How Measurement-based care will advance psychology: Lessons from history

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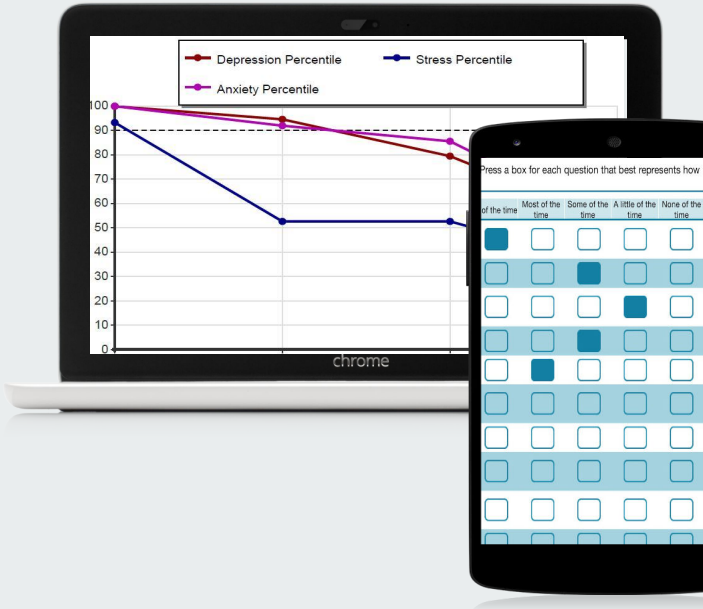

Disclosure of Interests

Potential conflicts of interests include:

- Founder and CEO at NovoPsych.com.au, providing psychometric tools for psychologists
- Member of Better Access Review funded by the Department of Health

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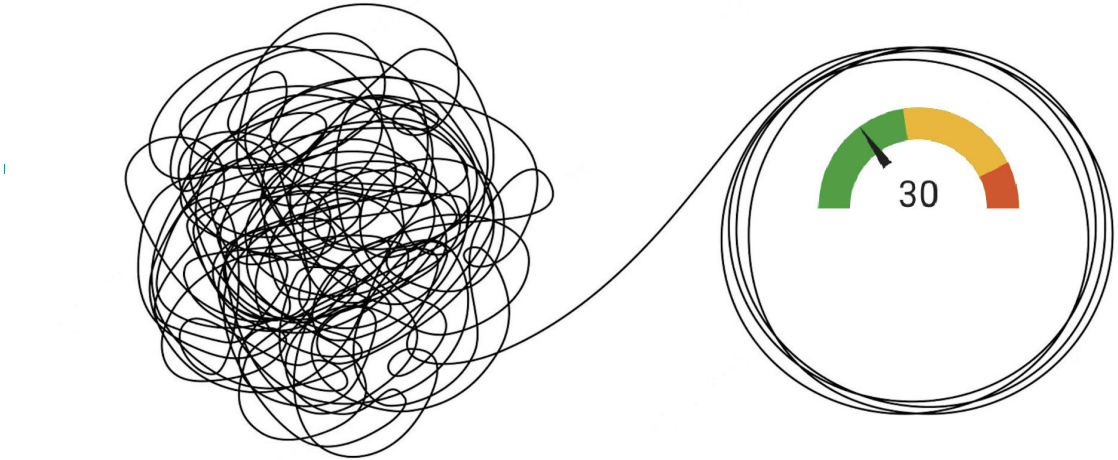
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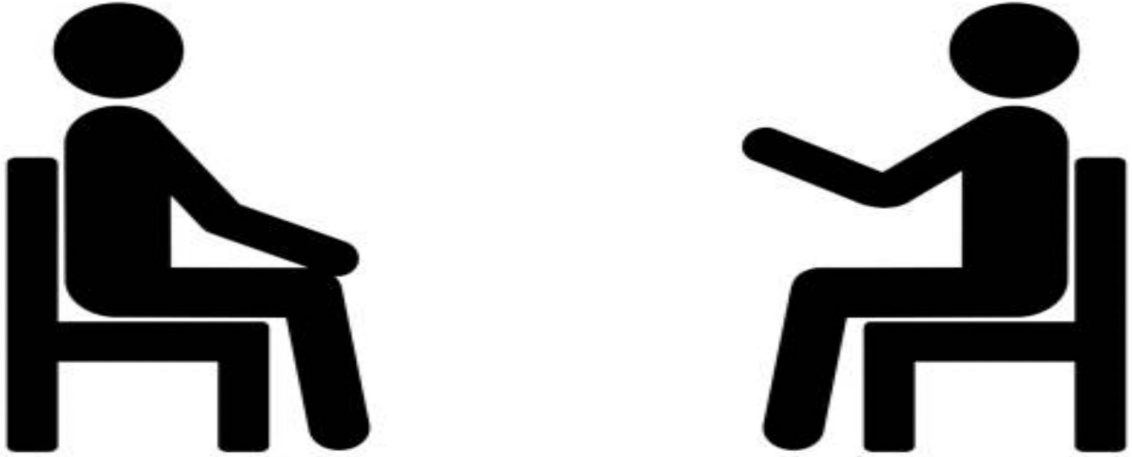


