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Comparison of Schema Modes in Clinical and Non-Clinical Individuals: A Preliminary Finding

Abstract   This study compares the schema modes between the clinical and non-clinical individuals. A purposive convenient sampling technique was used for the data collection from one hundred and fifty healthy community volunteers, and sixty diagnosed psychiatric patients. The "Schema Mode Inventory (SMI)" was utilized for the mode assessment and group comparison. A series of independent sample t-test depicted that, the clinical group had a significantly higher score on ten out of twelve dysfunctional schema modes and significantly lesser score on both functional schema modes. Identically, Fisher's r-to-z transformation confirmed that the association between dysfunctional schema modes was significantly higher in clinical individuals in comparison to non-clinical individuals. Thus, the present study describes a tendency of individuals with psychiatric disorders to rely more on dysfunctional schema modes in comparison to non-clinical individuals. These findings strengthen the empirical provision of the "schema mode model" for the assessment and treatment of psychiatric disorders.

Key Words: Dysfunctional Modes, Healthy Modes, Fischer Transformation, Psychiatric Individuals, Schema Modes.

Introduction

Schema modes identify the actual prevailing emotional state of a person. Schema modes integrate our responses and are frequently caused by life circumstances or scenarios to which people are mostly oversensitive (Bamber, 2004). An agreed schema mode definition states that "a schema mode represents those schemas, coping responses, or healthy behaviours that are currently active in an individual" (Young, Klosko, & Weishaar, 2003). Schema modes are triggered when particular schemas or coping responses become intense emotions that have a direct effect on the functioning of a person (Petrocelli, Glaser, Calhoun, & Campbell, 2001; Simeone-DiFrancesco, Roediger, & Stevens, 2015).

Apparently, fourteen well-known schema modes are recognized, classified into four major clusters: Child, Dysfunctional Coping, Maladaptive Parent, and Functional modes (Jacob, Van Genderen, & Seebauer, 2014; Lobbestael, van Vreeswijk, Spinhoven, Schouten, & Arntz, 2010; Lobbestael, van Vreeswijk, & Arntz, 2007; Young, 2003; Zaman, & Khalily, 2016). The first cluster is of the Child Modes that are often called as innate modes are said to develop when the emotional, safety, belongingness and nurturance needs are unmet in childhood and expressed as the intense feelings of helplessness, hostility, rage, and fear (Farrell, Shaw, & Shaw, 2012; Siddique, Khalily, & Arouj, 2018). These Child Modes further divided into five types. In alliance, the *Vulnerable Child mode* refers to the feelings of isolation, hopelessness, frightened, being victimized or anxious. Afterwards, is the *Angry Child mode* that represents extreme annoyance, frustration, and incensed; along with the *Enraged Child mode* which encompasses *the* severe sense of resentment and wrath that results in hurting or damaging people or objects. Meanwhile, the *Impulsive Child mode* seems to be spoiled tendencies on wishes and follows innate feelings instantly without taking into the consideration the consequences; and *Undisciplined Child mode* repeatedly behaves impulsive, violent, irritated and having difficulty to finish routine or dreary tasks (Dadomo, Grecucci, Giardini, Ugolini, Carmelita, & Panzeri, 2016). Afterwards, Dysfunctional Parent modes are the second category which reveals how the child and an adolescent internalize the negative aspects of the identity figures such as parents, teachers, etc. The Dysfunctional Parent modes include *Punitive Parent* mode which refers as always

