The Effectiveness of Combining Cognitive Processing Therapy with a Case Formulation Approach in the Treatment of Posttraumatic Stress Disorder – A Randomised Controlled Trial

Marja Elizabeth
Psychologist; PhD Candidate, Psychology, Flinders University
marja.elizabeth@flinders.edu.au

Reg Nixon
Professor, Psychology, Flinders University
reg.nixon@flinders.edu.au

Flinders UNIVERSITY

What is a ‘traumatic event’

- Involves actual or threatened death, serious injury, or sexual violence.
- A person can be exposed in the following ways:
  - Directly experiencing a trauma(s)
  - Witnessing a trauma(s) in person
  - Learning that the traumatic event occurred to a close family member or close friend. In cases of actual or threatened death to a family member or friend, the event must have been violent or accidental.
  - Indirect exposure to aversive details of someone else's trauma(s) usually in the course of professional duties

Flinders UNIVERSITY

For a PTSD diagnosis, a person must have symptoms in the following areas:

- **Reexperiencing -** dreams, memories, flashbacks
- **Avoidance -** of trauma related thoughts, feelings or reminders
- **Negative thoughts or feelings -** gaps in memory, negative thoughts about self, others or the world, exaggerated blame of self or others, decreased interest in activities, feeling isolated
- **Arousal and reactivity –** aggression, irritability, hypervigilance, risky behaviour, startle reactions, difficulty concentrating, sleep issues

- Symptoms last more than one month
- Symptoms cause distress or functional impairment (e.g. social, occupational)

PTSD

- Lifetime prevalence of being exposed to at least one traumatic event ranges between 50-75%

- PTSD prevalence in Australian population estimated at 4.4% over 12 month period and 7.2% lifetime (15-25% of people exposed to a traumatic event have also had diagnosis of PTSD) (Australian Centre for Posttraumatic Mental Health, 2013)

PTSD

- PTSD symptoms nearly universal after a very serious traumatic event, with recovery taking a few months under normal circumstances (Resick et al, 2014)

- PTSD symptoms generally remit following exposure to a traumatic stressor, with the steepest remission in the first 12 months after diagnosis.

- PTSD is a disruption in that normal recovery process

Audience Poll 1

How many ‘traumatic events’ have you experienced in your lifetime?

Flinders UNIVERSITY

Treatment

- Trauma focused interventions (e.g. TF-CBT or eye movement desensitisation and reprocessing (EMDR)) is recommended treatment for PTSD (Australian Centre for Posttraumatic Mental Health, 2013; Bradley, Greene, Russ, Dutra & Westen, 2005; Forbes et al., 2007; National Institute for Health and Care Excellence, 2005).

- Cognitive Processing Therapy (CPT) is a cognitive-behavioural treatment for PTSD shown to be effacious in at least 15 randomised clinical trials, and multiple other studies with a wide range of traumas.

Flinders UNIVERSITY

Audience Poll 2

Once you have PTSD you have it forever and need to learn how to manage it.

- True

- False

Flinders UNIVERSITY

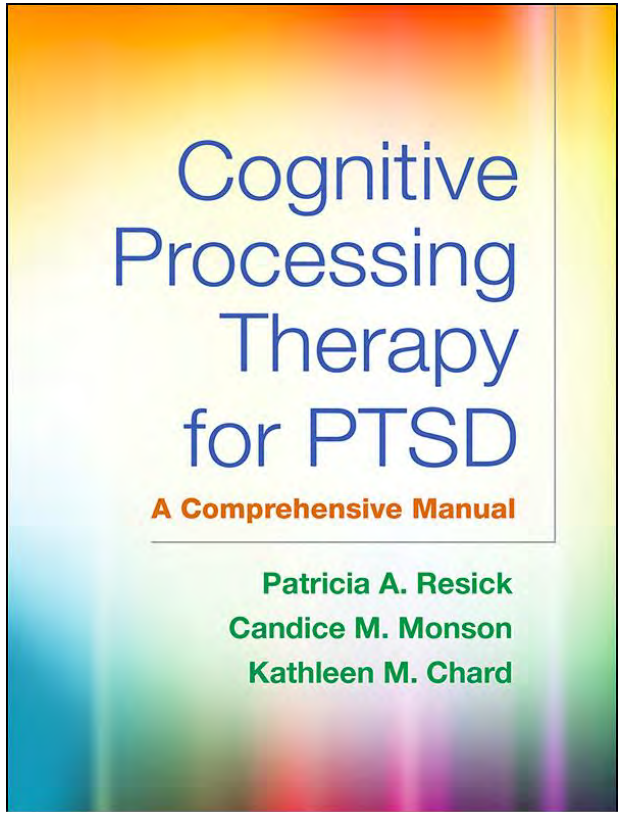
Research

- 15 published randomised controlled trials (RCTs) of CPT

Traumas	Populations	Locations	Modalities	Comparison conditions
• Rape • Child sexual abuse • Physical assault • Military sexual trauma • Combat • All studies include individuals with multiple traumas	• Civilian • Active duty • Veteran • Male • Female	• U.S.A. • Australia • Germany • Democratic Republic of Congo	• CPT • CPT+A • Individual • Group • Combined • Telehealth	• Delayed treatment • Treatment as Usual • Present-Centred Therapy • Prolonged Exposure • Dialogical Exposure Therapy • Differing CPT modalities

CPT

- Manualised protocol
- Typically delivered over 12-15 sessions in this study
- Manual ≠ inflexible



Flinders UNIVERSITY

CPT structure

1. Overview of PTSD and CPT
2. Examining Impact of Trauma
3. Working with Events, Thoughts and Feelings (ABC)
4. Examining the Index Event (ABC)
5. Challenging Questions
6. Patterns of Problematic Thinking
7. Challenging Beliefs
8. Processing Safety
9. Processing Trust
10. Processing Power/Control
11. Processing Esteem
12. Processing Intimacy and Meaning of the Event

Flinders UNIVERSITY

CPT: Early sessions (~1-5)

- PTSD psycho-education
- Treatment rationale
- Emotions: natural vs. manufactured
- Goals
- Focused on resolving guilt, blame, shame
- Developing a stuck point log

Possible challenges

- Engagement with therapy (prior tx experiences)
- Trust / disclosure
- Avoidance (active and automatic [e.g., dissociation])
- Affect regulation

Flinders UNIVERSITY

CPT: Questioning the Stuck Points [unhelpful beliefs] (Sessions ~6-8)

More direct questioning of stuck points

- Challenging Questions Worksheet

Identification of patterns of unhelpful thinking

- Patterns of Problematic Thinking Worksheet

Likely challenges

- Highly self-**critical voice 'undoes' some of the challenging**
- Non-compliance with practice/homework
- Strong affect in session / numbing
- Off-topic issues and conversations
- Rigidity in thoughts / little change

Flinders UNIVERSITY

Challenging Questions Worksheet

Below is a list of questions to be used in helping you challenge your Stuck Points or problematic beliefs. Not all questions will be appropriate for the belief you choose to challenge. Answer as many questions as you can for the belief you have chosen to challenge below.

Belief:

1. What is the evidence for and against this Stuck Point?

    For:

    Against:

2. Is your Stuck Point a habit or based on facts?

3. In what ways is your Stuck Point not including all of the information?

4. Does your Stuck Point include all-or-none terms?

5. Does the Stuck Point include words or phrases that are extreme or exaggerated (such as ***"always," "forever," "never," "need," "should," "must," "can't," and "every time"***)?

6. In what way is your Stuck Point focused on just one piece of the story?

7. Where did this Stuck Point come from? Is this a dependable source of information on this Stuck Point?

8. How is your Stuck Point confusing something that is possible with something that is likely?

9. In what ways is your Stuck Point based on feelings rather than facts?

10. In what ways is this Stuck Point focused on unrelated parts of the story?

CPT: Alternative beliefs and themes

(Sessions ~9-16)

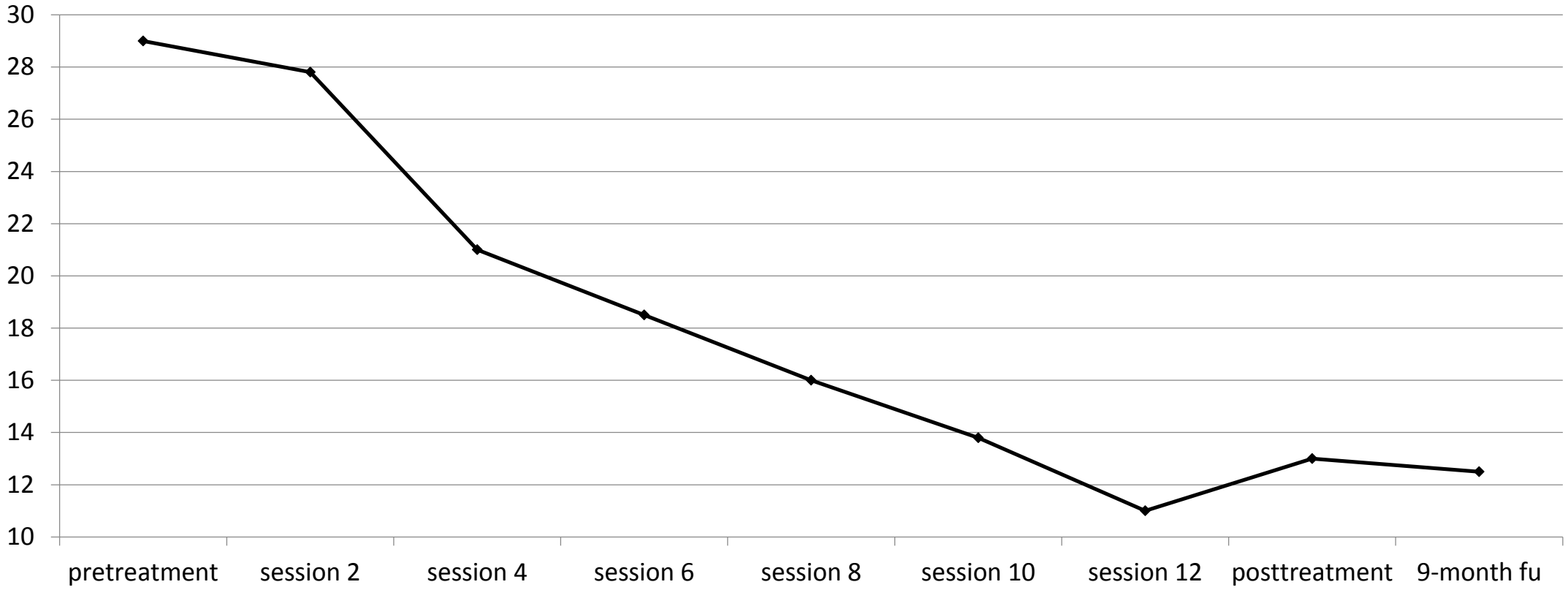
Putting it all together (Challenging Belief Worksheet)

Themes (accompanied by handouts)