37.0°C

History of Thermometers in Medicine

400BC

Use of human hand

Hippocrates taught his students to use the hand to detect fever

1668 - 1777

Fringe doctors took temperature

Boerhaave & Anton De Haen felt that measuring temperature was useful, but few of their colleagues agreed.

Anal theremoetres. 20 minutes

1867

Convenient thermometer introduced

Took five minutes to measure temperature

1868

Major research published

Wunderlich reported 100,000 observations showing temperatures were plotted on charts, the disease could be shown to follow certain patterns. He defined normal temperature and fever.

1900s

Scepticism reduced

Temperature became a key clinical measurement. Objective measurement favoured over self-report, clinician's subjective judgement

2000s

Infrared thermometers

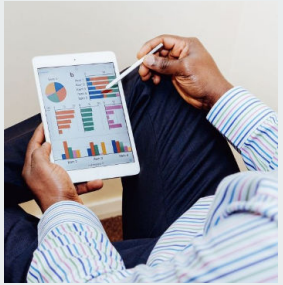
Non contact forehead thermometers widespread

Barriers to thermometry

- 1000s of years between basic knowledge and wide practice
- Lack of convenient, accurate technology
- The concept of fever was ill defined (lack of high quality data)
- Reliance on clinical judgment

- “A doctor who has devoted years of education and training to acquiring and refining a particular skill will inevitably be reluctant to accept a new development that seems to make all that effort redundant.” (From Patient Data to Medical Knowledge: Paul Taylor)

Measurement in Psychotherapy



1937

MMPI introduced

An objective aid in the routine psychiatric case work-up of patients and as a method of determining the severity of the conditions. Takes hours to administer and score.

1900 - 1970s

Psychodynamic approach does not favour measurement

Expert clinical judgement endorsed

2005

Lambert's systematic studies

Treatment as usual versus measurement/feedback, finding improved treatment response with measurement.

2010s

Computers assessment

Measurement in under a minute

Feedback informed treatment

2015

Measurement-based care defined

Systematic use of symptom monitoring scales (Scott & Lewis, 2015)

2025

Measurement-based care widespread

Bayesian statistics and artificial intelligence used to aid formulations and make recommendations