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indulge in criticizing others or themselves, having suicidal fantasies, self-destructive behaviour, self-loathing, self-mutilation, and self-denial; while the *Demanding Parent* mode strives for high status, try to meet ambitious standards, seek perfection and avoid wasting time (Peled, 2018). Meanwhile, Maladaptive Coping modes is the third category which operates unconsciously like a defence mechanism. It is defined as excessive practice of unhealthy coping styles, incorporate avoidance, denying the reality, overcompensation, and abandon (Farrell, Shaw, & Shaw, 2012). The Maladaptive Coping modes constitutes the third cluster, it further groups the five coping modes as; *Compliant Surrender* mode which acts in a passive, submissive, reassurance-seeking, or self-critical way towards others due to fear of rejection; *Detached Protector* mode cut off or disengage from all joys of life and stay in isolation and having emptiness, depersonalization, dullness, substance abuse, overindulging, self-harm, psychosomatic complaints, and barrenness; *Detached Self-soother* mode involve in pleasurable or soothing activities include workaholism, gambling, dangerous sports, or drugs abuse, playing computer games, overeating and watching television (Edwards, 2017); *Self-Aggrandiser* mode show lack of empathy, extremely self-absorbed, competitive, grandiose, abusive, and status-seeking way in order to have whatever they want; *Bully and Attack* mode portrays antisocial and criminal acts, may harm anyone with proper strategic way either emotionally, physically, sexually, and verbally. In alliance, Healthy and Adaptive Modes is the fourth category, which embraces the Healthy Adult mode and the Happy Child mode. The *Healthy adult* mode represents the appropriate skills and functional behaviors of an adult such as working, parenting, nurturing, taking responsibility, and committing. The *Happy child* mode entails playful or enjoyable activities and feeling of contentment because core emotional needs are sufficient. Accordingly, many people use numerous diverse schema modes (Young, 2003), although the operation of few schema modes is unhealthy (impulsive child, vulnerable child, angry child, compliant surrender, over-compensator, detached protector, punitive parent, as well as the demanding parent modes). Persons often change schema modes in response to surroundings modifications with a group of schemas modes getting triggered at the same time (Young, 2003). Indeed, healthy individuals more often change their schema modes and use a variety of schema modes at the same time (Young, Atkinson, Arntz, Engels, & Weishaar, 2005). However, individuals having the Axis-I and Axis-II psychopathology utilizes a particular set of dysfunctional schema modes (Behary, & Dieckmann, 2013; Jacob, & Arntz, 2013; Lobbestael, 2007; Young, 2005), habitually stick inflexibly to such dysfunctional schema modes (Arntz, Klokman, & Sieswerda, 2005; Young, & Klosko, 1994), have trouble to use the variety of schema modes instantaneously (Bamber, 2004), and subsequently may involve in dysfunctional coping behaviors (Lobbestael, 2007; Young, 2003), in addition to inflexible coping styles.

To the best of our knowledge, there is minimal work for a comparison of schema modes in psychiatric patients and community individuals. Some initial evidence put forward that females with eating disorders depend more on dysfunctional schema modes in comparison to the community sample females (Bernstein, Arntz, & Vos, 2007). The current study intended to provide an additional indication for the comparison of schema modes among clinical (Axis-I) and non-clinical individuals. It was hypothesized, in line with previous findings (Talbot, Smith, Tomkins, Brockman, & Simpson, 2015)., that Individuals with psychiatric disorders will score significantly higher for dysfunctional schema modes, and lower for functional schema modes relative to a community sample as assessed by the Schema Mode Inventory (SMI).

Materials and Methods

Participants

Subjects included were categorized into two distinct groups, i.e., "clinical and non-clinical individuals". All these individuals were adults Pakistani national aged between 18 and 51 years and were fluent in reading and understanding Urdu. One hundred and fifty non-clinical individuals were approached through purposive sampling, and none had any recurrent symptoms indicating potential psychiatric disorder. Meanwhile, sixty clinically diagnosed psychiatric (Axis I) patients were approached from the outpatient department of a psychiatric unit by the trained psychologist to participate in this study. We used the DSM-IV-TR (American Psychiatric Association, 2000) multiaxial classification of the psychopathology as Axis I (general psychopathology) and Axis II (personality

disorders), to make comparison simpler with available studies that were accomplished before the DSM-5 (American Psychiatric Association, 2013).

Measure

The present research used Urdu translated version of the short Schema Mode Inventory (Riaz, & Khalily, 2013) with 118 items graded on a Likert six-point scale ranging from 'never or almost never' to 'always'. 'This short version covers four domains (Child, Maladaptive Coping, Maladaptive Parent, and Healthy modes) and contains 14 schema modes. The SMI has strong discriminated validity a moderate convergent validity (Lobbestael, Van Vreeswijk, & Arntz, 2008), with good internal consistency across all subscales, i.e., Cronbach's α range 0.76-0.96 (Lobbestael, 2007).

Procedure

The study did not include any data identifying the participants. Before the administration of the survey, the study received approval from the researcher's university's ethical review board. The study's proposal was reviewed by the board using ethical principles from the American Psychological Association. Informed consent was also obtained from each participant. The researcher contacted clinical as well as non-clinical participants and scheduled a meeting to attain the demographic information, diagnostic status, and SMI scores from each subject individually.

