
Effectiveness of Reattach Therapy in Management of Emotional Dysregulation with OCPD, PTSD, Anxiety and Stress in Young Adults

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Abstract

Emotional dysregulation has three major components which contribute to some of the major symptomatology in disorders like Obsessive Compulsive Personality Disorder, Post-Traumatic Stress Disorder, anxiety and stress. These components are: excessive intensity of emotions, poor processing of emotions and negative reactivity to emotions, which overlap as well as distinct symptoms with possible manifestations of emotional dysregulation like angry outbursts or behaviour outbursts such as destroying or throwing objects, aggression towards self or others, and threats to kill oneself, especially in young adults. These patients have a chronically and ongoing difficult time with the level of cooperation and social ability required for a healthy and fulfilling existence. ReAttach Therapy through its Multiple Sensory Integration Processing by Cognitive Bias Modification, has been found to be very helpful in the effective management of maladaptive emotions and helps developing interpersonal effectiveness, emotion regulation skills (expressing emotions effectively), behaviour control and distress situations management skills, which in turn helps the overall decrease in symptomatology of the above mentioned disorders.

Key words: *Emotional Dysregulation, ReAttach Therapy, Cognitive Bias Modification, Distress Situation Management Skills.*

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Introduction

Emotional dysregulation generally refers to a condition in which the person's emotional response is poorly modulated and does not fall within the conventionally accepted range of emotive response, which may also be referred to as labile mood, marked fluctuation of mood or mood swings. Emotions play a great role not only in our lives but also affect our history, philosophy and religion. Emotions assist us in evaluating our alternatives, provide motivation to make some change and tell us about our needs. Emotions are like 'somatic markers' which tell us what we 'want' to do. (Damasio, 2005) Emotions help us link to others and constitute a shared 'theory of mind'. Unable to accurately assess the emotions of others results in awkward and dysfunctional interpersonal behaviour. (Baron et al, 2009). Taylor (1984) described Alexithymia as 'The inability to recognize, label, differentiate and link emotions to an event'. (A personality construct characterized by the subclinical inability to identify and describe emotions in the self).

Alexithymia is associated with a wide variety of psychopathology in the form of GAD, PTSD, substance abuse and other problems (Taylor, 1984). When during stressful experiences, the intensity of emotions increases and coping skills play an important role.

Difficulty or inability in coping with the experience or in processing emotions leads to emotional dysregulation. This dysregulation may manifest in either excessive intensification of emotions or excessive deactivation of emotions. Excessive intensification of emotions includes any rise of emotions experienced by the individual which is unwanted, intrusive and overwhelming, leading to panic, trauma, dread and terror. Excessive deactivation of

emotions leads to dissociative experiences like depersonalization, derealisation, splitting or emotional numbing.

The major components which cause emotional dysregulation are:

1) *Emotion sensitivity or excessive intensity of emotions*: the person has heightened awareness to subtle stimuli, processes environmental information more thoroughly and has more vivid perceptions of both positive and negative stimuli.

2) *Negative affect or negative reactivity to emotions* pertains to our reaction to various stimuli, which arises from a preconditioned sensitivity triggering a perception of the stimulus to be threatening and interpret certain situations in a negative light. This may be the reason that some situations, events and behaviours are upsetting and threatening for some people, but not for others who are also present there at that time.

3) *Poor processing of emotions*: the resultant factor of inadequate or partial processing and maladaptive emotional regulation strategies. Lack of emotional regulation is generally seen as a set of symptoms common to a number of different psychological conditions but, in some specific disorders, it plays a larger role in the possible manifestation of its symptomatology, which may lead to behavioural problems and may deeply interfere with a person's social interactions and relationships. These emotional dynamics constitute significant response parameters that are influenced by the emotional regulation processes (Thompson, 1990).

Aim of the study

In this multiple case study, a probable relationship has been explored, between

emotional regulation and rest of the disorders, which is linear in nature and prevails as cross-sectional symptoms/features of emotional dysregulation. This relationship has been observed, existing and prevailing as a pattern, cutting across the symptomology of disorders like PTSD, OCPD, anxiety, and stress, which often leads to aggressive behaviour.

This study is also an observational experiment to explore the possibility that by controlling the symptoms of emotional dysregulation through ReAttach therapy, the symptomology of the subsequent disorders will be altered, or not.

