



The Impact of Government-Funded Brief Psychological Interventions on Mental Health: A Longitudinal Evaluation of the Italian “Psychological Bonus” Policy

Ilaria Maria Antonietta Benzi¹ · Antonino La Tona² · Cristina Zarbo¹ · Nicola Carone³ · Marianna Liotti⁴ · Rossana Smeriglio⁵ · Angelo Compare^{2,6} · Santo Di Nuovo⁵ · David Lazzari⁷ · Elisabetta Camussi^{1,8} · Vittorio Lingiardi⁴ · Gianluca Lo Coco⁹ · Laura Antonia Lucia Parolin¹

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Abstract

The COVID-19 pandemic amplified an ongoing mental health crisis in Europe. In response, the Italian Ministry of Health introduced the “Psychological Bonus,” a government-funded initiative aimed at improving access to brief psychological interventions (BPIs). This longitudinal study examined the effectiveness of these publicly funded BPIs in reducing psychological distress, anxiety, and depression among a large sample of Italian patients, while also exploring the moderating roles of therapy continuation, therapist orientation, and treatment setting. A total of 1,541 participants were assessed at baseline (T0), post-treatment (T1), and six-month follow-up (T2) using the CORE-10, GAD-7, and PHQ-9. Longitudinal trajectories were analyzed using Linear Mixed Models, controlling for age, sex, and session count. Separate models examined the impact of therapy continuation, therapist orientation, and treatment setting (in-person, online, or blended). Significant reductions in psychological distress, depression, and anxiety from baseline to post-treatment were maintained at follow-up, with effect sizes ranging from medium to large across outcomes and timepoints ($d=0.54-0.80$). A small but significant attenuation of psychological distress gains was observed between post-treatment and follow-up, while depression and anxiety scores remained stable. Continuation of therapy after the funded sessions did not significantly moderate symptom trajectories. Likewise, no significant differences in change trajectories emerged across therapist theoretical orientations or treatment settings. The findings provide strong support for the effectiveness of the “Psychological Bonus” as a publicly funded BPI, helpful in addressing widespread mental health needs across different therapeutic and delivery models, representing a promising model for mental health policy.

Keywords Mental health policy · Access to care · Brief psychological interventions (BPIs) · Treatment effectiveness · Longitudinal evaluation · Public mental health · Access to care · Telepsychology

Introduction

Mental health disorders and psychological distress are major public health issues worldwide, substantially contributing to global morbidity and the health-care burden (Santomauro et al., 2021). Among these, depressive and anxiety symptoms are particularly relevant for public mental health systems because they are highly prevalent and commonly observed in routine care. Cross-national studies have documented substantial variability in their prevalence across Europe. For

depressive disorders, estimates range from approximately 2.6% in the Czech Republic to over 10% in Iceland (Arias-de La Torre et al., 2021). For anxiety disorders, reported prevalence ranges from 4.9% in Sweden to 8.6% in Portugal (Javaid et al., 2023). In Italy specifically, anxiety and mood disorders are among the most common psychiatric conditions (De Girolamo et al., 2006), and about one in six people experiences a mental health disorder, with anxiety disorders being especially common and more prevalent among women (OECD & European Observatory on Health

Extended author information available on the last page of the article

Systems and Policies, 2023). Given that this study is conducted in Italy and that no restrictions were placed on diagnosis, depressive and anxiety symptoms receive particular attention in the following overview because they represent the predominant presentations in this context and are the conditions most commonly observed in routine Italian care.

The COVID-19 pandemic further amplified this pre-existing mental health burden globally, with an estimated 53.2 million additional cases of major depressive disorder (a 27.6% increase over pre-pandemic levels) and 76.2 million additional cases of anxiety disorders (a 25.6% increase) (Santomauro et al., 2021). In Europe, longitudinal evidence suggests that mental distress increased markedly during the early stages of the pandemic, and although trends attenuated over time, a subset of individuals continued to report elevated symptoms (Ahmed et al., 2023; Robinson et al., 2022). In Italy, symptoms of depression, anxiety, and fear related to COVID-19 remained elevated during and after the lockdown period (Di Blasi et al., 2021).