Statistical Analysis

The Statistical Package for Social Sciences 25.0 for Windows (IBM, 2016b) was used to perform the essential statistical analysis. Pearson's Product Moment Correlation (r) was performed to assess the association between schema modes data. Accordingly, a Fisher's r-to-z (Fisher, 1915) conversion was executed online (Vassarstats, 2020) to test for probable differences flanked by correlations (r) between "clinical and non-clinical group". Around the same time, 14 independent sample t-tests were executed to compare scores on the clinical group's schema modes with those of the non-clinical. Besides this, Cohen's d was computed to determine the effect size of comparison. Conferring to generally believed criteria, d ≥ 0.80 is considered a large effect size, d = 0.50 a medium effect size, and d ≤ 0.20 a small effect size (Cohen, Cohen, West, & Aiken, 2013).

Results

Initially, we presented our findings of group differences followed by the results of Pearson product-moment correlations along with Fischer's z transformation. Furthermore, a graphical illustration of group differences appears in figure 01.

Firstly, group comparison showed that the clinical group was significantly higher on 10 out of 12 (83 percent) dysfunctional schema modes and significantly lower on both functional schema modes than that of the community sample. Particularly, the psychiatric disorder group presented no significant differences in comparison to the community sample on an angry child and undisciplined child modes. Significant mean differences along with the large effect sizes were observed for a vulnerable child, impulsive child, compliant surrender, detached self-soother, detached protector, self-aggrandizer, bully & attack, punitive parent, demanding parent, happy child and healthy adult modes. Table 1 summarizes the outcomes of all measurements, means, standard deviations, t-values, and p-values obtained in contrast. All the Cohen's d, which reached significance ranged from 0.44 to 8.34. Altogether the contrasts can be additionally elaborated through figure 01.

Secondly, Table 2 shows a Pearson's correlation coefficients between fourteen schema modes for both independent groups that are, coefficients for clinical (psychiatric disorder) group are presented above the diagonal while for a non-clinical group the correlation coefficients are displayed below the diagonal. The bivariate correlational analysis depicted the mixed pattern of correlation in the healthy sample on dysfunctional schema modes. Contrary to this in clinical individuals, the unvarying pattern of positive correlations existed between all dysfunctional schema modes except for demanding parent modes. The range of significant correlations varied from r = .26 to r = −.82 for the clinical group, while for non-clinical group it ranged from r = -.17 to r = −.61. *Finally,* to test for possible

differences among the correlations in the clinical and non-clinical groups (Table 2), the correlation coefficients were converted into z-scores through Fisher's r-to-z transformation, resultant in significant z-scores ranging from $z = 1.95$ to $z = 5.02$, respectively. Subsequently, using a two-tailed test of significance, results showed that the correlation between vulnerable child and angry child modes was found to be significantly higher in a clinical group than non-clinical group ($z = 2.93$, $p < 0.01$); coupled with this an association between vulnerable child and impulsive child modes was also found to be considerably higher in a clinical group ($z = 2.92$, $p < 0.01$); along with this the relationship between a vulnerable child and compliant surrender modes was also significantly greater in clinical individuals in contrast to the community sample ($z = 2.15$, $p < 0.05$). Correspondingly, the association between angry child and detached protector modes was markedly greater in the clinical group than the non-clinical group ($z = 5.02$, $p < 0.001$). Indeed, the correlation between compliant surrender and demanding parent modes was also significantly high in the clinical group than that of the non-clinical group ($z = 4.77$, $p < 0.001$). Following the same pattern, the correlation between a detached protector and punitive parent modes was found to be considerably greater in the clinical group ($z = 2.68$, $p < 0.05$). In alliance, the correlation between demanding parent and punitive parent modes was established to be meaningfully greater in the clinical group in comparison to the community sample non-clinical group ($z = 3.67$, $p < 0.001$). Above all, the correlation between a happy child and a healthy adult mode was found to be significantly lower in the clinical group in contrast to the non-clinical group ($z = 2.54$, $p < 0.01$).