This case study was carried out with aim of:

- 1) Identifying a probability of the larger role that emotional dysregulation plays in the symptomology of some major disorders like OCPD, PTSD, anxiety and stress in young adults.
- 2) To evolve an effective treatment strategy for emotional dysregulation and its management with ReAttach Therapy.

Research Design and Methods

A multiple case study design was used to study the effectiveness of ReAttach Therapy in the management of symptomology of emotional dysregulation.

Study population

The study was conducted based on case history and therapeutic treatment data collected from five patients:

Patient A, 23 year old female with stress causing emotional dysregulation.

Patient B, 21 year old male diagnosed with Obsessive Compulsive Personality Disorder. Patient C, 19 year old female, diagnosed with Post-Traumatic Stress Disorder.

Patient D, 18 year old female diagnosed with emotional dysregulation and aggressive behaviour.

Patient E, 24 year old male diagnosed with anxiety (GAD).

Tools

Apart from the primary diagnosis, the patients were administered with two comprehensive evaluations for symptomatology of emotional dysregulation.

1) Core Symptoms Evaluation – Reattach Therapy Institute

A 35 item self-report evaluation with a rating scale of 0-5, based on the thoughts or problems that someone might experience and how much these thoughts and problems affect them. The evaluation is calculated on subscales of:

- i) Risky behaviour
- ii) Short Symptom Inventory
- iii) Happiness
- iv) Total score

It gives a comprehensive measurement of symptomology instead of compartmentalised, narrow, disorder based psychopathology.

2) Difficulties in Emotion Regulation Scale – Short Form (DERS-SF) which was modified by Kaufman, Xia, Fosco, Yaptangco, Skidmore, & Crowell, 2015; (Original contributors Difficulties in Emotion Regulation Scale: Gratz and Roemer, 2004).

An 18 item self-report scale with a five-point response scale calculated with subscales on:

- i) Strategies to emotional regulation
- ii) Non-acceptance of emotional response
- iii) Impulse control difficulties
- iv) Goals directed behaviour
- v) Awareness about emotional dysregulation
- vi) Clarity about emotional dysregulation and resultant behaviour and total score.

The patients were also evaluated for the primary disorder-based assessments pre and

post ReAttach therapy to find out the effect of intervention in the improvement of symptomology. Detailed reports are presented in tabular form in the results section.

Procedure

Five patients diagnosed with Obsessive Compulsive Personality Disorder, Post-Traumatic Stress Disorder, General Anxiety Disorder, emotional dysregulation and stress with an age range of 18 to 24 were taken for this study. The initial sessions were held for diagnostic interviews, self-report questionnaires and Psychodiagnostic assessments to confirm the diagnoses.

The patients were then administered with the above-mentioned evaluations to record the pre and post results for emotional dysregulation symptomology. Five ReAttach sessions for intervention and mindfulness were used for interaction and as adjunct therapy or follow up therapy, with this procedure to be continued for 6 weeks. For this study, only ReAttach therapy and its procedure has been discussed. The therapy process was smooth for three patients A, D, and E, but, there were moments of emotional dysregulation and aversion to the therapy evident from patient B, diagnosed with OCPD and patient C, diagnosed with PTSD. Reasons were explored and overcome with the help of counselling and sessions of mindfulness.

ReAttach Process and Procedure:

ReAttach process

It is said that words are powerful tools of thoughts and communication, but, when applied with ReAttach therapy along with visual imagination and Multi-Sensory Integration Processing by Cognitive Bias Modification, it opens vast possibilities to capture intricate relationships between specific facts, beliefs, assumptions, emotions,

thoughts and memories by providing special access to cognitive structures or schemas and helps to identify and restructure the distortion inherent in them. It works upon the individual holistically and in a comprehensive way that the linear analytic verbal techniques cannot.

ReAttach is an intervention in which people do not have to discuss their problems. ReAttach assists with the collection of facts, impressions and events, which are later processed quickly to ensure that the process will not overwhelm the participants. During ReAttach, the therapist focuses on the process and not on the content of the information. The participants are asked to listen to the thinking assignments given to them during cognitive training. The subsequent insights that follow are the participants' own insights because they process information better. (Weerkamp-Bartholomeus, 2015)

Every individual has a treasure trove of personal memories, emotions, events and experiences stored in the long-term memories. The challenge of ReAttach is to access these pieces of information, fragmented or hidden, stored in the long-term memory and then reprocess this information in a coherent manner to reflect the following concepts: self, significant others and social.