- Safety
- Trust
- Power/control
- Esteem
- Intimacy

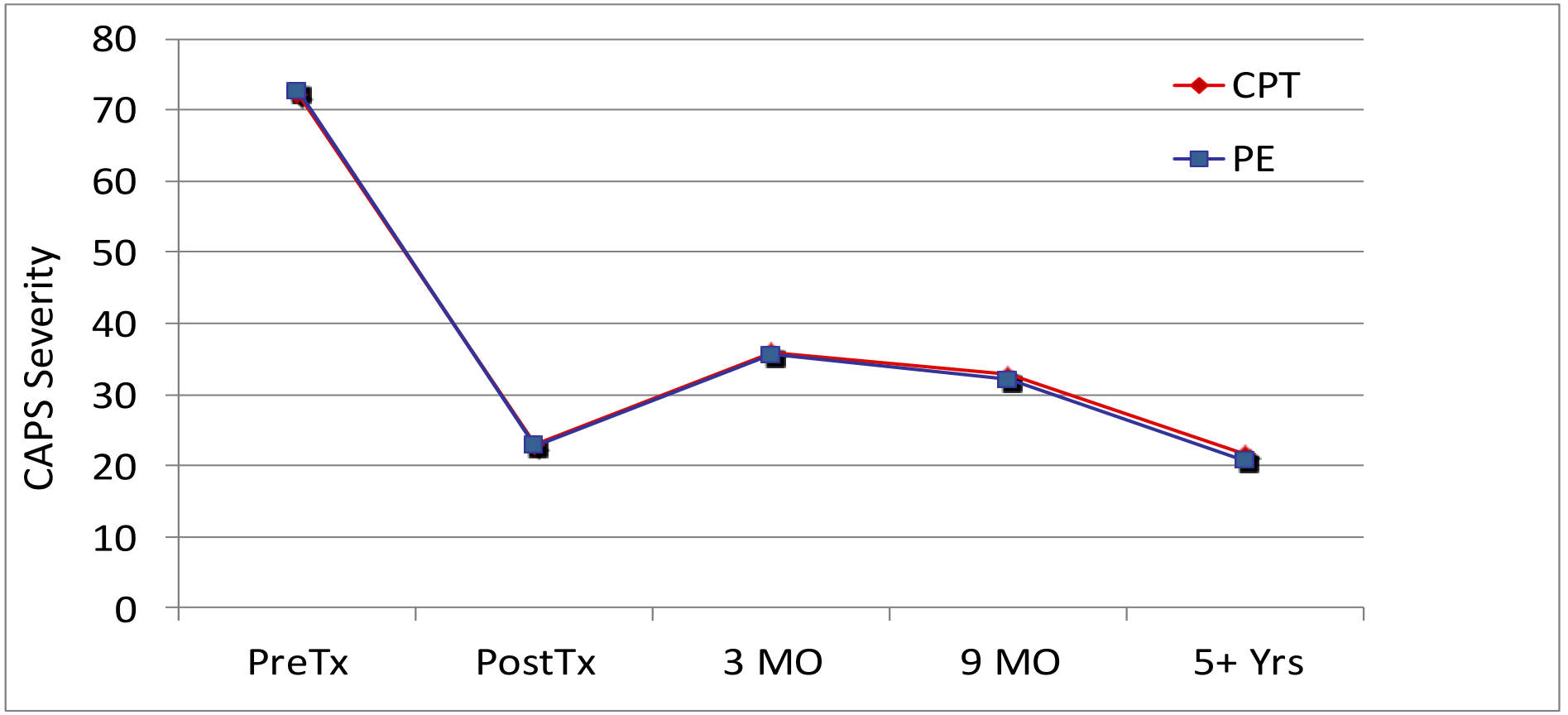
Flinders UNIVERSITY

Typical pattern of PTSD severity reductions during CPT
(using PDS, group average, from Resick et al. 2008)



Flinders UNIVERSITY

LONG-TERM OUTCOME OF CPT
(Resick et al. 2012)



Flinders UNIVERSITY

So if CPT is so good why are we doing any more study on it?

Flinders UNIVERSITY

Barriers

- Non response to treatment and dropout rates in PTSD treatment can be high (25-50%) (Bisson, Roberts, Andrew, Cooper, & Lewis, 2013; Brady, Warnock-Parkes, Barker, & Ehlers, 2015; Schottenbauer et al., 2008)

- More 'complex' clinical cases *may* not benefit from standardised versions of CBT alone (Tarrier & Calam, 2002; Wagner, Rizvi & Harnod, 2007)

- Other non clinical factors may also impede (e.g. motivation; work related issues)

- Manualised treatment *might* elicit greater dropout rates as they leave little leeway for the therapist to individualise treatment and address immediate concerns and thus restrict the therapist (Hembree et al., 2003; Schottenbauer et al., 2008).

- In clinical practice therapists can re-evaluate progress and provide continued treatment as required with additional flexibility in sessions possibly improving treatment outcomes (Schottenbauer et al., 2008).

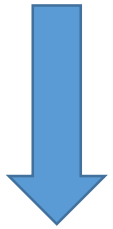
Some Challenges

- Ambivalence, -ve beliefs about therapy
- Extreme levels of anxiety / poor distress tolerance
- Significant depression/suicidality
- Severe anger/homicidality
- Substances
- Psychosis
- Personality Disorders
- Cognitive impairment
- Pain
- Traumatic grief
- Safety
- Returning to danger
- Psychosocial stressors and crises
- Logistics (limited access to face to face,…..)
- Compensation
- Criminal justice system

Emotional dysregulation (e.g., significant expression of affect or numbing)

Significant avoidance behaviors (e.g., poor attendance, lack of homework compliance, behavioral avoidance within and outside of the session)

Rigidity in beliefs



Suboptimal engagement / outcome

Rationale for study

Exposure to a traumatic event is common

Whilst not all people who experience trauma go on to develop PTSD, the rates in the general population are considerable and the symptoms can be debilitating

Although CPT is an effective treatment, not all benefit with some dropping out or not responding to treatment; particularly for complex cases

Individualising treatment based on the needs of the client so that issues obstructing therapy are explicitly addressed may be more beneficial

A combined approach – CPT+ case formulation (CF)

- Case formulation - a collaborative approach between client and therapist which identifies causes, precipitants and maintaining factors associated with the presenting issue (Allen et al., 2016).
- Case formulation combined with CBT therapies can have positive effects (Lewis, 2002; Sensky, 2000; Stanley et al, 2009); however other studies have found no significant differences
- There is also very little evidence on the quality or type of case formulations used and their impact on treatment outcomes

Aims

- To investigate whether a combination of CPT and case formulation has any effect on client outcomes including:
  - Therapy drop out rates
  - Response to treatment

- Whether there are any other factors that contribute to treatment outcomes in a combined approach and which might affect client outcomes, for example:
  - Complexity of clients
  - Levels of deviation from the CPT protocol
  - Therapeutic alliance
  - Other?

Hypotheses

Participants in both treatment groups will demonstrate a reduction in PTSD symptoms, however;

Participants in the CPT/CF treatment group will show a greater reduction in PTSD symptoms.

Flinders UNIVERSITY

And…

- Client complexity will moderate outcomes – expectation is that clients with complex outcomes will have a greater reduction of PTSD symptoms in the CF/CPT group than in the CPT alone treatment group

Flinders UNIVERSITY

Method - Design

- Randomised Controlled Trial – CPT v CPT+CF
- Measures taken at pre-, post-treatment and six month follow up; PTSD symptoms also tracked weekly during therapy.
- Reliability and quality issues
  - Videotaping all sessions and checking therapy quality
  - Blind assessors conducting follow up

Method - Participants

- Initial aim was 30 participants in each group

- Recruited through:
  - Referrals or self referrals to PTSD Unit at Flinders
  - Flyers throughout Flinders and community
  - Ads in the Messenger and on Facebook
  - Located at Yarrow Place one day per week – sexual assault and domestic violence trauma

  - Some of referral sources: GPs, SAPOL and first responders, word of mouth, ex-clients

Inclusion and exclusion criteria

Inclusion

- PTSD diagnosis
- 18 years of age*
- At least 1 month post-trauma

Exclusion

- Imminent suicide risk
- Uncontrolled mania or psychosis
- Substance Dependence needing detox
- Severe cognitive impairment
- Current involvement in violent relationship

Not Exclusion Criteria:

Personality Disorders, Substance Use/Abuse, Dissociation, Depression, Panic, other comorbid conditions, history of multiple traumas

Flinders UNIVERSITY

Current status

- Over 200 contacts to the study since February 2017
- 82 clients assessed as eligible and either completed or in treatment
- 14 clients dropped out after 1 or more treatment sessions
- 56 clients completed treatment
- 12 currently in treatment
- Age (range 21-69 years; mean 43.94 years)
- Gender (male n=28; female n=54)
- Time since trauma (range 1 month – 55 years; mean 17.09 years)

Flinders UNIVERSITY

Current Comorbidities

Past Suicidality	65.9%
Major Depressive Disorder	62.2%
Alcohol Use Disorder	45.1%
Generalised Anxiety Disorder	43.9%
Panic Disorder	40.2%
Agoraphobia	34.1%
Social Anxiety Disorder	30.9%
Obsessive Compulsive Disorder	15.9%
Substance Abuse Disorder	12.2%
Manic	7.3%
Eating Disorder	7.3%
Psychosis	3.7%

Percentage who have experienced other trauma types

Trauma Type	
Serious transportation accident	79.3%
Physical assault (family/known)	64.6%
Sexual assault (family/known)	52.4%
Physical assault (stranger)	51.2%
Assault with a weapon	47.6%
Serious work accident	45.1%
Violent death (suicide, homicide)	43.9%
Fire or explosion	42.7%
Sexual assault (stranger)	31.7%
Natural disaster	24.4%
Exposure to toxic substances	17.1%
Caused injury/death to another	15.9%
Military, war zone	6.1%

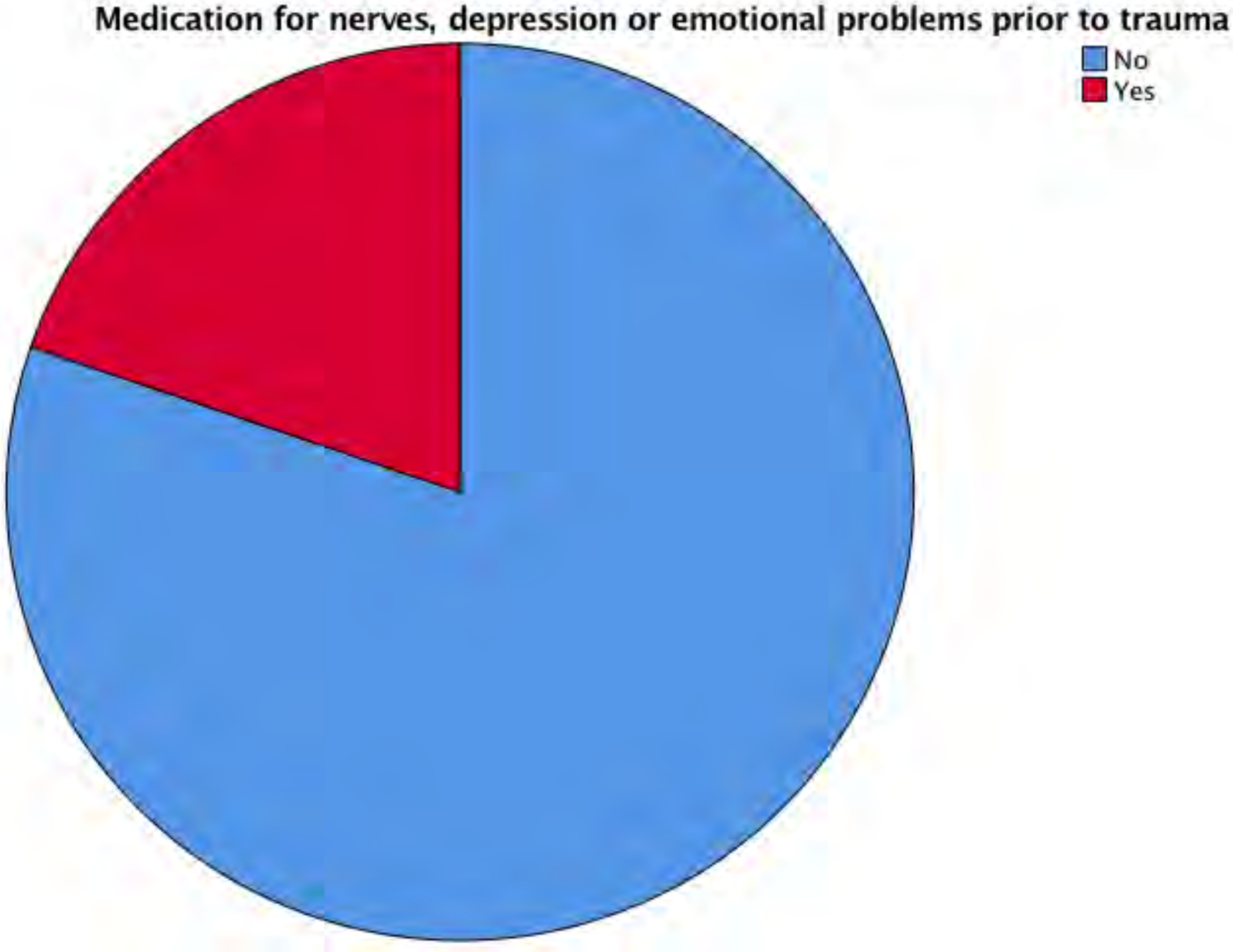
Psychiatric Hospitalisations pre-post trauma