Table 1. Group Differences in Schema Modes (N=210)

Variables	Clinical (n = 60)		Nonclinical (n = 150)		T	LL	UL	Cohen's d
	M	SD	M	SD				
Vulnerable Child	30.13	13.90	17.81	6.89	8.56**	9.49	15.17	1.12
Angry Child	27.40	10.89	22.13	7.88	1.68	-.39	4.93	0.55
Enraged Child	26.62	8.56	22.57	9.80	2.79*	1.19	6.89	0.44
Impulsive Child	27.60	8.43	12.26	4.29	17.39**	13.60	17.08	2.29
Undisciplined Child	18.32	5.84	17.41	4.79	1.18	-.62	2.46	0.17
Complaint Surrender	26.52	7.18	16.82	3.64	12.92**	8.22	11.17	1.70
Detached Protector	30.10	8.12	14.76	5.16	16.32**	13.49	17.19	2.25
Detached Self-Soother	14.68	3.44	12.06	3.67	4.76**	1.54	3.74	0.74
Self-Aggrandizer	36.75	4.30	8.40	2.09	64.12**	27.48	29.21	8.34
Bully & Attack	25.78	6.34	6.86	3.03	29.21**	17.65	20.21	3.81
Punishing Parent	27.43	5.54	18.49	6.17	9.75**	7.12	10.73	1.52
Demanding Parent	37.58	6.77	31.44	6.83	5.91**	4.09	8.20	0.90
Happy Child	19.08	4.22	24.78	5.27	7.46**	4.19	7.20	1.19
Healthy Adult	22.18	3.44	36.30	7.35	14.26**	12.17	16.07	2.46

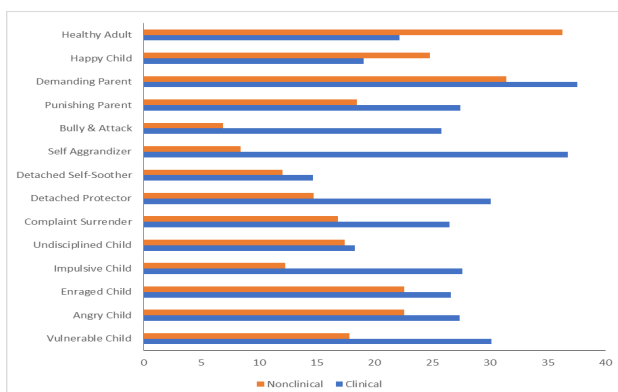*Note: *p<.05; **p<.001; ***p<.0001*

Figure 1: Comparison of Schema Modes among Clinical and Non-Clinical Individuals.

Table 2. Pearson Bivariate Correlations Among Schema Modes

S. No		Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Vulnerable Child	10	-	.77**	.16	.70**	.64**	.46**	.76**	.29*	.28*	.28*	.53**	.57**	-.12	-.31*
2	Angry Child	10	.51**	-	.35**	.61**	.63**	.18	.86**	.09	.53**	.52**	.39**	.26*	-.17	-.46**
3	Enraged Child	9	.41**	.57**	-	.43**	.24	-.16	.30*	.42**	.17	.68**	.10	-.39**	-.08	-.12
4	Impulsive Child	8	.39**	.52**	.54**	-	.56**	.68**	.57**	.68**	.48**	.50**	.61**	.52**	-.08	-.18
5	Undisciplined Child	5	.45**	.44**	.21*	.51**	-	.29*	.64**	.23	.39**	.04	.43**	.51**	-.29*	-.49**
6	Compliant Surrender	7	-.16*	-.08	-.16*	-.01	-.15	-	.09	.41**	.35**	.08	.53**	.82**	.03	.24
7	Detached Protector	9	.61**	.47**	.47**	.50**	.50**	-.23**	-	.27*	.32*	.23	.58**	.32*	-.11	-.60**
8	Detached Self Soother	4	-.05	.03	-.08	.14	.10	.24**	.03	-	.30*	.28*	.38**	.18	-.03	-.23
9	Self-Aggrandizer	10	-.13	-.02	-.11	.14	-.01	.27**	-.17*	.35**	-	.38**	.40**	.18	.06	-.26*
10	Bully and Attack	9	.38**	.34**	.39**	.29**	.25**	-.23**	.40**	-.25**	-.17*	-	-.12	-.31*	-.09	.08
11	Punitive Parent	10	.47**	.41**	.48**	.52**	.35**	-.02	.46**	-.05	-.03	.35**	-	.65**	.23	-.17
12	Demanding Parent	7	-.16	-.04	-.16*	.02	-.04	.39**	-.24**	.40**	.49**	-.37**	-.20*	-	-.02	-.04
13	Happy Child	10	-.38**	-.24**	-.25**	-.15	-.24**	.29**	-.46**	.30**	.43**	-.22**	-.29**	.50**	-	.26*
14	Healthy Adult	10	-.30**	-.19*	-.32**	-.18*	-.16	.30**	-.34**	.36**	.42**	-.35**	-.44**	.58**	.58**	-