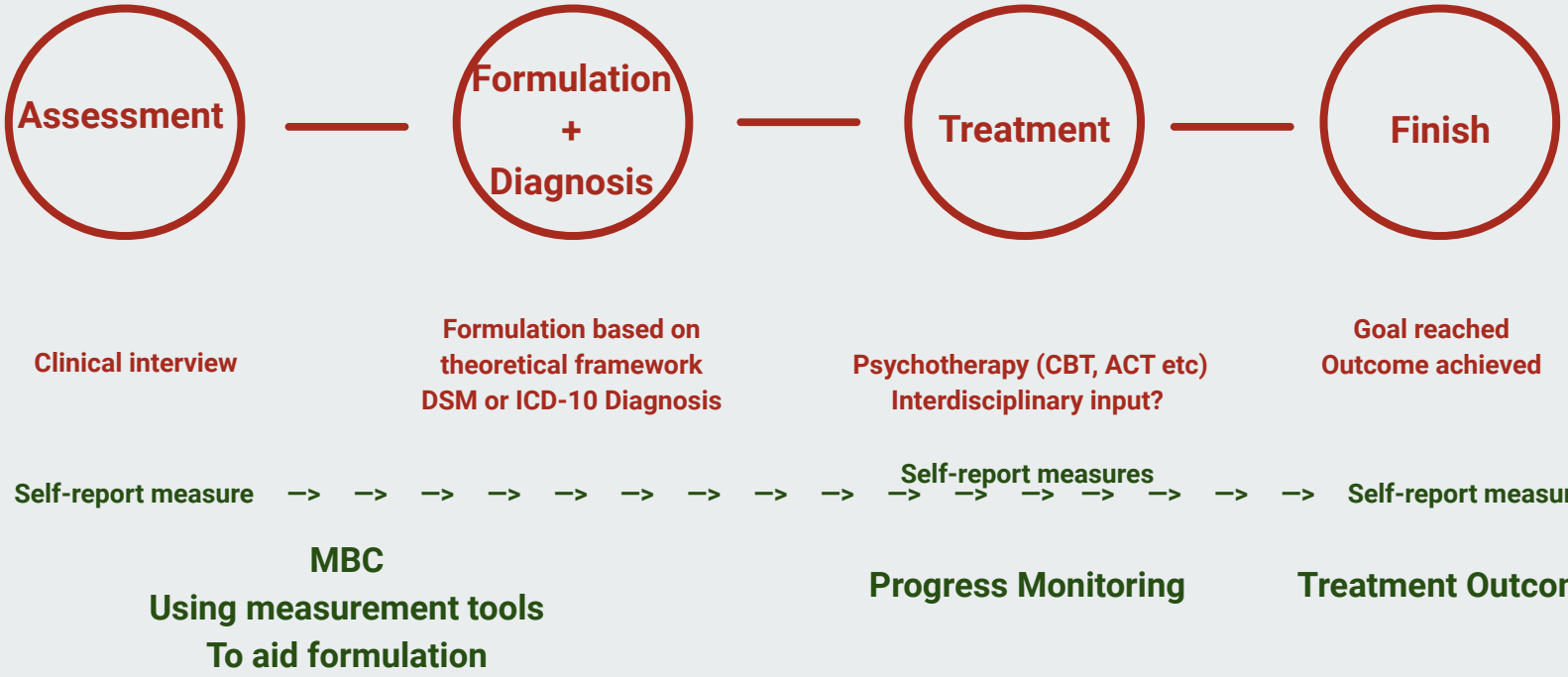
Measurement-Based Care (MBC)

Measurement-based care also known as:

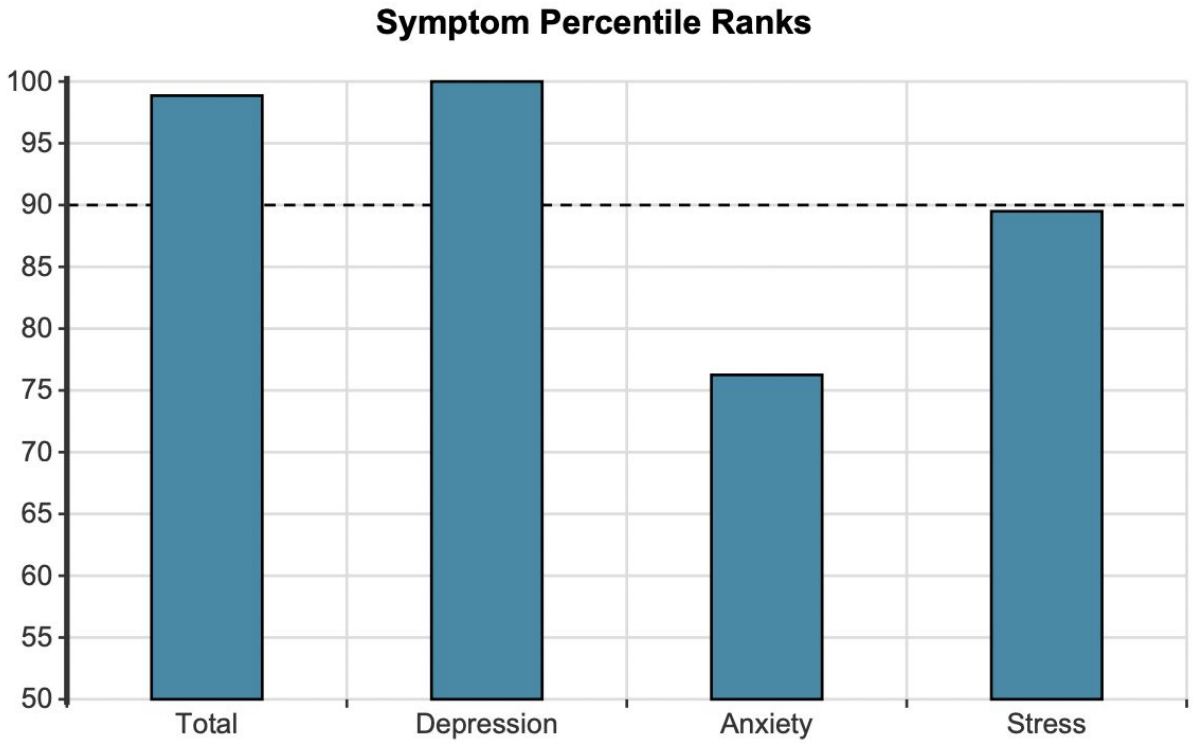
- Routine outcome monitoring (Paul Elwood, 1988)
- Progress monitoring (Goodman et al, 2013)
- Feedback informed treatment (FIT)
- Stepped care