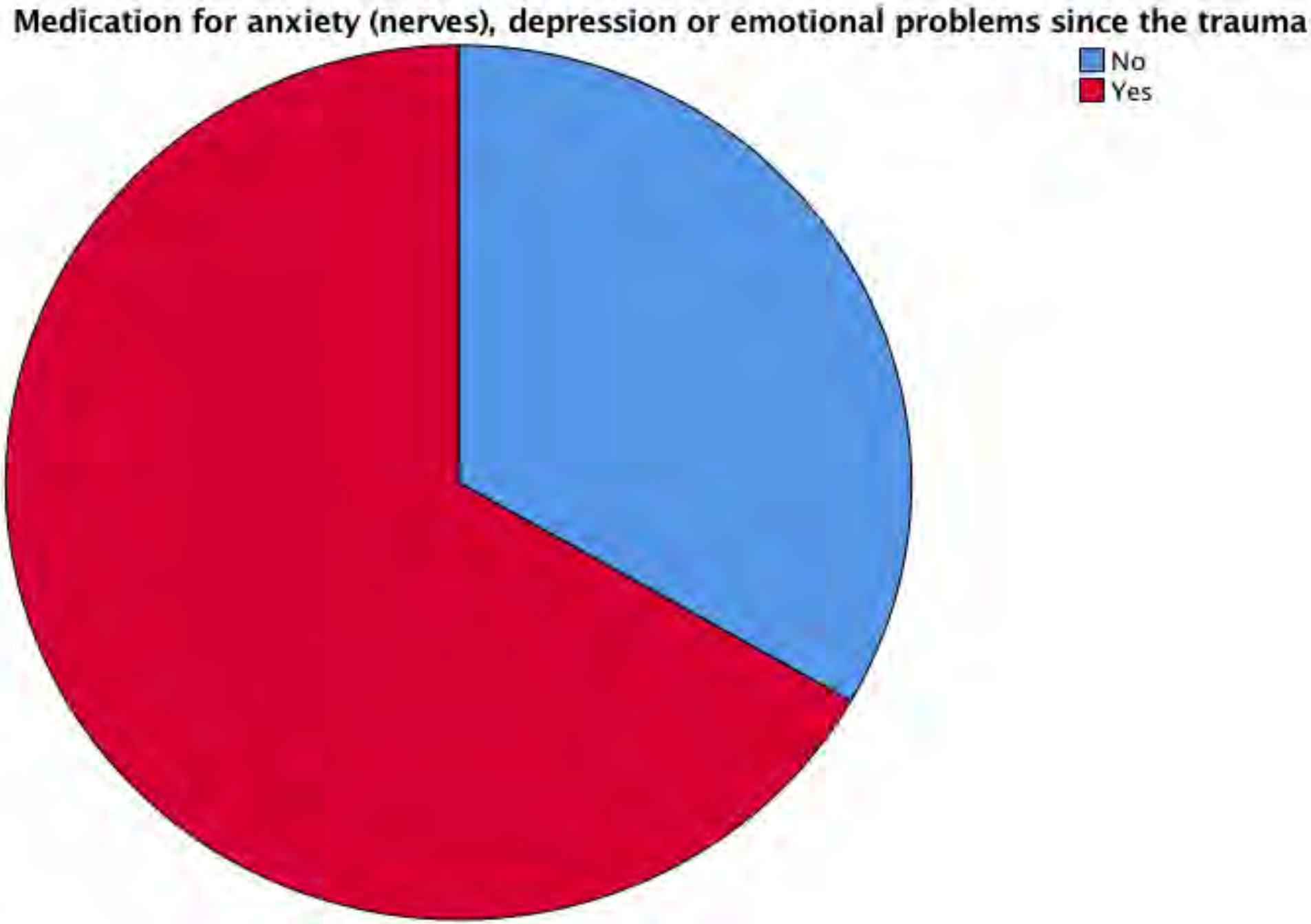
	Yes
Hospitalisations - prior	12.3%
Hospitalisations - post	32.3%
- Of those hospitalised post trauma (N):	
• *1-10 days*	15
• *11-20 days*	4
• *21-60 days*	4
• *100 days*	1
• *300 days*	1
• *420 days*	1

Therapy pre-post trauma

(for 'emotional' issues)

# sessions	Pre Trauma (#)	Post Trauma (#)
0	49	10
1-20	25	39
21-40	2	8
41-60	1	4
61-80	0	5
81-100	1	4
101-200	1	6
201-400	1	4


Medication for nerves, depression or emotional problems prior to trauma
No
Yes


Medication for anxiety (nerves), depression or emotional problems since the trauma
No
Yes

Audience Poll 3

- What is your estimate of the average cost of treating one person for PTSD per annum (taking into account therapy provided, hospitalisations, medication costs, doctors visits, lost productivity)?

Preliminary results

	Pre Tx	Post Tx (n=53)	Follow up (n=37)
Diagnosis of PTSD (CAPS)			
Yes	100%	5.7%	8.1%

Subjective levels of distress

	Pre Tx	Post Tx (53)	Follow up (37)
Distress			
- *No adverse impact*	0%	38.9%	35.1%
- *Mild*	1.2%	40.7%	43.2%
- *Moderate*	25.6%	16.7%	10.8%
- *Severe*	63.4%	3.7%	8.1%
- *Extreme*	9.8%	0%	2.7%

Subjective level of social functioning

	Pre Tx	Post Tx (53)	Follow up (37)
Social functioning			
- *No adverse impact*	1.2%	57.4%	54.4%
- *Mild*	6.1%	29.6%	16.2%
- *Moderate*	37.8%	11.1%	24.3%
- *Severe*	41.5%	1.9%	2.7%
- *Extreme*	13.4%	0%	2.7%

Subjective level of occupational functioning

	Pre Tx	Post Tx (53)	Follow up (37)
Occupational			
- No adverse impact	1.2%	57.4%	67.6%
- Mild	14.6%	24.1%	18.9%
- Moderate	42.7%	16.7%	8.1%
- Severe	32.9%	1.9%	2.7%
- Extreme	8.5%	0%	2.7%

Case Studies

Avoidance

Client, in 50s, female, divorced
Severe domestic violence
20yrs posttrauma
CAPS 63, PCL 56
MDD, Social Anxiety, GAD, Alcohol (severe)

Treatment likely to be successful: poor/moderate

Attendance: good

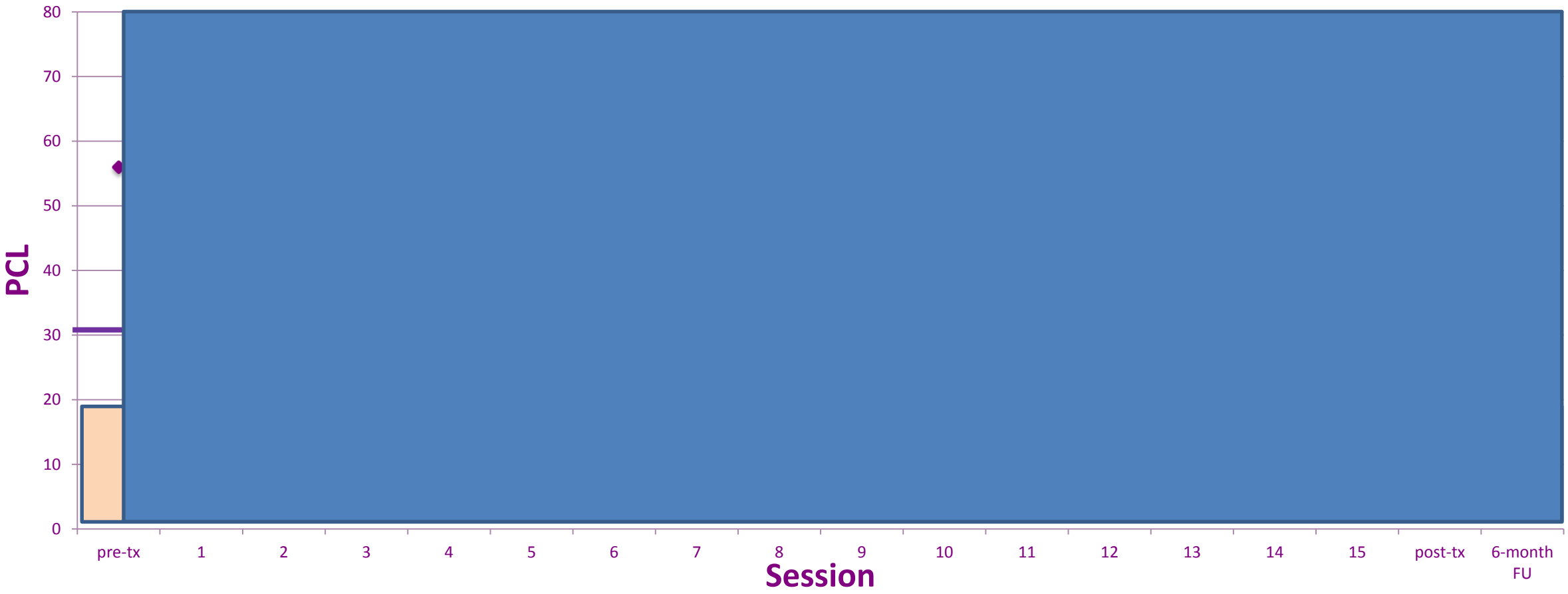
Homework completion: poor

Engagement in session: poor – moderate

- often wanted to discuss nontrauma topics
- resistant / hostile when gently directed back to trauma

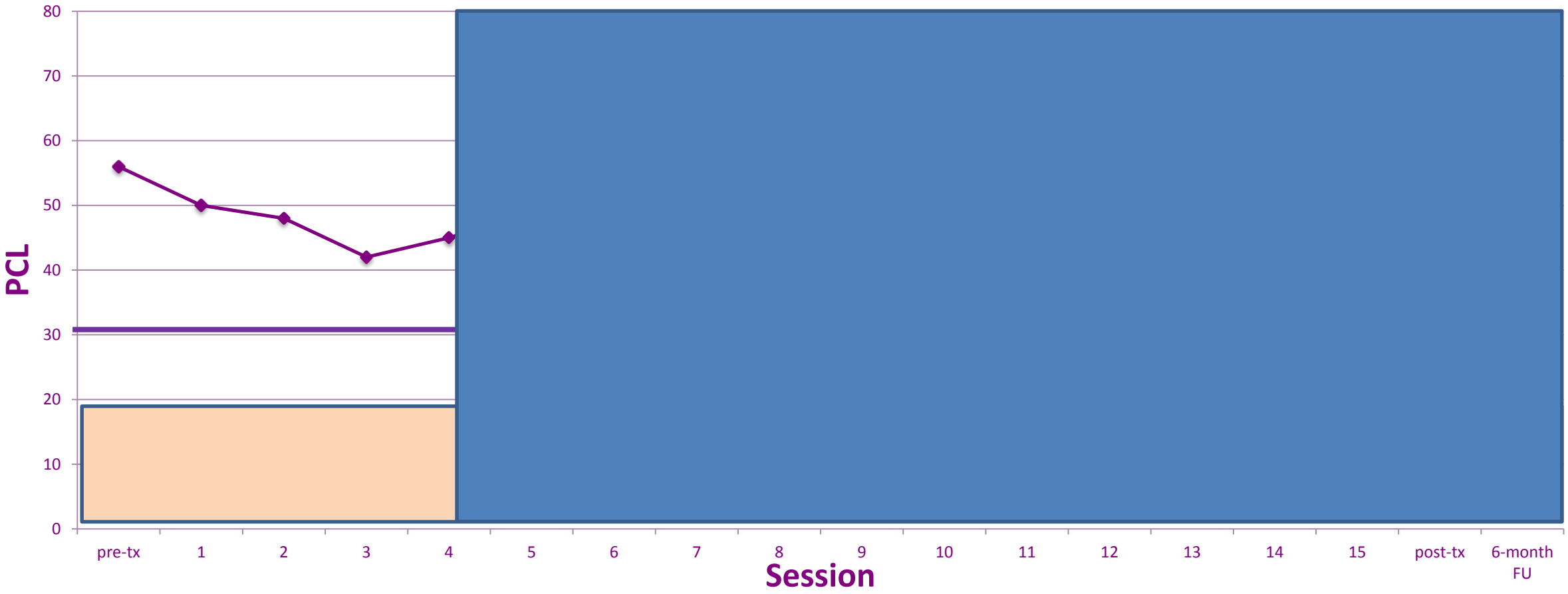
Willingness to engage with feelings: poor