*Note: *p<.05; **p<.001; Correlation coefficients for clinical participants (n=60) are presented above the diagonal, and correlation coefficients for non-clinical participants (n=150) are presented below the diagonal. Discussion*

This study was aimed, to address whether clinically diagnosed psychiatric individuals differ in a pattern of schema modes from that of community non-clinical sample, and to enquire the association between each schema modes, and each association compared to the community sample. Firstly, we establish that the clinical group comprising of Axis I psychiatric patients could be differentiated from the demographically matched non-clinical group by the level of most of the schema modes. As hypothesized the results indicated that individuals diagnosed with psychiatric disorders scored significantly greater on 10 out of 12 maladaptive and lessened on both healthy modes in comparison to that of the community sample individuals. Certainly, the 'angry child', and 'undisciplined child' did not differ between the clinical and non-clinical groups. Thus, it can be ascertained that the feelings of anger and frustration with impatience and inability to complete routine tasks, respectively (Khalily, Wota, & Hallahan, 2011; Lobbestael, 2007; Young, 2003) were not remarkably different across groups, suggestive of the possibility that this set of modes characterizes less-prominent mechanisms in the pathology of psychiatric disorders among study participants. Moreover, our findings strengthen the existing empirical work (Talbot, 2015; Voderholzer, 2014; Khalily, 2011) about the clinical sample with the notion that the clinical group scored significantly lower on both schema modes acknowledged as adaptive, including modes happy child, and healthy adult modes.

Additionally, associations between dysfunctional schema modes were generally high in the clinical sample. Following this, between vulnerable and angry child mode; vulnerable and impulsive child modes; vulnerable child and compliant surrender modes; angry child and detached protector modes; compliant surrender and demanding parent modes; detached protector and punitive parent mode, and between demanding and punitive parent were high, which is suggestive of the fact that the individual clinical experiences more the anxiousness, apprehensions, and helplessness in contrast to the non-clinical individuals. They are the specific modes that put the individual in vulnerable modes, such as a feeling of being abandoned, neglected, and they strengthen one another. Thus, in an alliance, perceiving the discerning attitude during childhood and activating the specific schemas which are abuse, rejection, and emotional deprivation. Such schemas signify the noxious consequence of internalized critical messages in creating emotional distress (Simpson, Pietrabissa, Rossi, Seychell, Manzoni, Munro, & Castelnuovo, 2018). Accordingly, such associations can then be discussed and perhaps targeted for treatment and support by the clinician (Simpson, 2018; Khalily, 2011). Above all, the relationship between a happy child and healthy adult modes was found to be higher in a nonclinical group than the that of a clinical group which is indicative of the fact that person having psychiatric conditions are little using the functional schema modes that encompass the feelings of optimism, responsibility-taking, nurturance, resilience, pursuing healthy interests and pleasurable activities, all of which is helpful for the psychological wellbeing.

Limitations

Considering this study was largely exploratory, having a cross-sectional evaluation of schema modes in clinical and healthy individuals, certain limitations need to be considered while making the inferences. Principally, the limitation of the current study is that the individuals were assessed from twin cities of Rawalpindi/Islamabad. Meanwhile, patients with psychiatric disorders were only involved in this study; therefore, in the future study can be replicated in patients with general medical conditions as well.

Conclusions

Despite certain limitations, this study for the first time provides the comparison of the existence of numerous schema modes in persons diagnosed with psychiatric disorders with that of non-clinical (community) individuals. Merely, it can be concluded that the SMI can be helpful in both the assessment and understanding of persons diagnosed with different psychiatric disorders and thus can also provide the basis for Schema Focused Therapy (SFT), a therapy presenting capacity for the treatment of several clinical conditions.

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