To reprocess information, the arousal level of a patient must be regulated slightly above the level of 'falling asleep' at the Alpha-Theta border (7-8 Hz). This arousal level is important for transitioning from deep relaxation, visualization, creativity and learning to information acquisition from the long-term memory (Kirov, Weiss, Siebner, Born, Marshall, 2009); (Molle, 2010).

ReAttach procedure

For the ReAttach procedure, instructions explaining the process of ReAttach therapy sessions were given to the patients. The therapy starts by regulating the arousal level

of the patients. This is achieved by altering the tactile input by tapping the hands of the patients along with modulation in voice, change in attitude, attention and presence levels on the part of the therapist. In other words, it's the combination of multi-sensory inputs which works on the patients leading to sensory integration processing. The ReAttach process works by combining various steps in the following way:

- a) Providing the essential tactile stimuli needed to stimulate the tactile sensory channel simultaneously with auditory and visual inputs.
- b) External arousal regulation to gain and maintain joint attention.
- c) Stimulating multiple sensory integration processing through tapping, to teach the multi-tasking skill.

- d) Improvement of the information processing; thus promoting skill enhancement in context of social and personal growth in individuals.
- e) Oxytocin, administered through physical contact, to improve the social reward system. (Tapping is done gently on the back of the patient's hand without overstimulating oxytocin production) (Weerkamp-Bartholomeus, 2015).

Results

The results were compiled for comprehensive evaluations of emotional dysregulation symptomology in tabular form

I. Results for overall decrease in symptomology of CSE and Emotional Dysregulation

Table 1
Results of Core Symptoms Evaluation – Reattach

S.no	Test Condition	Cluster-1 Risky behaviour	Cluster-2 Short Symptom Inventory	Cluster-3 Happiness	Cluster-4 Total score
Patient A	Pre-test	09	20	02	58
	Post-test	01	04	03	12
Patient B	Pre-test	08	19	02	59
	Post-test	01	05	03	14
Patient C	Pre-test	10	25	01	75
	Post-test	04	08	03	22
Patient D	Pre-test	09	20	01	64
	Post-test	01	06	03	15
Patient E	Pre-test	06	11	02	42
	Post-test	02	02	03	12

Table 2

Difficulty in Emotional Regulation Scale – Short Form (DERS-SF)

S.no	Test Condition	Subscale Strategies	Subscale Non-acceptance	Subscale Impulse	Subscale Goals	Subscale Awareness	Subscale Clarity	Total Score
Patient A	Pre-test	12	12	12	12	13	11	72
	Post-test	03	05	03	04	06	04	25
Patient B	Pre-test	15	10	15	14	15	15	84
	Post-test	06	07	06	05	05	05	34
Patient C	Pre-test	14	13	15	15	15	15	87
	Post-test	04	05	04	06	05	06	30
Patient D	Pre-test	11	08	15	13	15	11	73
	Post-test	05	03	05	06	04	03	26
Patient E	Pre-test	15	15	15	15	15	14	89
	Post-test	05	04	05	06	08	06	34

II. Results for decrease in individual disorders:

Patient A

Diagnosis: Stress and Emotional Dysregulation

The patient was administered the following

Scales pre and post therapy:

1. Perceived stress scale (PSS)
2. Beck’s Anxiety Inventory (BAI)

Scale/ Test Condition	Perceived stress scale (PSS)	Beck’s Anxiety Inventory(BAI)
Pre-Test	46	45
Post-Test	09	08

Patient B

Diagnosis: Obsessive-compulsive Personality Disorder (OCPD).

The patient was administered the following scales pre and post therapy:

1. International Personality Disorder Examination(IPDE-WHO)
2. State and Trait Anxiety scale (STAI)
3. Beck’s Anxiety Inventory (BAI)

Scales/ Test Condition	IPDE-WHO	STAI - S	STAI - T	BAI
Pre-Test	08	60	49	39

Patient C

Diagnosis: Post-Traumatic Stress Disorder (PTSD).