Beliefs/SPs: very rigid


80
70
60
50
40
30
20
10
0
PCL
pre-tx
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
post-tx
6-month FU
Session

S2 Didn't do
Impact Statement
on index trauma

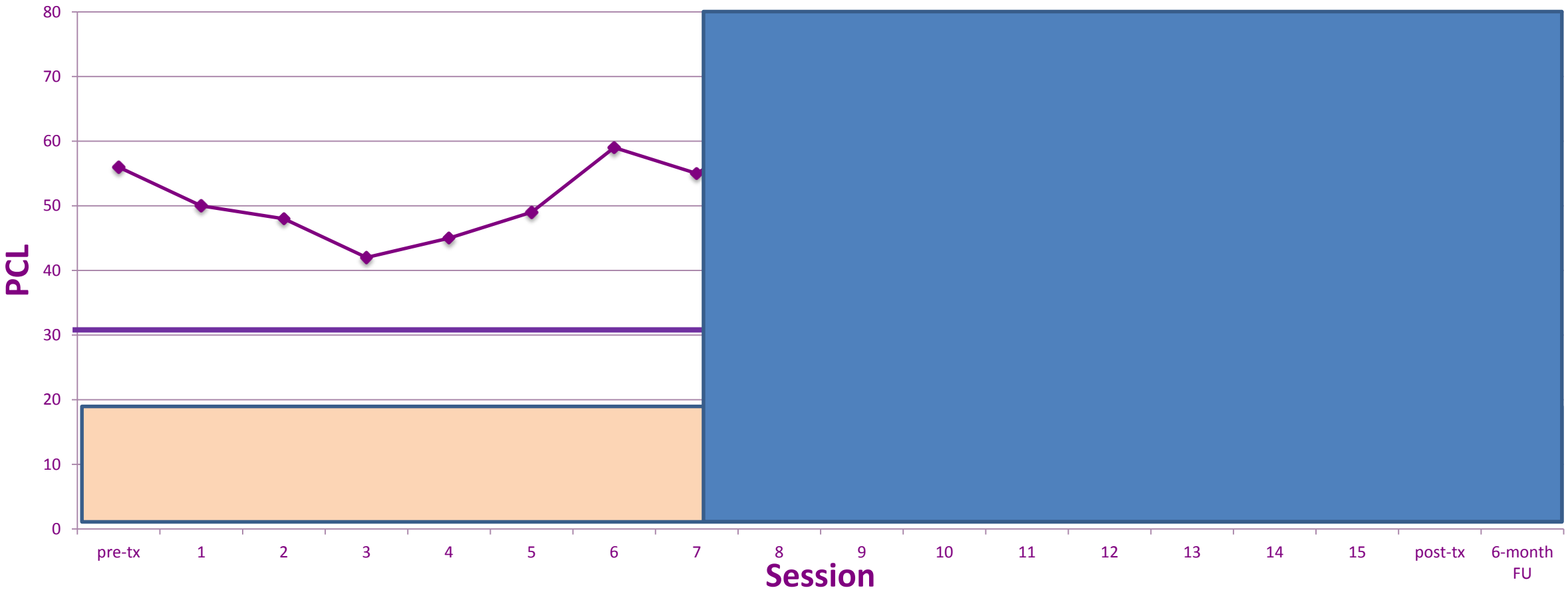
S4 Didn't do
ABCs on trauma



S6 ‘Therapy not working’

[SP re blame very rigid]

S7 motivation discussed

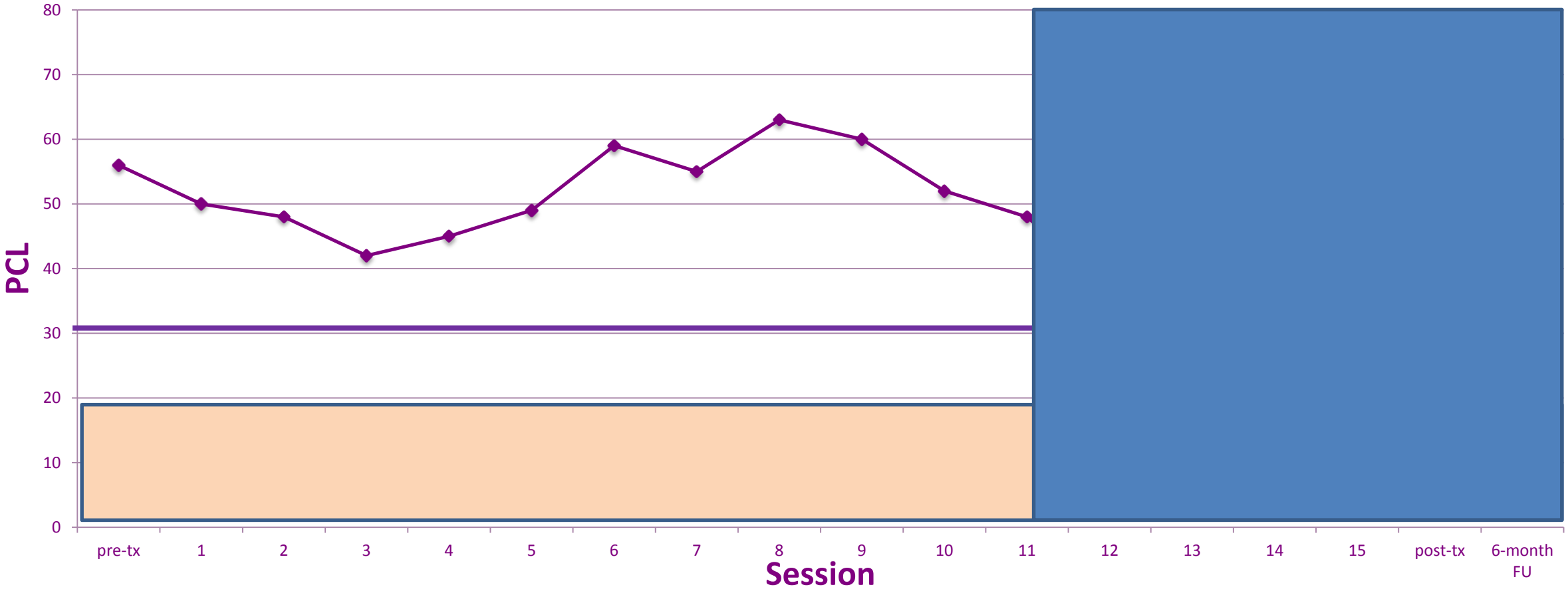


S8 avoidance discussed, MI, ETOH monitoring initiated

S10 avoidant, ETOH high, disengaged in session

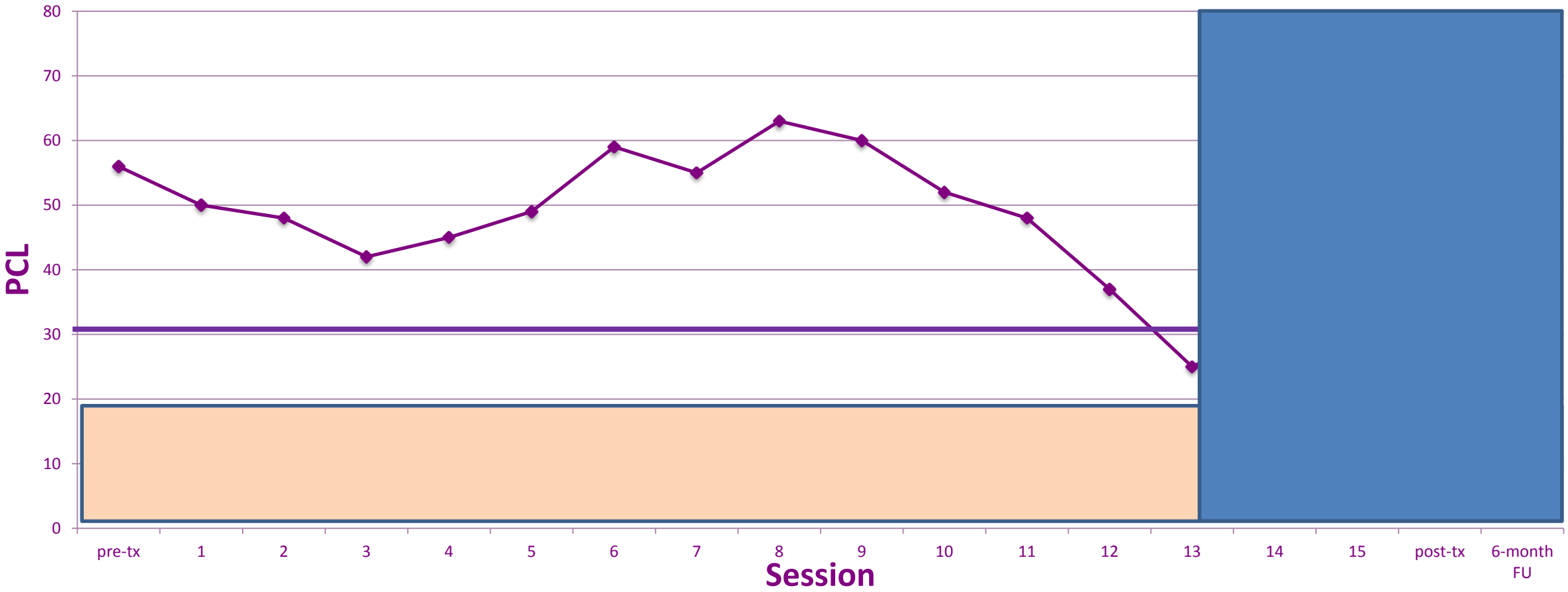
S9 self-blame 0%

S11 non-CPT, distress tolerance, ETOH as avoidance



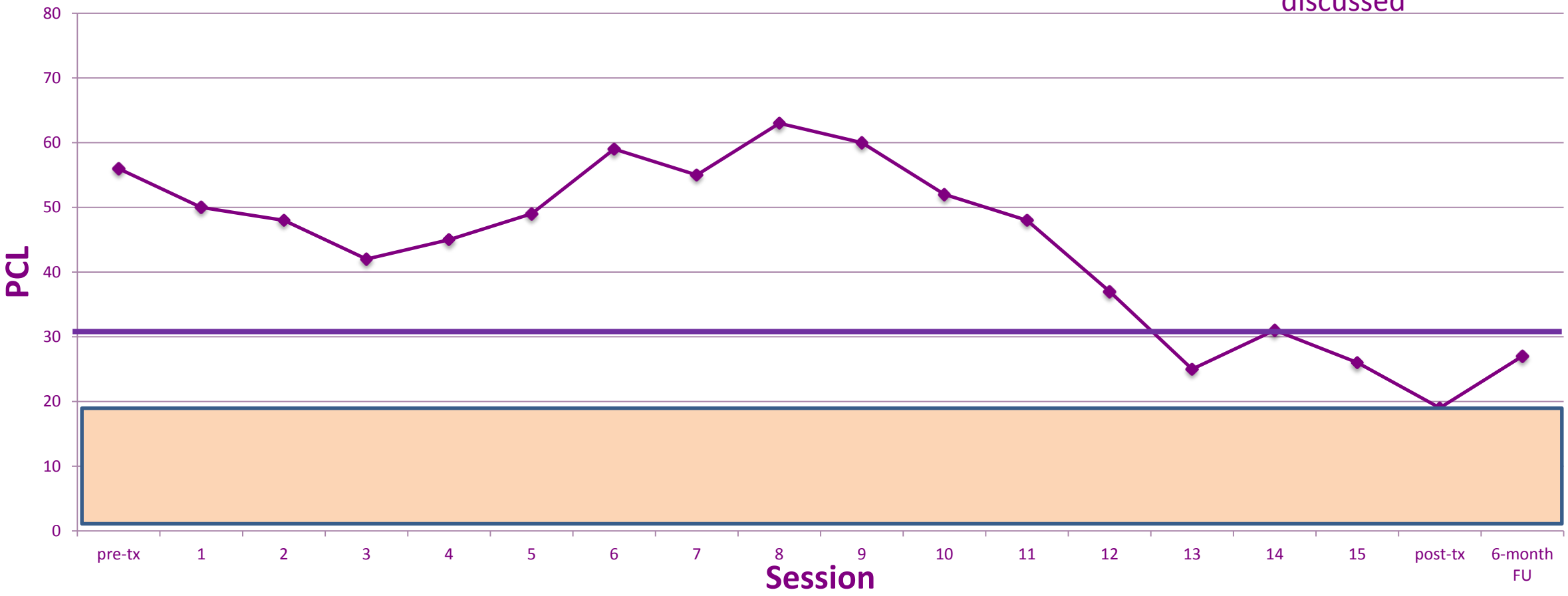
S12 CPT as usual

S13 distress tolerance skills



S14 moderate CPT deviation (family issues)