Measurement based care defined as systematic use of symptom monitoring scales and the use of those results to drive decision making at the level of individual patients (Scott & Lewis, 2015)

Standard care versus MBC



	Relative to the sample population, this patient is in the: -Extremely severe range for depression; -Mild range for anxiety; -Moderate range for stress.



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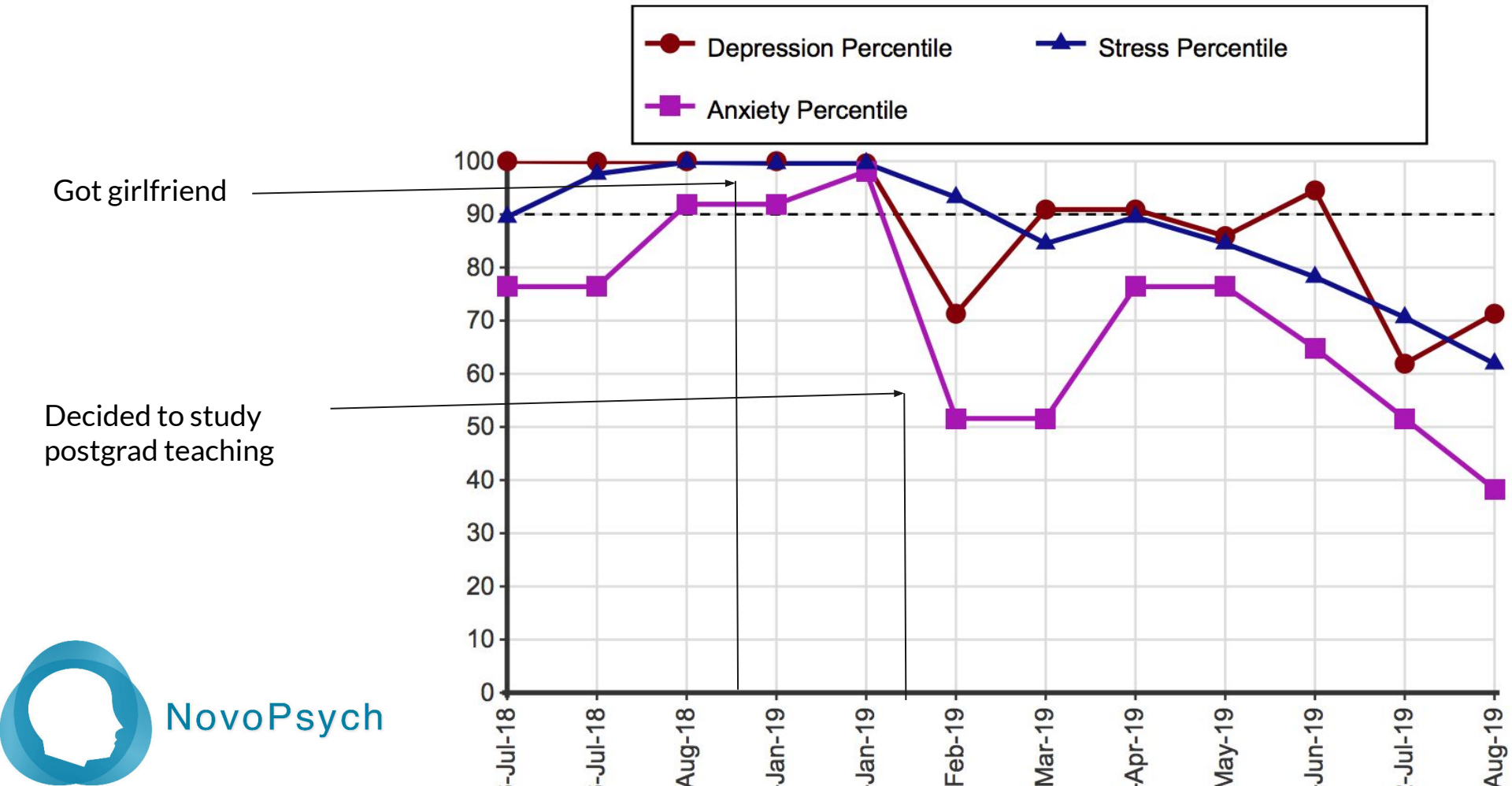
Depression Percentile
Stress Percentile
Anxiety Percentile
Got girlfriend
Decided to study postgrad teaching
100
90
80
70
60
50
40
30
20
10
0
-Jul-18
-Jul-18
Aug-18
Jan-19
Jan-19
Feb-19
Mar-19
Apr-19
May-19
Jun-19
Jul-19
Aug-19