The patient was administered the following scales pre and post therapy:

1. Post-Traumatic Stress Disorder Diagnostic scale (DSM-5)
2. Beck Depression Inventory (BDI)
3. Beck Anxiety Inventory (BAI)

Scales/ Test Condition	PTSD (DSM-V)	BDI	BAI
Pre-Test	41	13	28
Post-Test	12	08	12

Patient D

Diagnosis: Emotional Dysregulation

The patient was administered the following scales pre and post therapy:

1. Difficulty in Emotion Regulation Scale-SF(DERS-SF)
2. Beck Depression Inventory(BDI)
3. Beck Anxiety Inventor (BAI)

Scale/Test- Condition	DERS-SF	BDI	BAI
Pre -Test	73	12	34
Post-Test	26	08	12

Patient E

Diagnosis: Anxiety (GAD)

The patient was administered the following scales Pre and Post therapy:

1. Perceived Stress Scale (PSS)
2. State and Trait Anxiety(STAI-S)
3. State and Trait Anxiety(STAI-T)
4. Beck Anxiety Inventory(BAI)

Scale/ Test Condition	PSS-14	STAI-S	STAI-T	BAI
Pre-Test	47	70	68	45
Post-Test	20	32	28	16

Discussion

Neural underpinnings of Emotional regulation

Human beings are uniquely qualified to employ language, rational thinking, relational

processing and memory to execute deliberate, conscious emotion regulation strategies. The ability to self-regulate negative emotions in distress enhances mental and physical well-being and loss of such capacity confers risk towards psychopathology (John & Gross, 2004). A fundamental question in cognitive

affective neuroscience is; which neural circuit is involved in the control of emotion? Interrelated regions of the brain may serve as our emotional regulation circuitry. “Neural architecture” of emotion regulation in a way that distinguishes between two complementary but highly interconnected neural systems: a ventral system that underlies emotional arousal, emotional significance evaluation, motivational processes and a dorsal system that underlies relatively effortful, executive control functions such as attention regulation and cognitive control. (Critchley, 2005); (Luu, Tucker, D. M, & Derryberry, 1998).

The ventral system is sensitive to information that is motivationally significant and thus capitalizes on rapid and relatively automatic evaluative and regulatory processes. This system is activated under emotional conditions and is modulated by the use of cognitive emotion regulation strategies such as reappraisal. In emotion regulation research, four key structures have been emphasized: the amygdala, the insula, the striatum, and the medial orbitofrontal cortex (Fox, Morgan, Fidler, Daunhauer, & Barrett, 2013) and also, the Hippocampus, anterior cingulate cortex (ACC) and Dorsolateral and Ventral regions of the Prefrontal cortex (PFC) (Davidson, 2000).

Ochsner & Gross (2007), hypothesized that both bottom up (emotion as a response to environmental stimuli) and top down (emotions emerge as a result of cognitive process) models of emotional processing are involved in emotion regulation. When an aversive stimulus is encountered in the environment, a bottom up emotional response ensues, thus, the Amygdala, Nucleus Accumbens and Insula become active. These appraisal systems communicate with the cortex and Hypothalamus to generate responses. A top down emotional response may also begin with a stimulus in the environment. However, it may be a

discriminative stimulus, which suggests that the individual might predict that an aversive stimuli or sensation maybe on its way. The stimulus in top down processing may be a neutral one, which may provoke a negative response in a given context. In such cases, higher cognitive processes are involved in generating a modulated emotional response. These processes involve, PFC appraisal systems acting through lateral and medial PFC as well as ACC. It proves that modes of affective processing is interdependent and too complex to predict.

Role of Oxytocin in Emotional regulation

Oxytocin is a peptide hormone synthesized in the supra-optic and paraventricular nuclei of the hypothalamus with direct projections into other brain areas where it acts as a neurotransmitter. It is also released into the bloodstream via the posterior pituitary gland to peripheral targets. Oxytocin is not a classical neurotransmitter, i.e. limited to local actions by crossing a synapse between an axon and dendrite for its effects. Rather, oxytocin appears to be released from the neuronal soma, axons and dendrites, acting broadly in the nervous system as a neuromodulator. Upon release, oxytocin may flow through neural tissue by a process termed volume transmission (Neumann & Landgraf 2012). For example, there is evidence that oxytocin from the paraventricular nucleus (PVN) of the hypothalamus can reach the central amygdala via anatomical “expressways”, allowing this molecule to quickly modulate emotional functions of the amygdala and brain stem (Stoop 2012). In the presence of oxytocin, avoidance or fear may be replaced by approach and positive emotional states (Carter 1998).