S15 future ETOH use discussed



CAPS pre: 67, post: 42, FU: 17

Rigidity in beliefs

Client, in 30s, female, single
Index trauma - sexual assault at 15yo, (CSA also)

CAPS 49, PCL 46

MDD, Suicidal Beh Dis, Panic Disorder, Social Anxiety Disorder
Prior suicide attempt 1.5yrs previously

Treatment likely to be successful: moderate

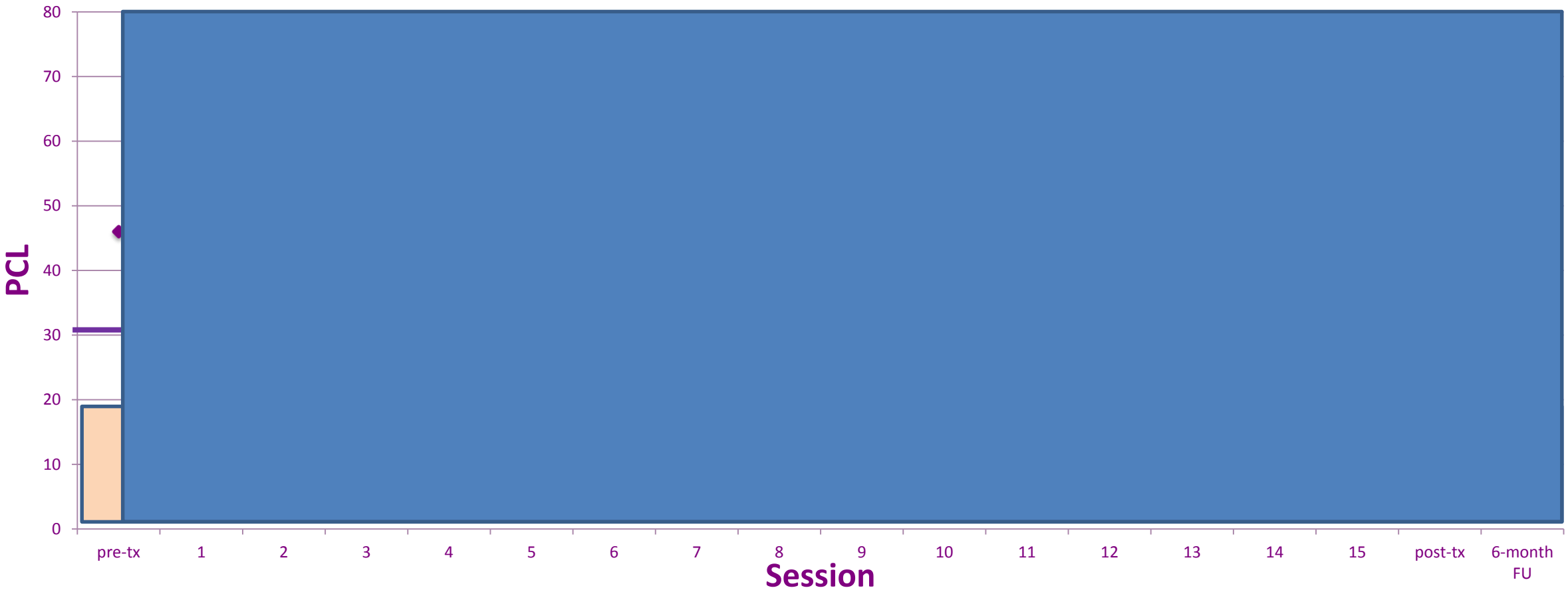
Attendance: very good

Homework completion: very good, but emotional engagement?

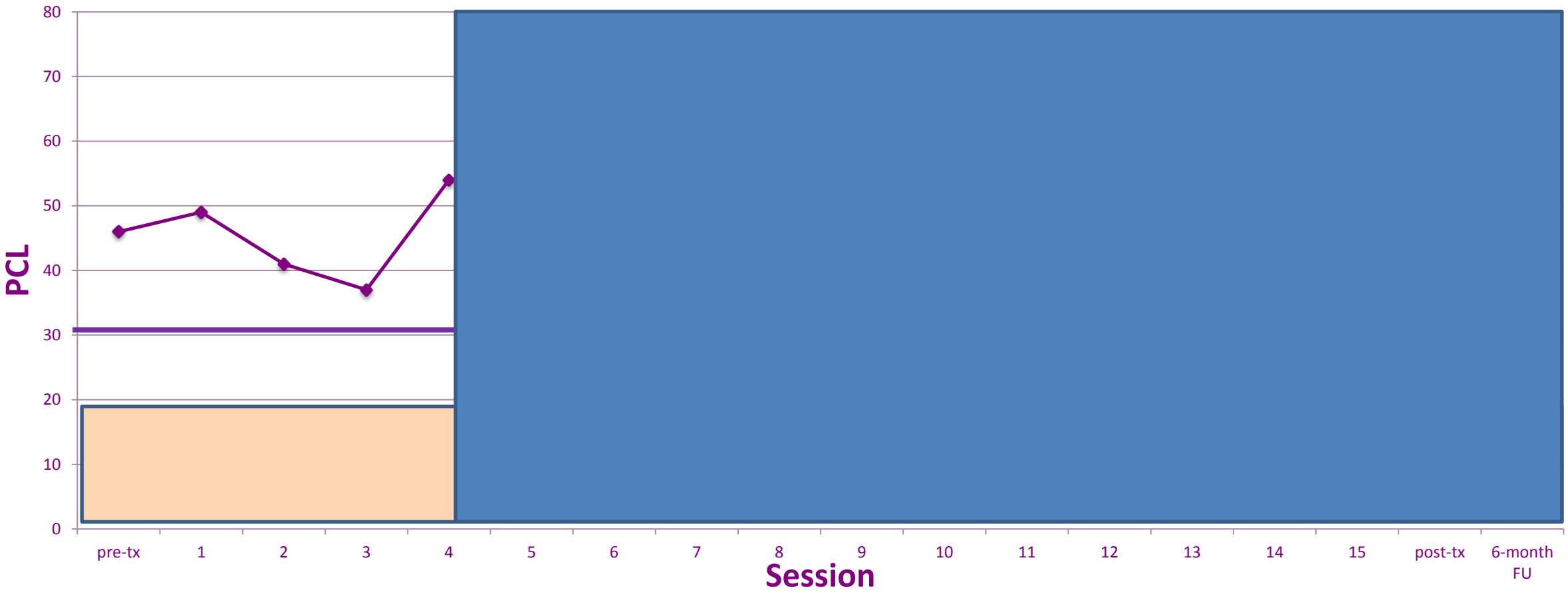
Engagement in session: good but…

- Insight into emotions?
- Overly compliant? Eager to please?

Beliefs/SPs: very rigid, especially about worthlessness/esteem

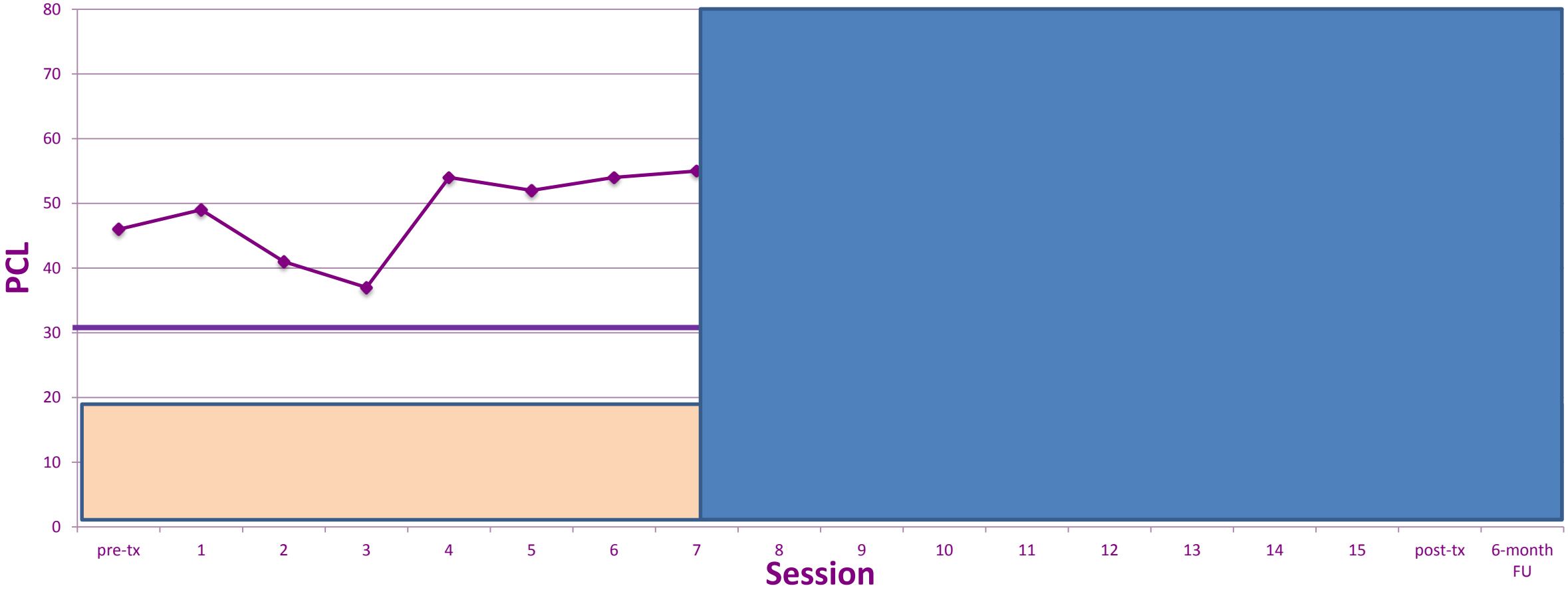

80
70
60
50
40
30
20
10
0
PCL
pre-tx
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
post-tx
6-month FU
Session