This increase in mental health difficulties placed additional pressure on health care systems, many of which were not adequately equipped to provide timely and effective psychological care. At the same time, the pandemic appeared to increase public awareness of the importance of attending not only to physical health, but also to psychological well-being. Across Europe, about 23% of adults reported unmet mental health care needs, with higher levels among younger individuals and those with lower incomes (OECD, 2023). Furthermore, studies documented marked heterogeneity in psychological responses to the pandemic, with some individuals showing more persistent, non-resilient trajectories and thus a greater likelihood of requiring psychological support (Ahrens et al., 2021; Lo Coco et al., 2023; Lu et al., 2022; Shevlin et al., 2023).

Italy reflects this broader mental health burden, while also presenting country-specific service challenges. In 2023, 854,040 individuals accessed public mental health services in Italy (Italian Ministry of Health, 2024). Most requests concerned non-acute conditions, particularly neurotic and somatoform presentations, that were managed in outpatient rather than inpatient settings. The current situation is further complicated by limited access to care, including a limited number of psychologists in the public sector (approximately 8.5 per 100,000 inhabitants), and substantial out-of-pocket spending for private services, both of which represent significant barriers to treatment access (OECD, 2023; OECD & European Observatory on Health Systems and Policies, 2023).

In this landscape of growing needs and limited resources, the challenge for health systems is to identify and implement intervention models that can help bridge the gap between demand for services and the capacity to respond adequately.

In this direction, it is crucial to adopt accessible and scalable approaches that can reduce barriers to care and support the delivery of evidence-based psychological interventions. Brief psychological interventions (BPIs), typically delivered over a limited number of sessions (e.g., 2–10), have shown efficacy for reducing symptoms of common mental disorders, particularly in non-acute and primary care settings (Cape et al. 2010; Corpas et al. 2021; Zhang et al. 2019a, b). Existing evidence suggests that these interventions may be especially effective for anxiety disorders relative to mixed presentations (Corpas et al., 2021). In particular, brief CBT has shown large effects for anxiety disorders, with outcomes comparable to those of longer treatments (Cape et al., 2010). For depressive disorders, the effects of brief interventions have sometimes appeared more modest in certain meta-analytic estimates (Cape et al., 2010); however, more recent evidence suggests that the number of sessions may not be a reliable predictor of effect size, with brief therapies showing outcomes comparable to longer treatments even for depression (Ciharova et al., 2024). More broadly, large-scale implementation programmes such as the UK Improving Access to Psychological Therapies (IAPT; now NHS Talking Therapies) initiative have shown substantial pre-post improvements in both depression and anxiety outcomes, supporting the public health relevance of brief evidence-based interventions (Wakefield et al., 2021). Within this programme, Dynamic Interpersonal Therapy (DIT), a psychodynamic brief intervention, has also been associated with significant reductions in depression and anxiety, although effects vary across outcome measures (Wright & Abrahams, 2015).

During and after the COVID-19 pandemic, interest in scalable and accessible delivery formats for psychological interventions further increased, including telehealth and digital adaptations of brief interventions (Pierce et al., 2021; Van Daele et al., 2022). Evidence from videoconference-delivered psychotherapy suggests that remote therapist-delivered treatment can yield outcomes broadly comparable to in-person care for common mental health problems, particularly when anxiety and depression are targeted (Berryhill et al. 2019a, b; Fernandez et al., 2021; Matsumoto et al., 2021). Together, these findings support the relevance of evaluating whether publicly funded BPIs can produce clinically meaningful symptom improvement when implemented in routine care at scale.