Emotional dysregulation and irritability are recognized as serious aspects of psychopathology seen in psychiatric patients.

Some studies have demonstrated that heightened amygdala response to negative emotional stimuli is closely related to irritability and emotional dysregulation in children and adolescents. Some studies have been conducted on the role of oxytocin on irritability/emotional dysregulation of disruptive behaviour and mood disorders through clinical trials sponsored by the University of Nebraska, showing administration of oxytocin can decrease the heightened amygdala response to negative emotional stimuli across various psychiatric diagnoses.

Human studies have confirmed oxytocin's role as a social hormone, mediating many social behaviours involved in forming attachments. In healthy controls, oxytocin decreases cortisol release and anxiety in response to social stress and reduces amygdala activity to fearful or threatening visual images or emotional faces (Cochran, Fallon, Hill, & Frazier, 2013).

Oxytocin may mediate the buffering effects of positive relationships and modulate reactivity to stressful experiences. The study by Lane et al. provides the first evidence that oxytocin increases people's willingness to share their emotions. Importantly, oxytocin did not make people more talkative (word counts were comparable across the two groups) but instead increased the willingness to share the specific component that is responsible for the calming and bonding effects of social sharing: emotions. (Lane, Luminet, Rimé, Gross, de Timary, & Mikolajczak, 2013).

Thus, the capacity to be close to and sensitive to others, which is typical of loving relationships, can be supported by oxytocin's behavioural effects. In the face of a severe challenge, oxytocin could initially support an increase in arousal and activation of the sympathetic nervous system and other

components of the HPA system but, in the face of chronic stress, the anti-stress effects of oxytocin may take precedence, permitting a more passive form of coping and immobility without fear (Porges, 1998). These findings suggest that oxytocin has effects on the regulation of emotion, stress, anxiety, coping and healing.

Neurochemical effects of ReAttach and Oxytocin

During ReAttach, physical contact is provided to the patient, gently and frequently in the form of tapping on the back of the patient's hand to activate arousal, which in turn stimulates the brain to produce the hormone oxytocin, which plays an important role in the bonding process and is a direct reward of social contact. (Bartholomeus, 2015).

Oxytocin facilitates social bonds and trust as well as counteracts stress by dampening the activity of physiological stress-systems, increases parasympathetic activity and regulates glucocorticoid receptor expression in the hippocampus. Oxytocin is implicated in the ontogenetic development of the neocortex and thus plays an important role in the construction of internal models. For example, it stimulates genetic regulation of the growth of the neocortex and the maintenance of the blood supply to the cortex - conditions that are prerequisites for the formation and sustenance of internal autobiographical models. In humans, oxytocin also facilitates cognitive control that helps individuals to bring behaviour in line with internal models since behaviour control is a highly valued aspect of therapeutic success (Carter, 2014). Oxytocin unfolds effects on a higher level of brain functioning. Specifically, while increasing familiarity and trust within a social context, oxytocin promotes the assimilation of novel emotional experiences into internal models (Tops, et al. 2013). Oxytocin might facilitate the establishment of a positive

therapeutic alliance and a relaxed atmosphere during therapy, which makes it easier for patients to awaken conflictual memories and tolerate concomitantly resurfacing negative emotions.

Therefore, the above mentioned discussion and results clearly indicate that the ReAttach therapy intervention shows promising results in bringing down the symptomology of emotional dysregulation, anxiety and stress, which in turn reduces pathological symptoms associated with respective disorders. For example, in the case of patient A with stress and emotional dysregulation, the levels of perceived stress have gone down from 46 to 18 and the similar results are depicted in BAI, where the anxiety index has decreased from 45 to 09, which is quite considerable. Also, in patient E, diagnosed with Anxiety(GAD), the measurement of PSS-14 in pre-test and post-test shows a decrease from 73 to 26, BAI from 45 to 16, STAI-S from 70 to 32 and STAI-T from 68 to 28. In patient D, diagnosed with emotional dysregulation, the measurement of DERS-SF in pre-test and post-test shows a decrease from 47 to 20, BDI from 12 to 08 and BAI from 34 to 12.