S2-4 avoidant of emotions



S6 self-blame ‘because I’m a bad person’, don’t deserve to get better

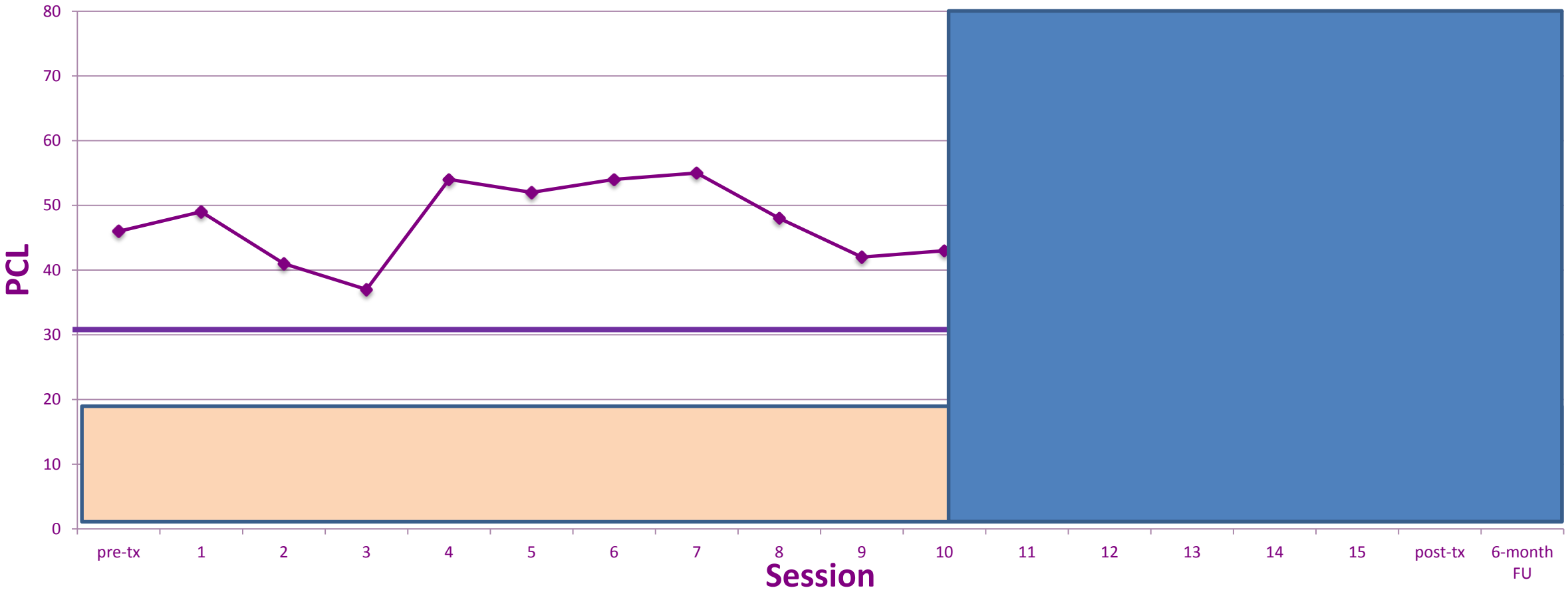
S7 dangerousness of emotions, SI increase

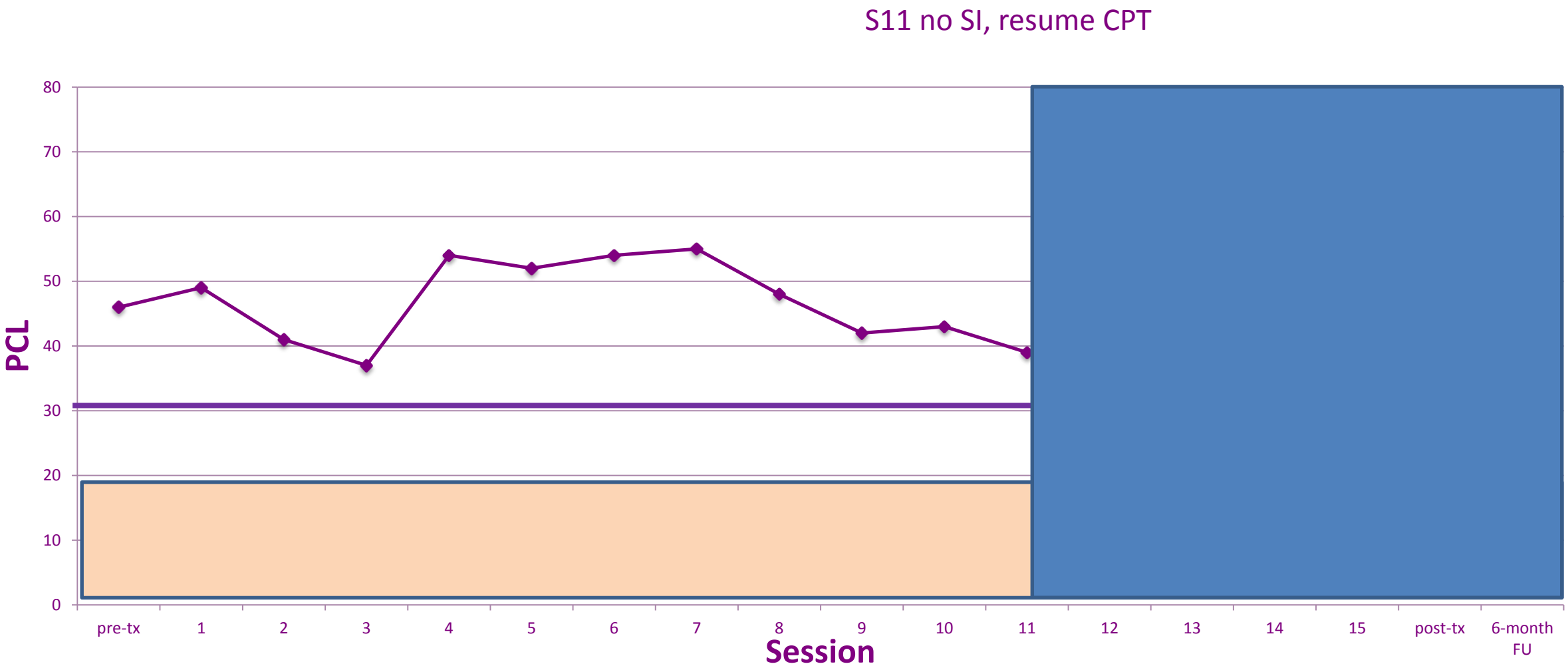


S9 self-esteem, survey discussion

S8 CF, decide to focus on esteem, rape survey

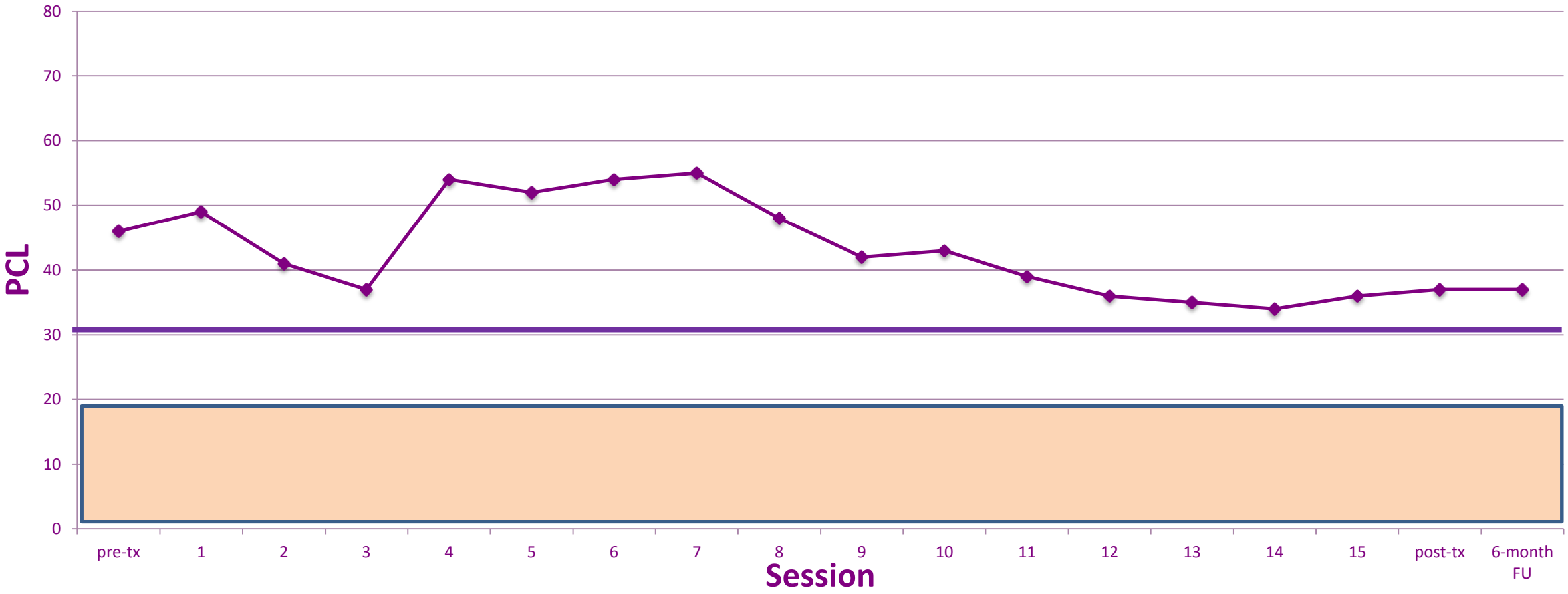
S10 developmental log re esteem




S11 no SI, resume CPT
PCL
80
70
60
50
40
30
20
10
0
pre-tx
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
post-tx
6-month FU
Session

S14 ‘best I’ve been for a decade’

S15 PCL calibration? Self-blame 10%, allowed positive things/feelings



CAPS pre: 49, post: 34, FU: 17

Complex PTSD

Client, in 40s, female, divorced
Index - CSA
(& multiple and extensive trauma hx)
CAPS 30, PCL 53

MDD, Suicidal Beh Dis, Bipolar, Panic Disorder (past), OCD, GAD, Substance in remission (prescription abuse, due to pain condition)

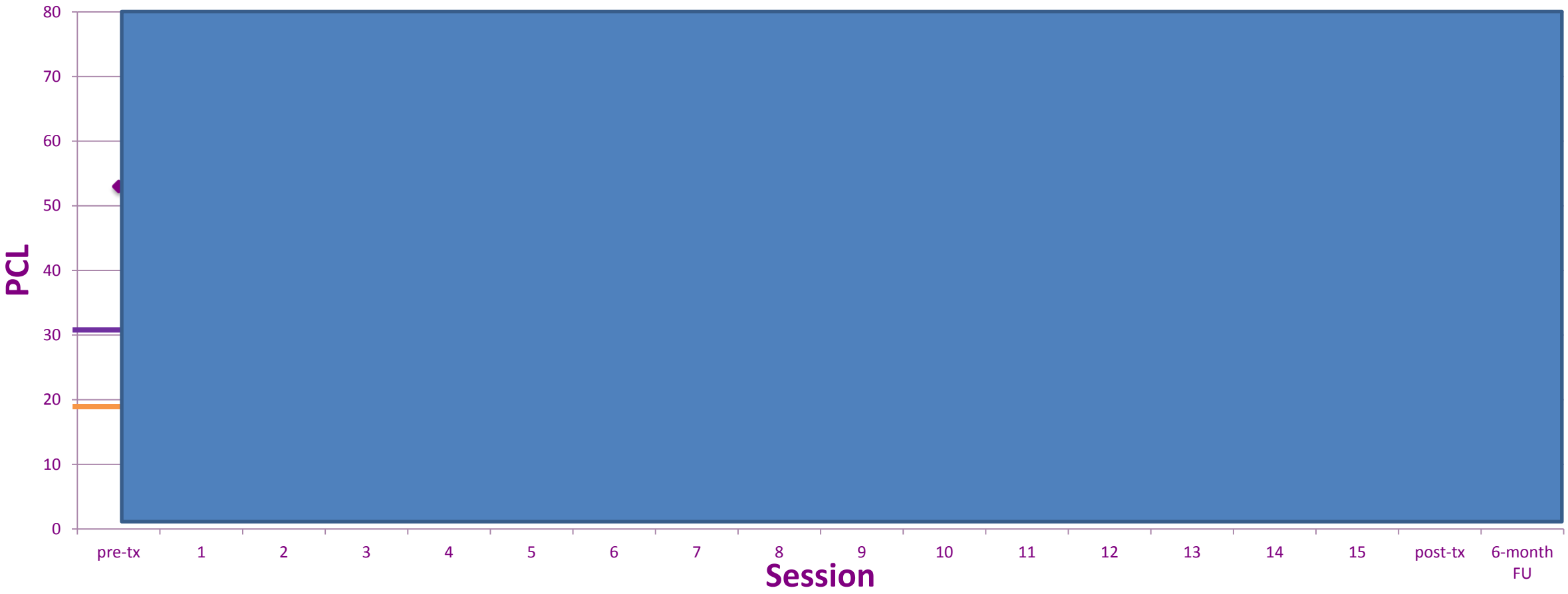
Recent hospitalisation for self-harm

Treatment likely to be successful: high [query]
Attendance: poor in first half
Homework completion: poor

