

Background

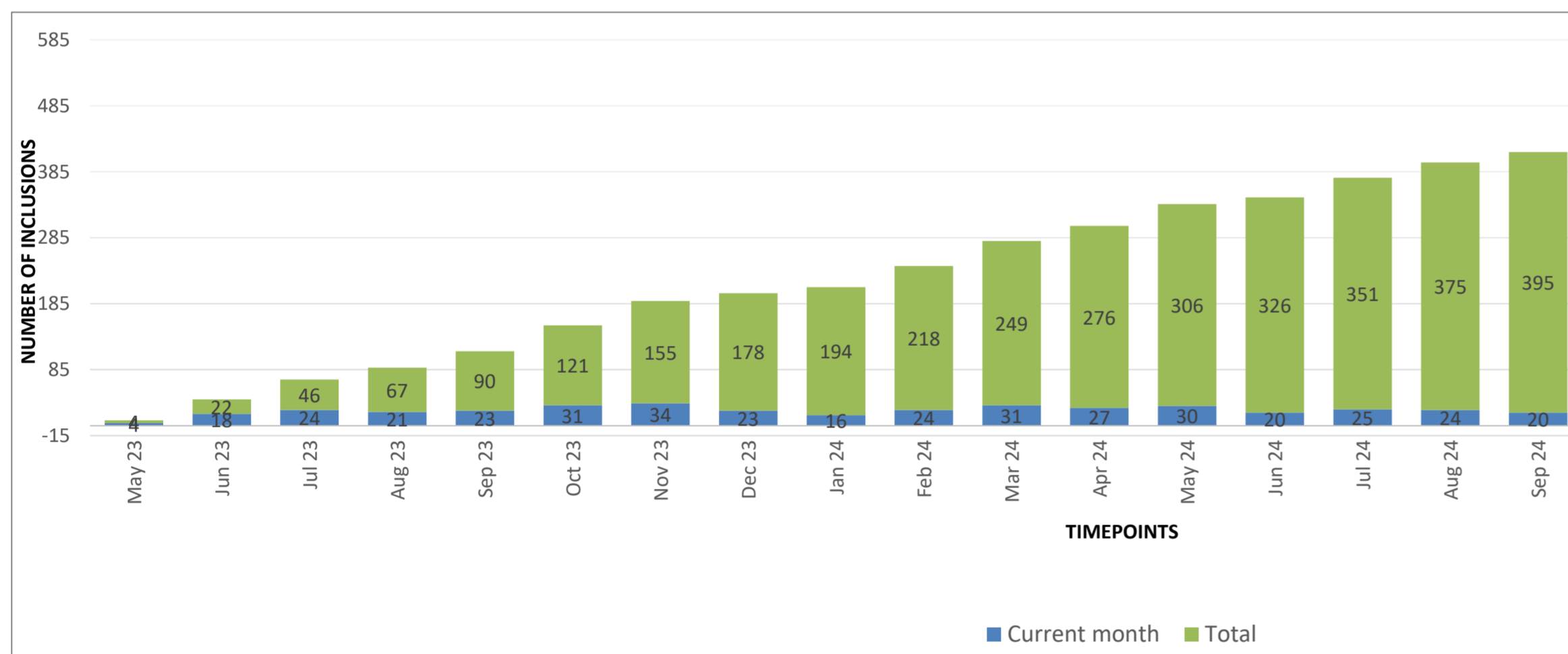
Cognitive Behavioral Therapy (CBT) is effective but doesn't help all patients equally; less than 50% with internalizing disorders achieve meaningful improvement¹. The Research Unit RU 5187 investigates treatment non-response (TNR) in naturalistic CBT². We aim to identify bio-behavioral signatures of TNR and predict it at the individual level using machine learning. This poster presents the recruitment status and descriptive analysis of our ongoing trial toward precision psychotherapy for non-respondent patients.