In the case of patient B with OCPD, the rigid over control of emotion characteristic of OCPD stands apart from excessive emotional expressivity and affective lability often present in other personality disorders. It is possible that the emotional suppression and constriction associated with the disorder reflects broader underlying emotion difficulties that may deleteriously affect functioning. That explains the reason for the eruption of evident moments of emotional dysregulations and brief aversion (patient B of OCPD and patient C of PTSD) to the therapy, which was taken care of during the therapeutic process. Some affective results shown above indicate a decrease not only in STAI and BAI, but also symptoms of OCPD have been found to be decreased.

Conclusion

A reduction in emotional regulation problems and explosive behaviour has been observed in all the five patients, across the various disorders. These findings might be the result of attaining a more realistic and coherent understanding of themselves and the world through better multi-sensory information processing. ReAttach therapy by its Multi-Sensory Integration Processing through Cognitive Bias Modification, has been found to be helpful in emotional dysregulation. It has been found that it facilitates social bonding and acts as a buffer against stress, anxiety and affect regulation. One might think of oxytocin as the magic ingredient in Danish *hygge* - the cosy, contented feeling of being with trusted others.

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Conflicts of interests

The author declares no conflict of interests.

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Appendices:

Appendix A

Interpretation of CSE-R scores

In terms of Normative Deviation	CSE-R total score	NDS	Percentile
Very serious problems	>34	>1.96	>97
Serious problems	31-34	1.65 -1.96	95-97
Substantial problems	28-30	1.29–1.64	90-94
Moderate problems	26-28	1.00-1.28	84-89
No problems	<26	<1.00	<84

Normative group(N=62) 32.26% male, age M=40.45, SD=16.22, range=7-74
 CSR-R mean score 15.24, SD 9.79

Patient group(N=727) 32.74% male, age M=39.55, SD=17.61, range=5-94
 CSE-R mean score 43.81, SD 8.48

Appendix B

Interpretation of DERS-SF

Scale can be scored using sums of items. Note that all three items in the Awareness Scale should be reverse coded. All subscales are scored so that higher values reflect greater difficulty with emotion regulation. Subscales: Strategies, Non-acceptance, Impulse, Goals, Awareness, Clarity.

Total sum of all the items in the questionnaire gives the score.

1R, 2, 3, 4R, 5, 6R, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.

Appendix C

Interpretation of various Scales used in this research paper:

Interpretation of Perceived Stress Scale

Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress.

Scores ranging from 0-13 would be considered low stress.

Scores ranging from 14-26 would be considered moderate stress.

Scores ranging from 27-40 would be considered high perceived stress.

Reliability: alpha = .78

Validity: Correlates in a predicted way with other measure of stress

Scoring:

PSS-14 scores are obtained by reversing the scores on the seven positive items, e.g., 0=4, 1=3, 2=2, etc., and then summing across all 14 items. Items 4, 5, 6, 7, 9, 10, and 13 are the positively stated items.

Interpretation of Beck Anxiety Inventory-(21 items)

Score ranging from 0 – 21 indicates very low anxiety.

Score ranging from 22 – 35 indicates moderate anxiety.

Score ranging from 36 and above indicates high anxiety.

Interpretation of Beck Depression Inventory-(21 items)

Score ranging from 0 – 10 indicates normal range.

Score ranging from 10 – 16 indicates mild mood disturbance.

Score ranging from 17 – 20 indicates Borderline clinical depression.

Score ranging from 21 – 30 indicates Moderate depression.

Score ranging from 31– 40 indicates severe depression.

Score ranging from 40 – above indicates extreme depression.

Interpretation of State trait Anxiety Inventory

Score interpretation

Range of scores for each subtest is 20-80, the higher score indicates greater anxiety.

A cut point of 39-40 has been suggested to detect clinically significant symptoms for the S-Anxiety scale; average score range: 26-46, however other studies have suggested a higher cut score of 54-55 for older adults.

http://homepages.uc.edu/~griesiws/ascl_scoreint.htm