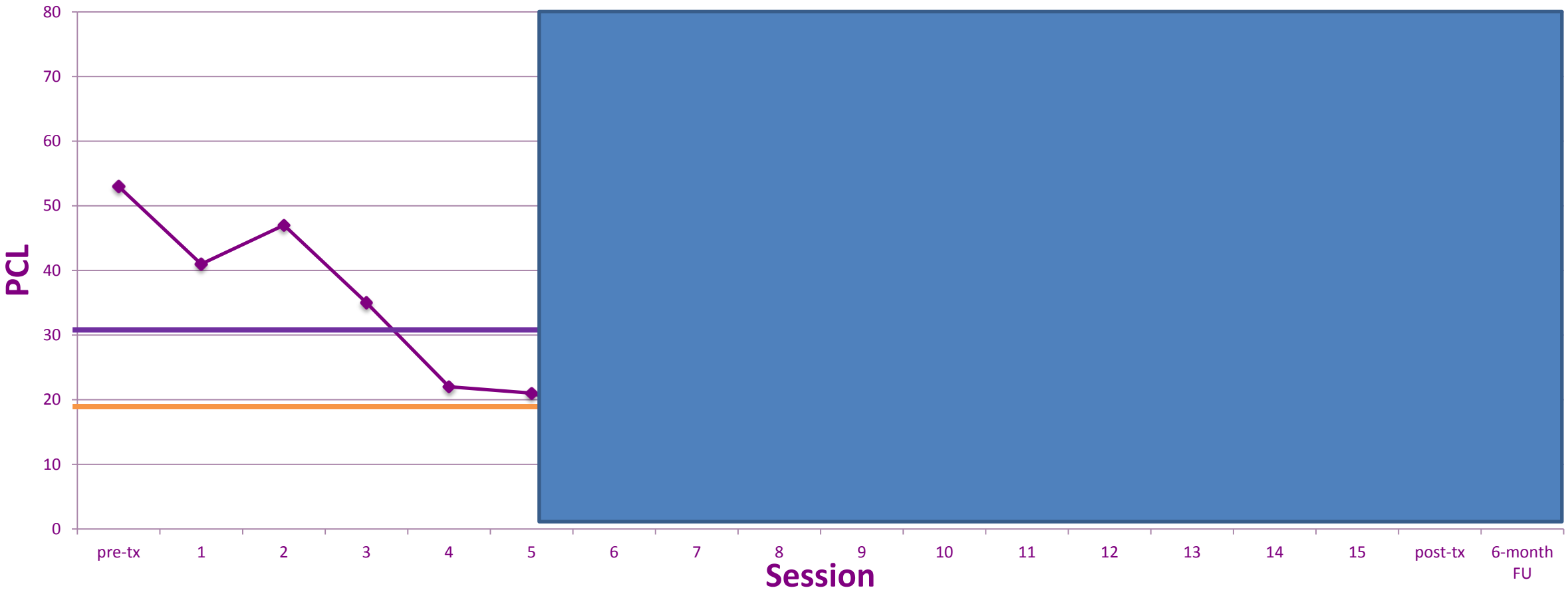
Engagement in session: moderate

- tangential
- avoidant of trauma-focus
- regular crises

Beliefs/SPs: rigid, anger (esp. at family), just world beliefs

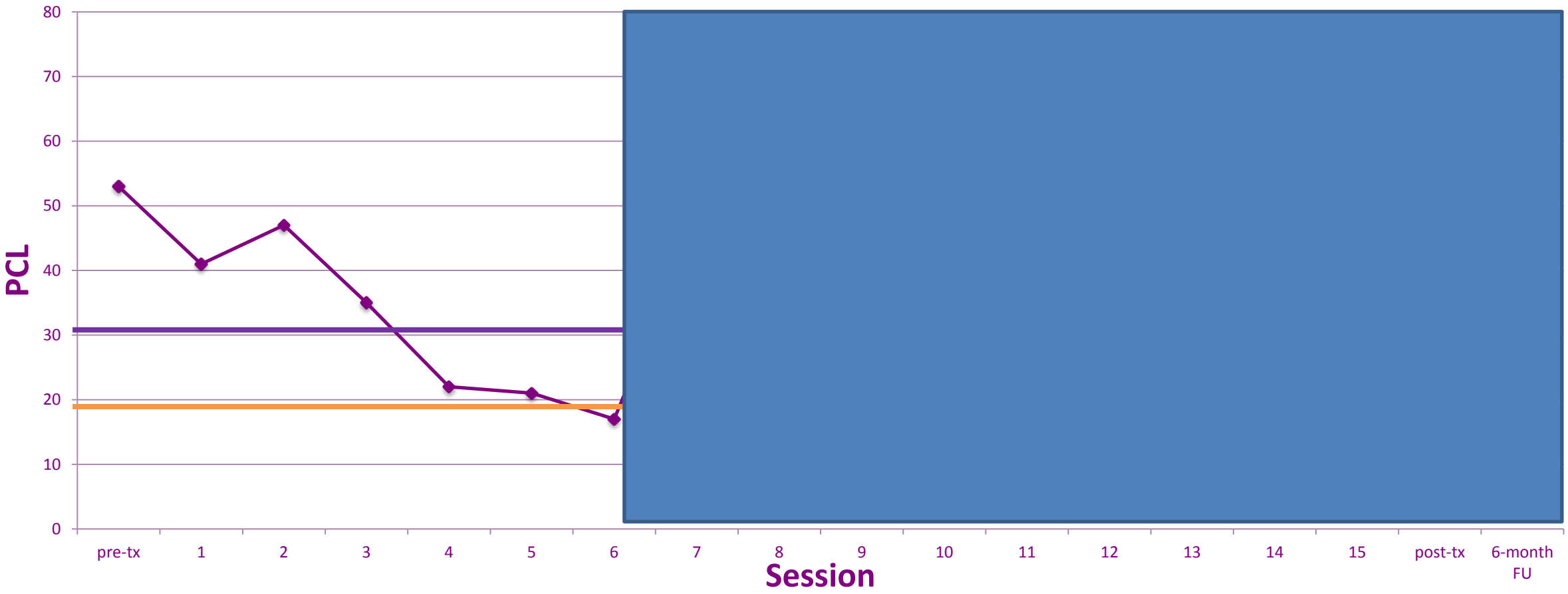

80
70
60
50
40
30
20
10
0
PCL
pre-tx
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
post-tx
6-month FU
Session

S1-5 poor attendance & HW,
but PCLs decreasing (?)