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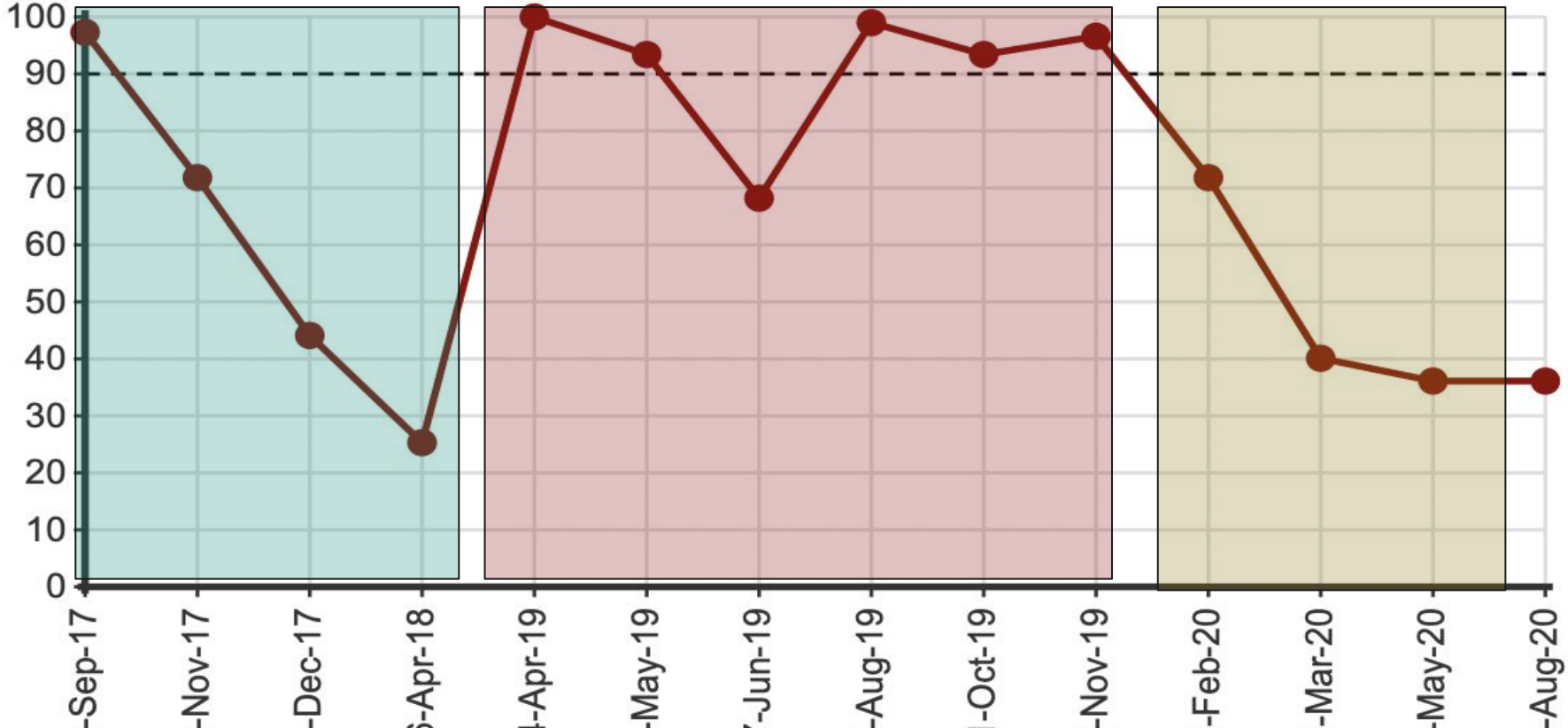
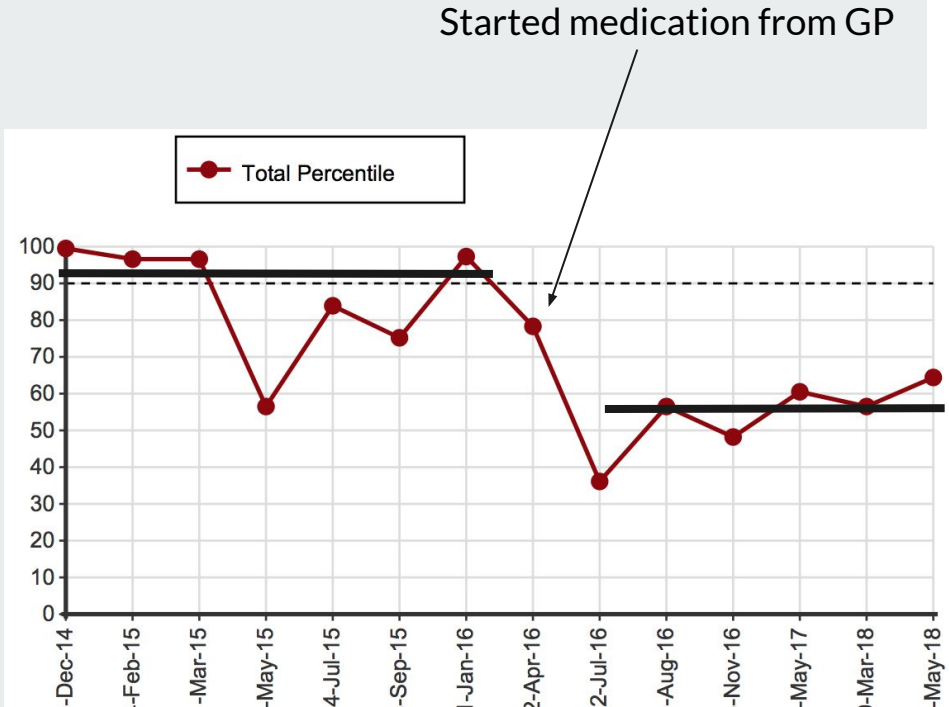
Episode of care 1
CBT successful! Discharged