Recruitment Status and Descriptive Analysis

Recruitment Status

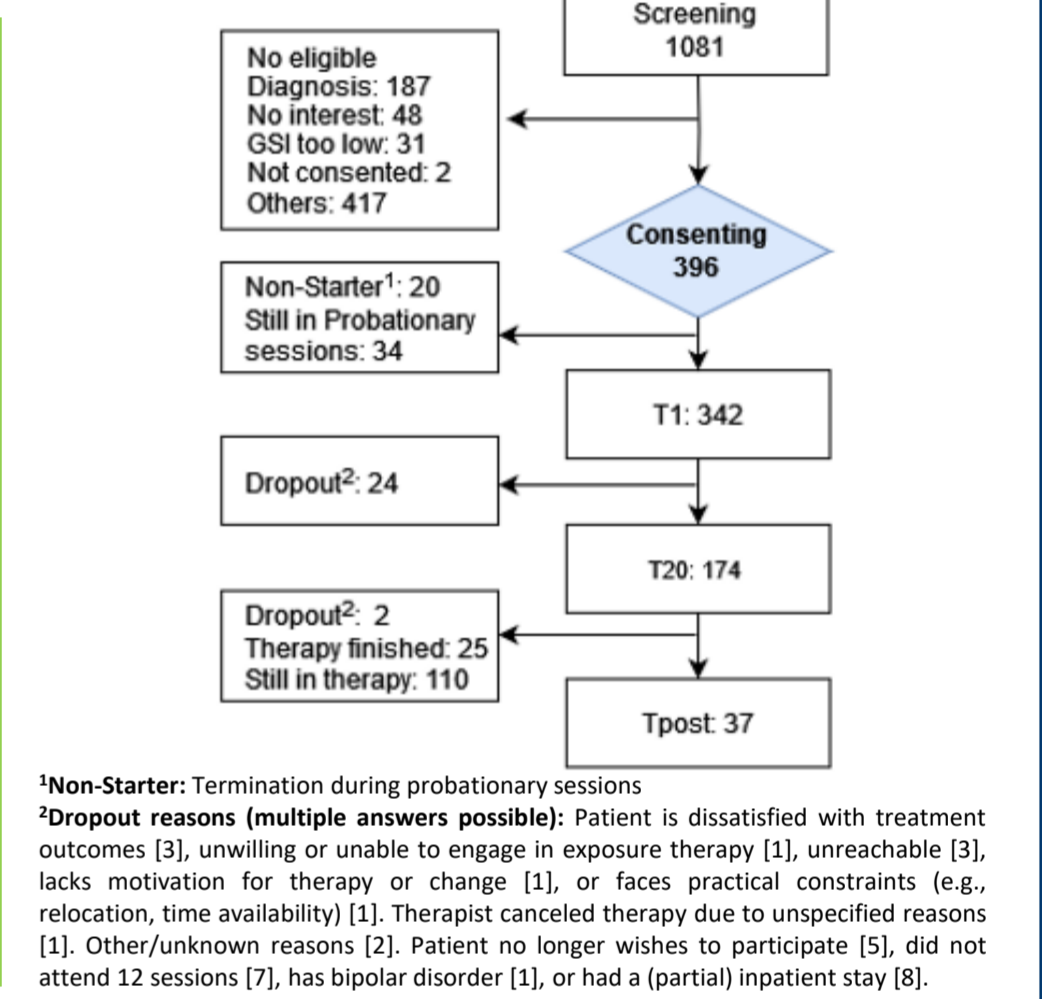
We aim to recruit 585 patients from four academic outpatient clinics in Berlin to ensure our sample reflects typical outpatient populations. Minimal exclusion criteria will be applied to maximize ecological validity. Eligible participants will be adults diagnosed with internalizing disorders—including anxiety disorders, Obsessive-Compulsive Disorder (OCD), Post-Traumatic Stress Disorder (PTSD), and unipolar depression—who are scheduled to receive cognitive behavioral therapy (CBT) at the participating clinics.