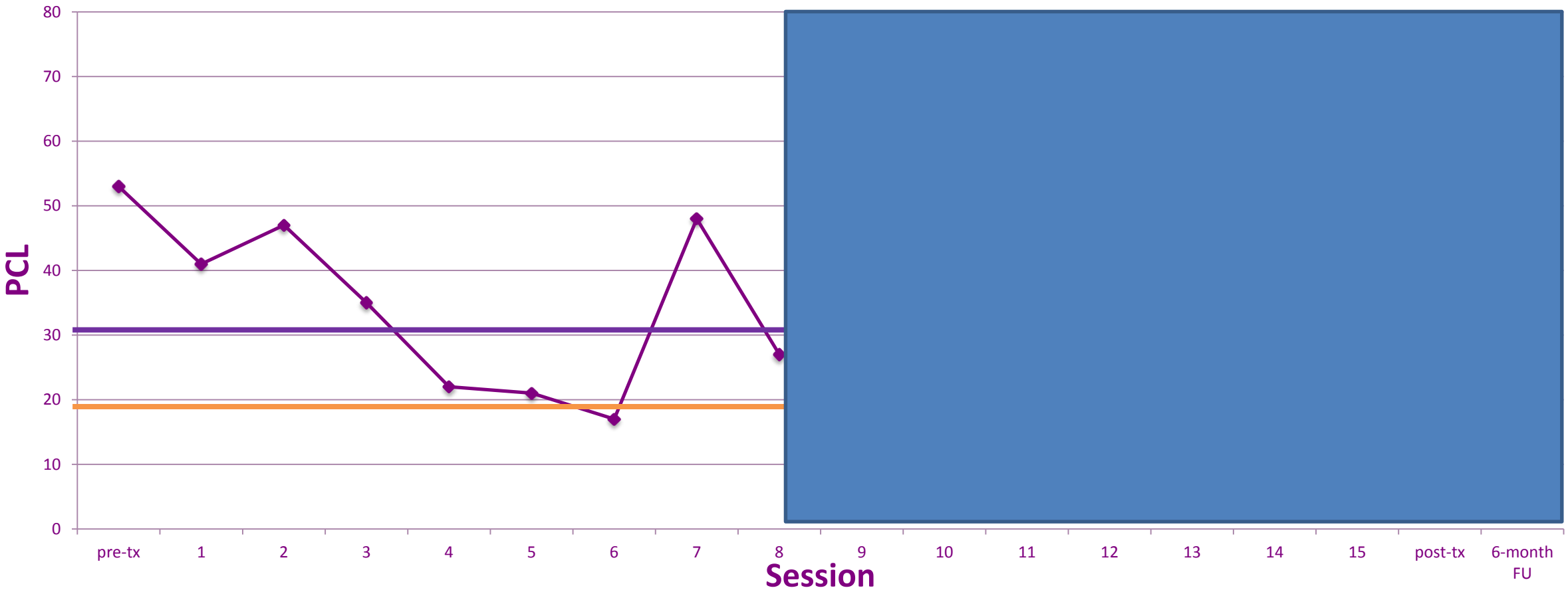
S5-6 Pain Rx +++, NOT in remission

S6 reformulation, pain, Rx, avoidance

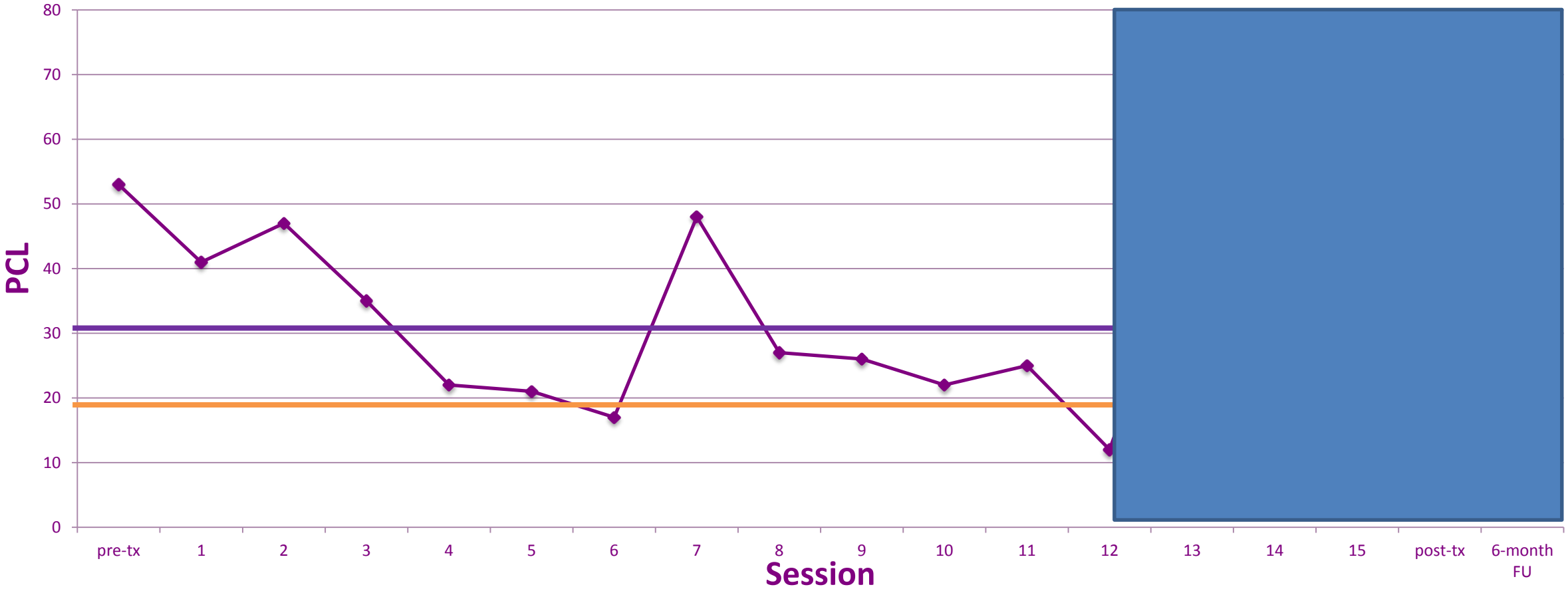


S6-7 pain specialist

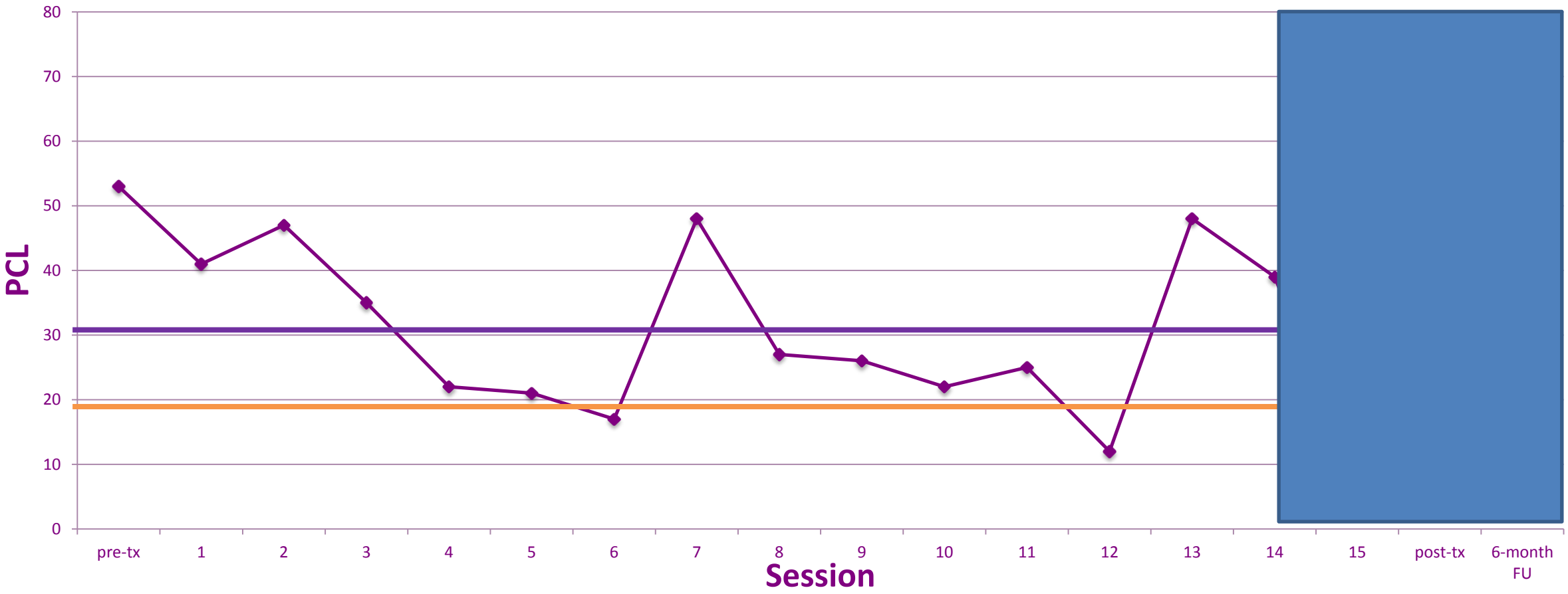
S7-8 SP and behavioural strategies re pain/Rx



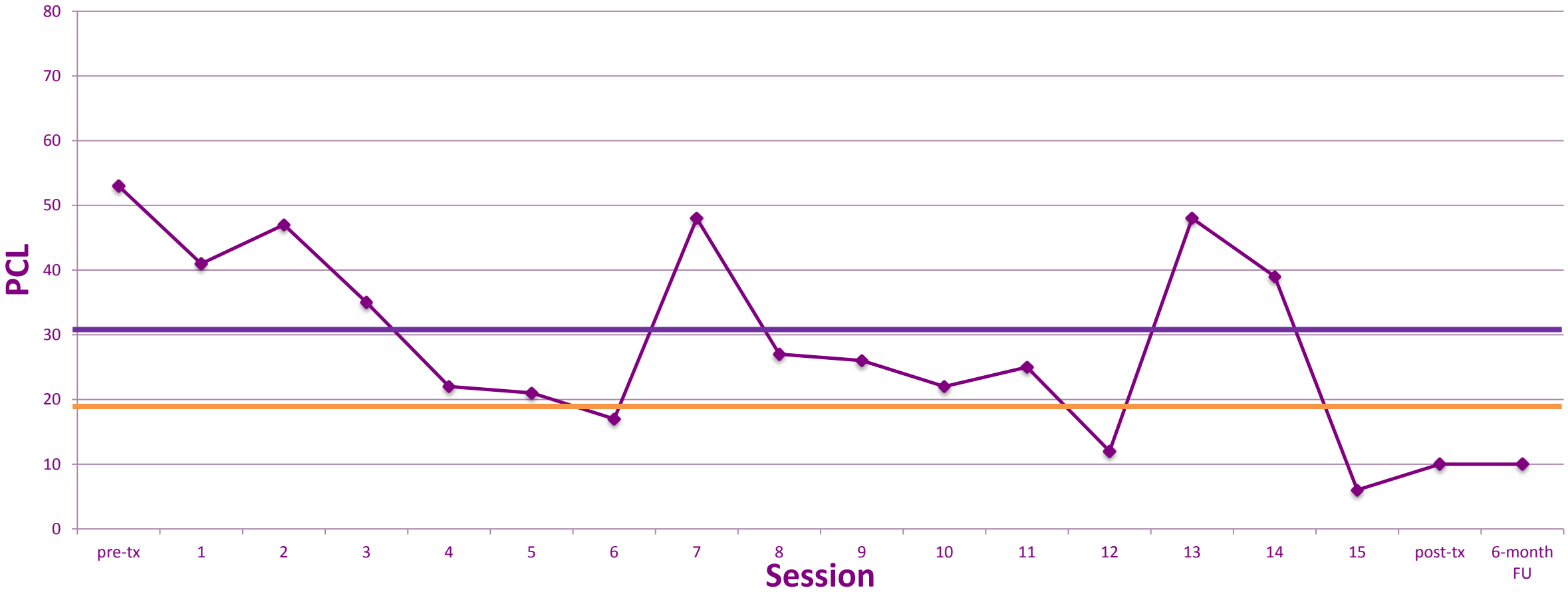
S9 NP, MI to address avoidance, attendance, then back to CPT



S13-14 traumas in family, CPT plus distress tolerance materials



S15, PCL consistent with qualitative appearance and new Impact Statement



CAPS pre: 30, post: 20, FU: 25

Thank you

Questions/Discussion

Flinders
UNIVERSITY

References and additional readings

Bass, J. K., Annan, J., McIvor Murray, S., Kaysen, D., Griffiths, S., Cetinoglu, T., . . . Bolton, P. A. (2013). Controlled trial of psychotherapy for Congolese survivors of sexual violence. *N Engl J Med, 368(23), 2182-2191. doi: 10.1056/NEJMoa1211853*

Bryan, C. J., Clemans, T. A., Hernandez, A. M., Mintz, J., Peterson, A. L., Yarvis, J. S., . . . Consortium, Strong Star. (2016). Evaluating Potential Iatrogenic Suicide Risk in Trauma-Focused Group Cognitive Behavioral Therapy for the Treatment of Ptsd in Active Duty Military Personnel. *Depression and Anxiety, 33(6), 549-557. doi: 10.1002/da.22456*

Clarke, S. B., Rizvi, S. L., & Resick, P. A. (2008). Borderline personality characteristics and treatment outcome in cognitive-behavioral treatments for PTSD in female rape victims. *Behavior Therapy, 39(1), 72-78. doi: 10.1016/j.beth.2007.05.002*

Farmer, Courtney C. , Mitchell, Karen S., Parker-Guilbert, Kelly , & Galovski, Tara E. . (2017). Fidelity to the Cognitive Processing Therapy Protocol: Evaluation of critical ingredients. *Behavior Therapy, 48, 195-206. doi: 10.1016/j.beth.2016.02.009*

References and additional readings

Forbes, D., Lloyd, D., Nixon, R. D. V., Elliott, P., Varker, T., Perry, D., . . . Creamer, M. (2012). A multisite randomized controlled effectiveness trial of cognitive processing therapy for military-related posttraumatic stress disorder. *J Anxiety Disord, 26(3), 442-452. doi: 10.1016/j.janxdis.2012.01.006*

Galovski, Tara E., Blain, Leah M., Mott, Juliette M., Elwood, Lisa, & Houle, Timothy. (2012). Manualized therapy for PTSD: Flexing the structure of cognitive processing therapy. *Journal of Consulting and Clinical Psychology, 80(6), 968-981. doi: 10.1037/a0030600*

Gradus, J. L., Suvak, M. K., Wisco, B. E., Marx, B. P., & Resick, P. A. (2013). Treatment of posttraumatic stress disorder reduces suicidal ideation. *Depression and Anxiety, 30(10), 1046-1053. doi: 10.1002/da.22117*

Lloyd, D., Nixon, R. D., Varker, T., Elliott, P., Perry, D., Bryant, R. A., . . . Forbes, D. (2014). Comorbidity in the prediction of Cognitive Processing Therapy treatment outcomes for combat-related posttraumatic stress disorder. *J Anxiety Disord, 28(2), 237-240. doi: 10.1016/j.janxdis.2013.12.002*

References and additional readings

Nixon, R.D.V., Best, T., Wilksch, S.R., Angelakis, S., Beatty, L.J., & Weber, N. (2016). Cognitive processing therapy for the treatment of acute stress disorder following sexual assault: A randomized effectiveness study. *Behaviour Change, 33, 232-250. doi: 10.1017/bec.2017.2*

Ouimette, Paige, Moos, Rudolf H., & Finney, John W. (2003). PTSD treatment and 5-year remission among patients with substance use and posttraumatic stress disorders. *Journal of Consulting and Clinical Psychology, 71(2), 410-414.*

Resick, P.A, Galovski, T.E., Uhlmansiek, M.O., Scher, C.D., Clum, G.A., & Young-Xu, Yinong. (2008). A Randomized Clinical Trial to Dismantle Components of Cognitive Processing Therapy for Posttraumatic Stress Disorder in Female Victims of Interpersonal Violence. *Journal of Consulting and Clinical Psychology, 76, 243-258. doi: 10.1037/0022-006X.76.2.243*

Roberts, N. P., Roberts, P. A., Jones, N., & Bisson, J. I. (2015). Psychological interventions for post-traumatic stress disorder and comorbid substance use disorder: A systematic review and meta-analysis. *Clinical Psychology Review, 38, 25-38. doi: 10.1016/j.cpr.2015.02.007*

References and additional readings

Schumm, J.A., Pukay-Martin, N.D., & Gore, W.L. (2017). A Comparison of Veterans Who Repeat Versus Who Do Not Repeat a Course of Manualized, Cognitive-Behavioral Therapy for Posttraumatic Stress Disorder. *Behavior Therapy, 48, 870-882. doi: 10.1016/j.beth.2017.06.004*

Simpson, T. L., Lehavot, K., & Petrakis, I. L. (2017). No Wrong Doors: Findings from a Critical Review of Behavioral Randomized Clinical Trials for Individuals with Co-Occurring Alcohol/Drug Problems and Posttraumatic Stress Disorder. *Alcoholism: Clinical and Experimental Research, 41(4), 681-702. doi: 10.1111/acer.13325*

van den Berg, D. P., de Bont, P. A., van der Vleugel, B. M., de Roos, C., de Jongh, A., Van Minnen, A., & van der Gaag, M. (2015). Prolonged exposure vs eye movement desensitization and reprocessing vs waiting list for posttraumatic stress disorder in patients with a psychotic disorder: a randomized clinical trial. *JAMA Psychiatry, 72(3), 259-267. doi: 10.1001/jamapsychiatry.2014.2637*

Walter, K.H. et al. (2012). The impact of personality disorders on treatment outcome for veterans in a posttraumatic stress disorder residential treatment program. *Cognitive Therapy and Research, 36,* 576-584.