Episode 2
CBT not working!
Referred to group

Episode 3
Compassion focussed and
mindfulness group work



Feedback letters to GPs with graph



NovoPsych
The new standard in psychometric testing

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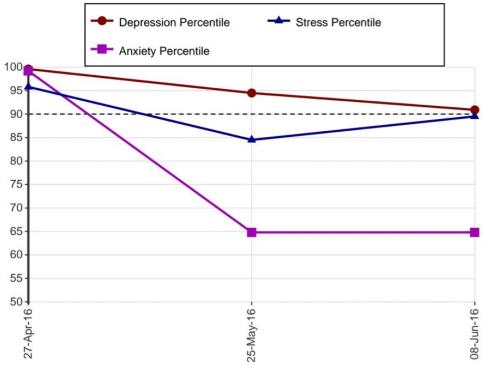
10/11/2018

Dear Doctor,

RE: John SMITH

Thank you for referring John to me for psychological assistance. I have now seen him on six occasions.

The graph below represents John's percentiles scores (compared to the Australian population) on the Depression Anxiety Stress Scale (DASS-21). When first administered during our initial appointment he had particularly high depression and anxiety symptoms. Scores above the 90th percentile are of clinical significance. He has responded well to CBT and these symptoms have reduced significantly, particularly his anxiety. He remains moderately depressed and stressed.



John and I have agreed to continue treatment given its observable benefit so far. Future sessions will target his depressive symptoms, pending your review of his Mental Health Care Plan.

Yours sincerely,

Dr Ben Buchanan

Why Measurement-based care?

For your clients

- Clients like tangibility of symptom measures and progress (Ionita & Fitzpatrick, 2014; Steinfeld et al., 2016)
- It improves treatment response. A meta-analysis, effect size (d=.55) (Tam & Ronan, 2017).