In line with these international developments, in 2022 the Italian government introduced the “Psychological Bonus” (PB), a publicly funded financial grant designed to support access to psychotherapy delivered by private licensed psychotherapists. In its first year, the contribution covered up to 50 euros per session, with the maximum amount varying by household economic status (ISEE): 600 euros for ISEE

below 15,000 euros, 400 euros for ISEE between 15,000 and 30,000 euros, and 200 euros for ISEE above 30,000 and up to 50,000 euros. This corresponded approximately to 4 to 12 funded sessions, depending on the assigned amount. Access to the benefit was reserved for applicants resident in Italy with an ISEE not exceeding 50,000 euros. Because demand exceeded available resources, beneficiaries were selected through regional/provincial rankings based primarily on ISEE and, in cases of equal ISEE, on order of application. Public uptake was remarkable: 395,604 applications were submitted for 41,657 funded places, further highlighting the substantial unmet need for psychological care in Italy. To systematically and longitudinally evaluate the effectiveness of these interventions, the PsyCARE project was subsequently developed (Benzi et al., 2023).

Previous cross-sectional work from the project described the baseline sociodemographic and clinical characteristics of the PB cohort, showing that the policy reached a population with substantial clinical needs and socioeconomic disadvantage (Benzi et al., 2025). Building on these findings, the present study examines programme effectiveness over time by evaluating the longitudinal impact of these state-funded brief interventions on patient-reported symptoms.

Beyond evidence from controlled efficacy trials, naturalistic studies are essential for evaluating how psychological interventions perform in routine care settings, where patients, providers, and treatment pathways are typically more heterogeneous than in experimental research. These designs can provide greater insight into real-world implementation, sustainability, and accessibility, and are therefore especially relevant for informing public mental health policies. In this sense, effectiveness research complements efficacy research by clarifying whether interventions that work under controlled conditions also retain their value when delivered in ordinary clinical practice at scale (McGinty et al., 2024). This perspective is particularly important for evaluating publicly funded programmes such as the Psychological Bonus, which were implemented to address unmet mental health needs in a real-world context.

The Current Study

This study aimed to evaluate the effectiveness of Psychological Bonus-funded interventions in reducing psychological symptoms over time. Specifically, we examined longitudinal changes in psychological distress, anxiety, and depressive symptoms across three time points: baseline (T0), post-treatment (T1), and 6-month follow-up (T2). We also examined whether continuation of therapy beyond the funded sessions moderated symptom trajectories, given that continuation may reflect differences in treatment need, clinical complexity, or the extent to which

brief treatment is sufficient for symptom stabilization over time (Wampold, 2015). Exploratory analyses further tested whether therapists' theoretical orientation (psychodynamic, cognitive-behavioural, systemic-relational, or integrative) and treatment setting (in-person, online, or blended) moderated outcomes, given that these factors may shape how brief interventions are implemented in routine care and the kinds of patients who engage with them. We hypothesized that participants would show significant symptom reduction from baseline to post-treatment and that these gains would be maintained at follow-up, regardless of therapists' theoretical orientation or treatment setting.

Materials and Methods

Design and Procedures

This study draws on longitudinal data collected as part of the PsyCARE project (Benzi et al., 2023). The study adopted a naturalistic longitudinal design with three repeated assessments: pre-treatment (T0), post-treatment (T1), and 6-month follow-up (T2). Data were collected from patients receiving psychological support through the "Psychological Bonus" policy and their therapists; the present article focuses exclusively on patient-level data. Therapists were recruited through national calls disseminated via newsletters and web communications managed by the National Board of Italian Psychologists. Patients were subsequently recruited by their therapists, who informed them about the study and facilitated participation. All participants provided written informed consent prior to data collection. Data collection took place between January 2023 and December 2024. At each time point, participants completed three validated self-report measures assessing psychological distress, anxiety symptoms, and depressive symptoms. All instruments were administered online through the digital platform used in the PsyCARE study and were presented at consistent time intervals across participants. The study was conducted in accordance with the ethical standards of the American Psychological Association and the Declaration of Helsinki (7th revision, 2013). Ethical approval for all study materials and procedures was obtained from the Ethics Committee of the University of Milano-Bicocca.

