**Title**: Dysfunctional Schema Modes as Determinants of Psychiatric Co-morbidities: A Study in Cohort of People with Epilepsy (PWE) in Pakistan

**Supplementary Table 1.** Schema Modes

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| **Domains** | **Modes**  | **Description of emotions** |
| **Child** | Vulnerable (VC) | Includes feelings of loneliness, isolation, sadness, being misunderstood, unsupported, defective, deprived, overwhelmed, incompetent, doubting self, needy, helpless, hopeless, fear, anxiety, victimization and exclusion, unloved, fragile, and pessimistic. |
| Angry (AC) | Intense feelings of anger and frustration with impatience as the core emotional (or physical) needs not being me are present. |
| Enraged Child (EC) | Experiences intense feelings of anger and impulsivity that may result in individuals causing harm to objects or other people.  |
| Impulsive Child (IC) | Acts on non-core desires or impulses in a selfish or uncontrolled manner to get their own way and often has difficulty delaying short-term gratification.  |
| Undisciplined Child (IC) | Often feels intensely angry, frustrated and impatient when non-core desires or impulses cannot be met. Individuals may also appear “spoiled” and fails to complete routine tasks. |
| Happy (HC) | Feels loved, content, satisfied, fulfilled, protected, accepted, praised, worthwhile, nurtured, understood, self-confident, competent, safe, resilient, and strong, in control, adaptable, optimistic and spontaneous. |
| **Maladaptive Coping** | Compliant Surrender (CS) | Acts in a passive, subservient, submissive, approval seeking, or self-deprecating way around others due to fear of conflict or rejection. Can engage in behaviours that directly maintain this self-defeating schema-driven pattern. |
| Detached Protector (DP) | Cuts off needs and feelings, detaches emotionally from people and often rejects their help. Can feel withdrawn, distracted, depersonalised, bored and pursues distracting, self-soothing or self-stimulating activities in a compulsive way or to excess. May adopt a cynical, aloof or pessimistic stance to avoid people or activities. |
| Detached self-Soother (DS) | Shut off emotions by engaging in activities that can soothe, stimulate or distract them from feelings. These behaviours are usually undertaken in an addictive or compulsive way, which include excessive working, gambling, involvement in dangerous sports, overeating, fantasizing, promiscuity and drug abuse. |
| Self-Aggrandiser (SA) | Feels and behaves in an inordinately grandiose, aggressive, dominant, competitive, arrogant, haughty, condescending, devaluing, over-controlled, rebellious, manipulative, exploitative, attention-seeking, or status-seeking way.  These feelings or behaviours originally developed to compensate for or gratify unmet core needs. |
| Bully and Attack (BA) | Directly harms other people in a controlled and strategic way emotionally, physically, sexually, or verbally. The motivation may be to overcompensate to prevent harm to them or to avoid humiliation. |
| **Parent\***  | Punitive (PP) | Believes oneself or others deserves punishment or blame and often acts on these feelings by being blaming, punishing, or being abusive towards self (e.g. self-mutilation) or others.   |
| Demanding (DPa) | Feels one should strive for perfection, avoids time wasting and expressing one’s feelings spontaneously, likes order, and believes one should strive for high status, be humble and put others’ needs before one's own. This mode refers to the nature of the internalized high standards and strict rules, rather than the style with which these rules are enforced. |
| **Healthy Adult** | Healthy Adult (HA) | Nurtures, validates and affirms the vulnerable child mode. Sets limit for the angry and impulsive child modes and promote and support the healthy child mode. Combats and eventually replaces the maladaptive coping modes and neutralizes or moderates the maladaptive parent modes. Performs appropriate adult functions such as working, parenting, taking responsibility, and pursues pleasurable adult activities such as sex, intellectual, and cultural interests, health maintenance and athletic activities. |

\*Also noted as dysfunctional parent. These parental schema modes do not attribute any blame for the utilisation of such schema to parents or other parental figures.

**Supplementary Table 2.** Schema Mode and SCL-90 Scores for entire cohort

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|  |  | **Mean** | **(SD)** |
| **Child Domain** |  |  |  |
|  AC |  | 29.12 | (9.78) |
|  EC |  | 28.88 | (11.73) |
|  IC |  | 27.82 | (9.65) |
|  UC |  | 17.90 | (5.46) |
|  VC |  | 27.21 | (10.48) |
|  HC |  | 36.54 | (9.54) |
| **Maladaptive Domain** |  |  |  |
|  CS |  | 23.38 | (6.38) |
|  DP |  | 23.53 | (9.23) |
|  DSS |  | 7.62 | (3.67) |
|  SA |  | 32.19 | (9.56) |
|  BA |  | 25.32 | (7.72) |
|  **Parent** PP |  | 25.23 | (9.63) |
|  DP |  | 34.48 | (9.79) |
| **Healthy Adult** |  | 36.65 | (10.39) |
| **Clinical Symptoms** |  |  |  |
|  Hostility |  | 10.53 | (5.62) |
|  Somatisation |  | 19.65 | (9.64) |
|  Interpersonal Sensitivity |  | 15.50 | (7.99) |
|  Obsessive Compulsive |  | 18.69 | (7.50) |
|  Depression |  | 22.64 | (11.82) |
|  Anxiety |  | 16.89 | (8.55) |
|  Phobias |  | 10.01 | (6.57) |
|  Paranoid  |  | 9.33 | (5.39) |
|  Psychoticism |  | 13.97 | (8.60) |

AC= Angry child, EC= Enraged Child, IC= Impulsive child, UC=Undisciplined child, VC=Vulnerable child, HC=Happy Child; CS=Compliant Surrender, DP=Detached Protector, DSS=Detached Self-soother, SA=Self-aggrandizer, BA= Bully and Attack; PP=Punishing Parent, DPa=Demanding Parent