For both client and therapist

- It reduces treatment dropout (e.g. Azocar et al., 2007; Brodey et al., 2005; Brown, Burlingame, Lambert, Jones, & Vaccaro, 2001; Hawkins, Lambert, Vermeersch, Slade, & Tuttle, 2004; Hermann, Chan, Zazzali, & Lerner, 2006; Nierenberg et al., 2006).
- Helps form shared conceptualisation of client

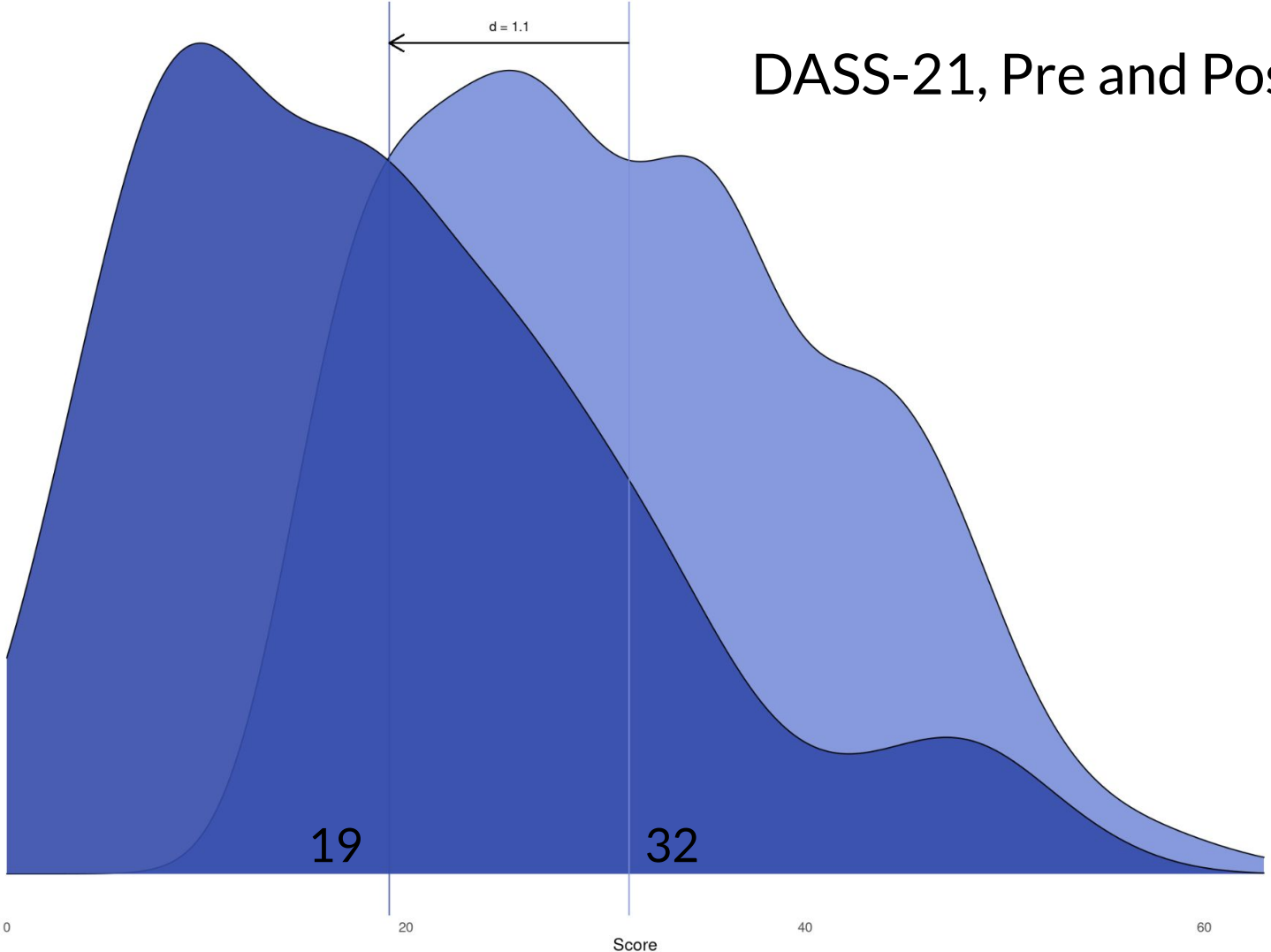
For psychologists

- Makes life easier for psychologists
- Provides objective evidence of treatment response, and feedback on your hard work