Intervention Characteristics

The intervention examined in the present study corresponded to the PB-funded psychotherapy phase, which in the 2022 scheme covered approximately 4 to 12 sessions. In the present sample, available therapist-reported treatment data indicated that the funded phase typically extended close to the

upper bound of this range (mean session count at T1 = 11.6, SD = 1.20; median = 12). In the present study, T1 corresponded to the end of the PB-funded intervention phase. Some participants subsequently continued psychotherapy with the same clinician beyond the funded sessions. Therapists provided information on treatment characteristics, including their primary theoretical orientation and treatment setting. Theoretical orientation was based on therapists' self-reported primary clinical framework and was classified as psychodynamic, cognitive-behavioural, systemic-relational, or integrative. Treatment setting was recorded as in-person, online, or blended. "Online" referred to therapist-delivered synchronous video sessions conducted via digital communication platforms (e.g., Zoom, Microsoft Teams); chat-based or asynchronous formats were not included.

Participants

The sample included 1,541 adult participants who accessed psychological services through Italy's national Psychological Bonus program. Inclusion criteria for this study required participants to be at least 18 years old, to have had no prior psychotherapy experience, and to have completed at least the post-treatment assessment (T1). No exclusion criteria were applied based on clinical diagnosis, symptom severity, or presenting issues, to preserve ecological validity and reflect the diverse population using publicly funded psychological support in Italy. The analytic sample comprised 1,272 women and 380 men (77.0% female), with a mean age of 34.4 years (SD = 10.7). Additional details on recruitment, study procedures, and baseline sample characteristics are available in previously published papers (Benzi et al., 2023, 2025).

Materials

Psychological distress, anxiety symptoms, and depressive symptoms were assessed at each time point using three validated self-report measures. Psychological distress was assessed with the Clinical Outcomes in Routine Evaluation-10 (CORE-10; Barkham et al., 2013; La Tona et al., 2023), a 10-item self-report measure rated on a 5-point scale, with total scores ranging from 0 to 40; higher scores indicate greater distress. The psychometric properties of the CORE-10, including its validity and reliability, have been supported in clinical and community samples (Barkham et al., 2013), and its validity has been confirmed in the Italian population (La Tona et al., 2023). Anxiety symptoms were assessed with the Generalized Anxiety Disorder Scale-7 (GAD-7; Spitzer et al., 2006; Bolgeo et al., 2023), a 7-item self-report measure rated on a 4-point scale, with total scores ranging from 0 to 21; higher scores indicate greater

anxiety severity. The GAD-7 has demonstrated good reliability and validity in the general population (Löwe et al., 2008; Spitzer et al., 2006), with its psychometric properties further supported in Italian clinical samples (Bolgeo et al., 2023) and its measurement invariance confirmed across European populations including Italy (Shevlin et al., 2022). Depressive symptoms were assessed with the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001), a 9-item self-report measure rated on a 4-point scale, with total scores ranging from 0 to 27; higher scores indicate greater depressive symptom severity. The validity of the PHQ-9 has been supported in the Italian population (Costantini et al., 2021; Shevlin et al., 2022).

Statistical Analyses

All analyses were conducted using jamovi's Mixed Models module, which builds on the R packages lme4, lmerTest, and GAMLj3 (Bates et al., 2014; Gallucci, 2019; The jamovi project, 2025). Descriptive statistics were used to summarize participant characteristics and follow-up completion. Analyses were conducted on the subset of participants with non-missing values on the variables included in each model. In particular, because post-treatment variables such as session count at the end of the funded intervention and, where applicable, treatment continuation were included as covariates, participants with missing data on these variables were excluded from the relevant models. Within each analytic sample, linear mixed models were estimated using available repeated observations across timepoints rather than restricting analyses to participants with complete follow-up data at all waves.

