schemas of participants, however, the results

of mode change after schema therapy are found relatively less in the literature. Nevertheless, findings of the following studies support the results of the current research. For example, Yakin and colleagues (2020) analyzed the results of a Dutch 3-year multicenter randomized controlled trial of schema therapy with other approaches. They reported that increased level of healthy adult mode and decreased levels of vulnerable child, impulsive child and avoidant protector modes predicted improvement in psychopathology of people with personality disorders.

Another study revealed significant improvement with medium effect size on psychological distress, early maladaptive schemas and modes after the completion of SCBT-g in older patients with longstanding mood disorder or chronic adjustment disorder with comorbid personality disorder or personality disorder features. Participants' maladaptive parent, child and coping modes decreased significantly and healthy modes significantly increased (Videler et al., 2018). A group of researchers also tested the efficacy of short-term group schema therapy in Germany by providing 12 to 15 sessions of group schema therapy to 9 patients with either cluster C or BPD. The findings revealed improvement in patients' mode activation along with a significant decrease in their symptoms (Nenadić et al., 2017).

The process of change in participants' modes for the current research can be analyzed with the help of a case example. During schema therapy sessions, a participant of experimental group analyzed her modes and reflected demanding parent mode and impulsive child mode to be the most dominant modes in the pie chart. She expressed that she displays aggression, feels depressed and her physical health also gets affected due to her dominant innate child modes. The maladaptive coping mode of avoidance made her more distant in her relations with others. She mentioned that she becomes overcritical of others and thus, she faces difficulty in acknowledging others' positive qualities. The insight through psychoeducation, facilitated her to understand how all these modes made her emotionally vulnerable and added excessive stress in her life. During sessions, she was able to recognize her basic needs of child modes, and the record sheet along with identification of cognitive distortions, helped her to bypass punitive and demanding parent modes. She started appreciating her positive qualities such as, optimism and the ability to bring out positivity in others. The experiential techniques further assisted to strengthen her healthy adult and happy child modes.

Thus, schema therapy intervention plan of current research facilitated participants to explore their unmet core childhood needs. It was done through

psychoeducation and the application of cognitive, behavioral and experiential techniques. Furthermore, the therapist utilized empathic confrontation, where needed, and performed the part of a good parent while maintaining therapeutic boundaries. The therapeutic relationship helped participants meet some of their core needs and also assisted them to internalize a good parent which acts like healthy adult mode. This is how schema therapy intervention enabled participants to decrease the dominance of their maladaptive schemas, to manage their maladaptive child and parent modes, and to strengthen functional modes of healthy adult and happy child.

Therefore, it can be concluded that schema therapy has been effective for young adults with borderline personality features to facilitate them in regulating their maladaptive modes and enhancing their functional modes. It can be implied from the outcomes of this research that schema therapy can be an efficacious, brief and cost-effective therapeutic approach for mental health practitioners in Pakistan to treat their clients with borderline personality features. The sample size in the present research was limited therefore, it is recommended for future researchers to include more participants. Schema therapy has a promising scope in treatment thus, more researches including randomized controlled trials (RCTs) are recommended to be conducted in Pakistan for people with features of other personality disorders and clinical disorders with different age groups,

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