Figure 1: Recruitment process



Extrapolation

Figure 2: Recruitment flowchart



Descriptives

Figure 4a: Current recruitment numbers

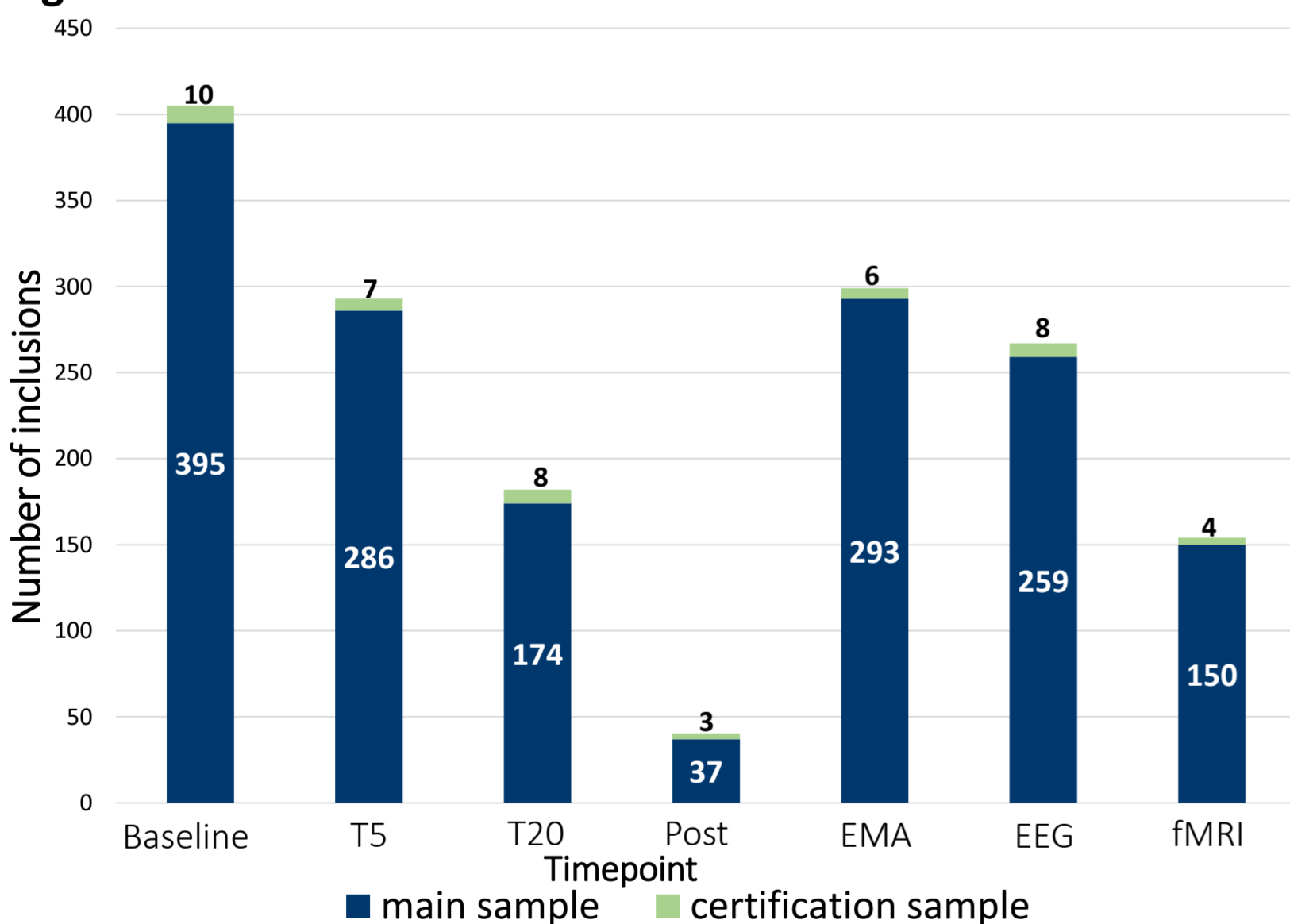