To examine longitudinal changes in psychological symptoms (general distress, anxiety, and depression), linear mixed models (LMMs) were estimated separately for each outcome. In each model, repeated observations were nested within participants, time (T0, T1, T2) was entered as a categorical fixed effect, and sex, age, and number of sessions were included as covariates. A random intercept for each participant was specified to account for between-person variability in baseline symptom levels. Models were estimated using restricted maximum likelihood (REML), and Satterthwaite's approximation was used to compute degrees of freedom. Significance of fixed effects was evaluated using Type III F-tests, and planned contrasts were used to examine differences between time points and between relevant clinical conditions. Additional models examined whether symptom trajectories varied as a function of continuation of therapy after the funded intervention, therapists' theoretical orientation, and treatment setting. The same analytic structure was applied across all three outcomes. For significant time-based contrasts, effect sizes were calculated

using Cohen's *d*. To evaluate the plausibility of the missing at random (MAR) assumption, we compared baseline demographic and clinical characteristics between participants who completed and did not complete each follow-up assessment. At T1, completers and non-completers did not differ significantly on age, sex, or baseline symptom scores (all *ps* > 0.10). At T2, completers and non-completers did not differ on age, sex, GAD-7, or PHQ-9 scores (all *ps* > 0.05); however, T2 non-completers showed marginally higher baseline psychological distress on the CORE-10 (16.04 vs. 15.25, *p* = .022), suggesting a small degree of selective attrition. This pattern is common in naturalistic longitudinal research and should be considered when interpreting follow-up findings.

To reduce the risk of Type I error due to multiple comparisons, *p* values for planned pairwise contrasts between time points were adjusted using the Holm correction. To aid interpretation of overall differences across therapist orientation groups, supplementary baseline comparisons of CORE, PHQ-9, and GAD-7 scores across theoretical orientations were conducted using one-way analyses of variance, with post hoc pairwise comparisons as appropriate. All statistical tests were two-tailed.

Results

Of the 1,541 participants included at baseline (T0), 1,084 (70.3%) completed the post-treatment assessment (T1), while 457 (29.7%) had missing T1 data. At 6-month follow-up (T2), 659 participants (42.8%) provided data, leaving 882 participants (57.2%) with missing T2 data. The most frequently represented diagnostic domains were anxiety-related (42.5%), depressive (19.9%), trauma-related (18.7%), and personality-related (10.0%). These categories were not mutually exclusive.

In available therapist-reported treatment data, the mean number of sessions completed by T1 was 11.6 (SD = 1.20), indicating that the PB-funded phase in the present sample typically extended close to the maximum number of funded sessions. In available therapist-reported treatment data, the distribution of therapists' primary theoretical orientation was 28.5% psychodynamic, 26.1% cognitive-behavioural, 24.3% systemic-relational, and 21.1% integrative. Treatment setting was 62.9% in-person, 33.8% blended, and 3.4% online.

In the present study, T1 corresponded to the end of the PB-funded intervention phase; continuation referred to psychotherapy extending beyond that funded phase. The T2 follow-up included participants regardless of whether they continued psychotherapy beyond T1; continuation status was examined analytically as a moderator in the dedicated

models. A series of linear mixed-effects models (LMMs) were conducted to examine longitudinal changes in psychological symptoms and the role of potential moderators. Raw mean symptom scores at each timepoint are presented in Table 1. The detailed results for all fixed effects, random effects, model fit statistics, and effect sizes are presented in Tables 2, 3 and 4, and 5.

Table 1 Raw mean symptom scores (and standard deviations) at each timepoint

	T0	T1	T2
CORE-10	15.79 (6.92)	12.21 (6.59)	12.79 (7.01)
GAD-7	4.41 (4.07)	2.70 (3.54)	2.65 (3.53)
PHQ-9	10.42 (5.80)	8.31 (5.41)	8.03 (5.39)