Analysis of patient datasets

- My data from Private Practice
- DASS-21 data collected every 2nd session
- 353 clients from Jan 2014 to May 2022
- 305 clients included
- 381 episode of care

DASS-21, Pre and Post



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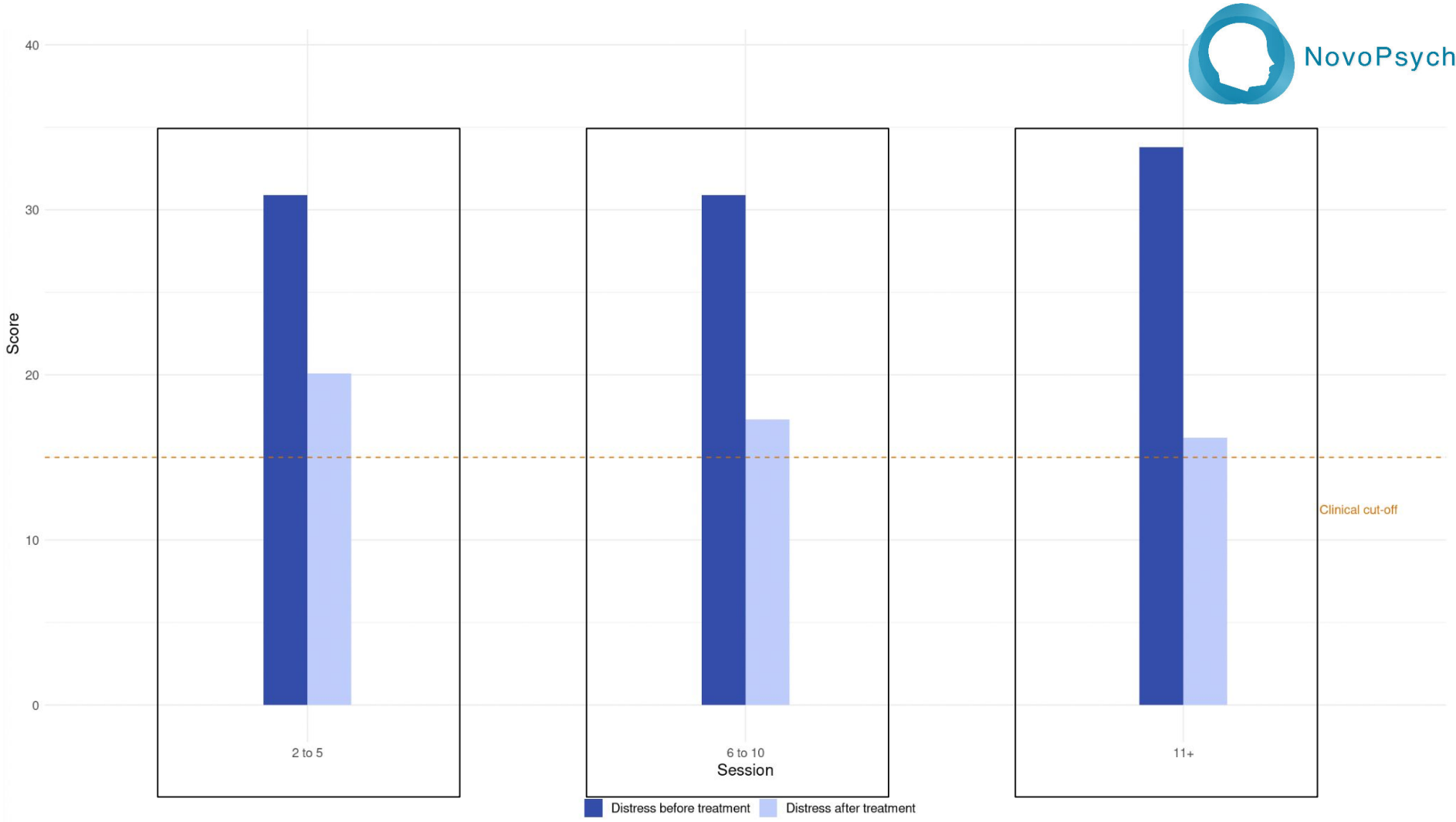
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40
30
20
10
0
Score
Clinical cut-off
2 to 5
6 to 10
11+
Session
Distress before treatment
Distress after treatment

Thanks

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