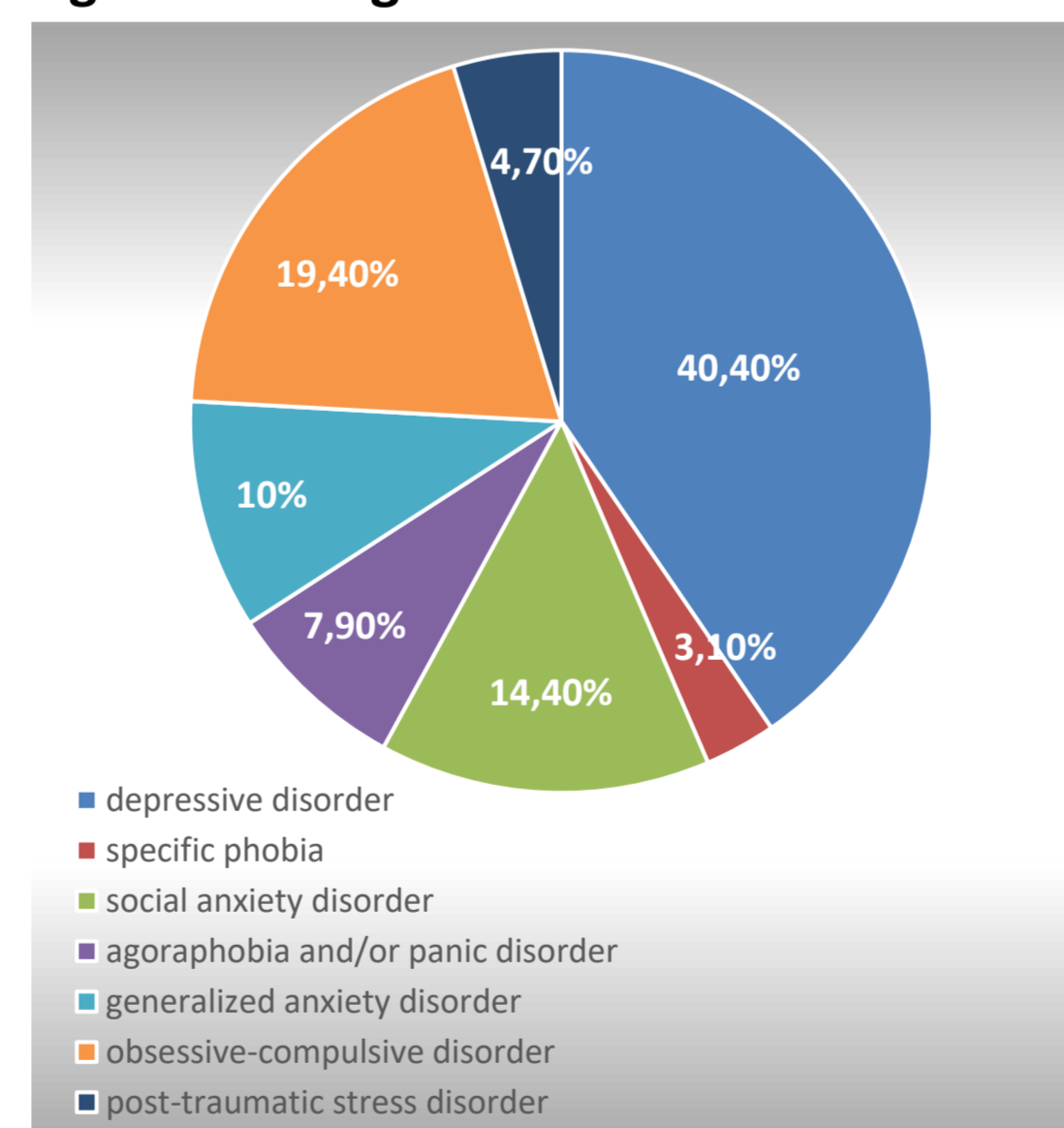
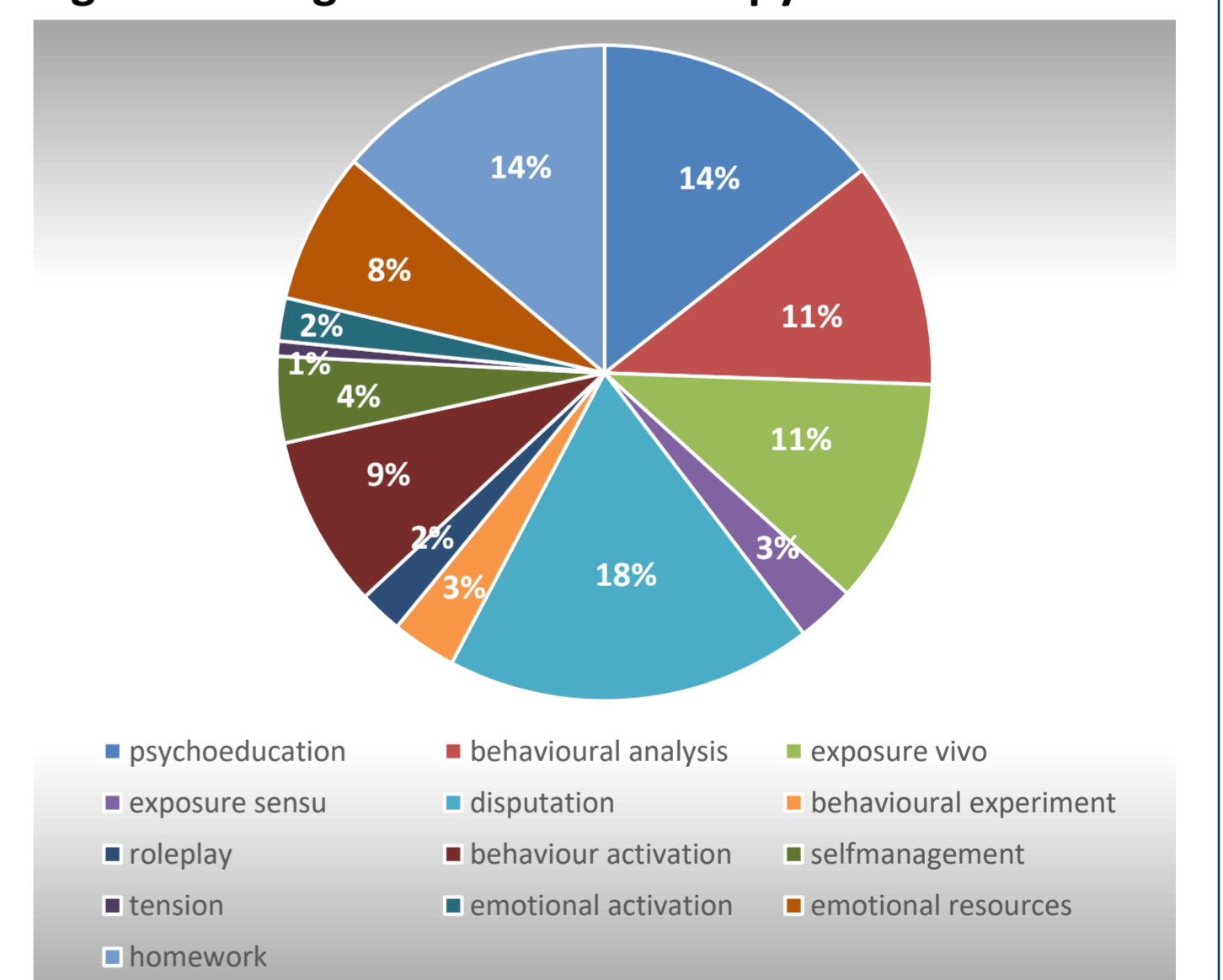


Figure 4b: Diagnosis distribution



Therapy content

Figure 5: Usage of different therapy methods



Therapy Completion Overview:

On average, patients who have completed therapy so far have had 27.6 sessions over 311 days. (Note: Some therapies continue beyond the post-assessment, as our observation period is limited to only one year.)

Manual Adherence:

Manual adherence is generally rated as moderate to high.

Manual Usage:

Approximately two-thirds of therapists use manuals during therapy.

Manual Orientation:

58.6% of therapy sessions are guided by the manual.

Table 1: Descriptive data

Sample characteristics	All patients (n = 396)	HSA-HU (n = 119)	ZPHU (n = 57)	HSA-FU (n = 70)	HSA-PHB (n = 150)	χ^2/F (df)	p
Female gender, n (%)	232 (58.58)	66 (55.46)	36 (61.40)	49 (70.00)	82 (54.67)	4.11(3)	0.250
Age	34.12 (12.11)	37.43 (13.6)	35.02 (10.72)	31.44 (10.79)	32.34 (11.35)	5.39(3)	<.01 ¹
School (years)	16.92 (4.21)	17.05 (3.82)	15.78 (3.07)	18.1 (4.09)	16.71 (4.85)	3.43(3)	0.02 ²
Psychotropic drugs, n (%)	125 (31.57)	40 (33.61)	21 (36.84)	26 (37.14)	38 (25.33)	3.55(3)	0.314
CGI	4.67 (0.89)	4.92 (0.8)	4.62 (0.71)	4.8 (1.01)	4.4 (0.89)	6.81(3)	<.001 ³
BSI - GS	68.62 (30.19)	63.74 (32.04)	62.77 (26.40)	75.19 (31.08)	72.72 (28.99)	3.29(3)	<.05 ⁴
BDI-II	22.95 (9.48)	22.74 (10.22)	22.95 (9.39)	22.71 (9.25)	23.20 (9.07)	0.06(3)	0.981
HAM-A	20.72 (7.73)	18.82 (8.04)	18.55 (7.39)	24.83 (6.46)	20.35 (7.52)	5.08 (3)	0.002 ⁵
MADRS	21.19 (7.47)	26.45 (6.41)	19.73 (8.23)	25.03 (8.23)	19.72 (7.12)	6.73 (3)	<.001 ⁶
Y-BOCS	26.52 (5.32)	28.00 (4.31)	20.10 (5.76)	/	22.16 (3.92)	16.38 (2)	<.001 ⁷
CAPS-5	31.67 (8.26)	37.00 (8.49)	25.00	32.25 (8.88)	28.00 (6.08)	0.67(3)	0.584

Note: Means, standard deviations (SD), group comparison was conducted with ANOVA + Post-Hoc-Tests (Tukey HSD); CGI (Clinical Global Impressions), BSI -GS (Brief Symptom Inventory - Global Score), BDI-II (Beck Depression Inventory), HAM-A (Hamilton Anxiety Rating Scale), MADRS (Montgomery-Åsberg Depression Rating Scale), Y-BOCS (Yale-Brown Obsessive Compulsive Scale), CAPS-5 (Clinician-Administered PTSD Scale for DSM-5)

¹FU/PHB<HU; ²ZPHU<FU; ³PHB<ZPHU/HU/FU; ⁴n.s on group-level; ⁵HU/ZPHU/PHB < FU; ⁶ZPHU/PHB < HU/FU; ⁷ZPHU/PHB < HU

References

- [1] Cuijpers, P., Miguel, C., Ciharova, M., Harrer, M., ... Karyotaki, E. (2024). Absolute and relative outcomes of psychotherapies for eight mental disorders: A systematic review and meta-analysis. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA)*, 23(2), 267–275.
- [2] Hahn, T., Nierenberg, A. A., & Whitfield-Gabrieli, S. (2017). Predictive analytics in mental health: Applications, guidelines, challenges and perspectives. *Molecular Psychiatry*, 22(1), Article 1.