Note. *CORE-10*Clinical Outcomes in Routine Evaluation-10 (range 0–40), *GAD-7*Generalized Anxiety Disorder Scale-7 (range 0–21), *PHQ-9*Patient Health Questionnaire-9 (range 0–27). Higher scores indicate greater symptom severity. Values are raw means with standard deviations in parentheses. T0=baseline; T1=post-treatment; T2=6-month follow-up. *N*=1,541 at T0; *n*=1,084 at T1; *n*=659 at T2

Table 2 Linear mixed models for symptom trajectories and the moderating role of therapy continuation

Predictors	Distress (CORE-10)	Depres- sion (PHQ-9)	Anxiety (GAD-7)
	β (SE)	β (SE)	β (SE)
<i>Fixed Effects</i>			
(Intercept)	13.27 (0.25)***	8.63 (0.21)***	3.05 (0.13)***
<i>Time Effects</i>			
Time: Post-Treatment vs. Baseline	-3.89 (0.25)***	-2.13 (0.18)***	-1.84 (0.14)***
Time: Follow-Up vs. Baseline	-2.82 (0.31)***	-1.93 (0.23)***	-1.67 (0.18)***
<i>Moderator</i>			
Continue Therapy (No vs. Yes)	-0.57 (0.43)	-0.52 (0.36)	-0.18 (0.23)
<i>Interactions</i>			
Post-Treatment \times Continue Therapy (No vs. Yes)	-0.97 (0.50)	-0.23 (0.37)	-0.19 (0.29)
Follow-Up \times Continue Therapy (No vs. Yes)	-0.16 (0.62)	0.50 (0.46)	0.06 (0.36)
<i>Model Fit Statistics</i>			
ICC	0.51	0.60	0.46
R ² Marginal	0.062	0.038	0.058
R ² Conditional	0.542	0.617	0.495

Note. β unstandardized estimate, *SE*standard error, *ICC*intraclass correlation coefficient. All models controlled for participant sex, age, and session count. The effect of sex was significant for GAD (*p* = .016), while all other covariate effects were non-significant (*ps* > 0.05); they are omitted from the table for clarity. Planned pairwise contrasts between time points were adjusted using the Holm correction; the table reports fixed-effect coefficients from the fitted models. * *p* < .05, ** *p* < .01, *** *p* < .001

Table 3 Linear mixed models for symptom trajectories and the moderating role of therapist orientation

	Distress (CORE-10)	Depression (PHQ-9)	Anxiety (GAD-7)
Predictors	β (SE)	β (SE)	β (SE)
Fixed Effects			
(Intercept)	13.23 (0.23)***	8.64 (0.20)***	3.07 (0.13)***
<i>Time Effects</i>			
Time: Post-Treatment vs. Baseline	-3.67 (0.23)***	-2.06 (0.17)***	-1.81 (0.13)***
Time: Follow-Up vs. Baseline	-2.64 (0.28)***	-2.02 (0.21)***	-1.67 (0.16)***
<i>Moderator (vs. Psychodynamic)</i>			
Orientation: CBT	-0.88 (0.53)	-1.00 (0.45)*	-0.49 (0.29)
Orientation: Systemic	-0.81 (0.54)	-0.66 (0.45)	-0.38 (0.29)
Orientation: Integrative	-1.16 (0.56)*	-0.72 (0.47)	-0.56 (0.30)
<i>Interactions (vs. Psychodynamic)</i>			
Post-Treatment \times CBT	-0.51 (0.61)	-0.60 (0.46)	-0.60 (0.36)
Follow-Up \times CBT	-0.94 (0.76)	-1.04 (0.58)	-0.33 (0.44)
Post-Treatment \times Systemic	0.01 (0.63)	0.04 (0.47)	-0.35 (0.36)
Follow-Up \times Systemic	-0.70 (0.77)	-0.60 (0.58)	-0.21 (0.44)
Post-Treatment \times Integrative	0.15 (0.64)	0.02 (0.49)	-0.22 (0.37)
Follow-Up \times Integrative	0.04 (0.81)	-0.54 (0.61)	-0.44 (0.47)
<i>Model Fit Statistics</i>			
ICC	0.51	0.59	0.47
R ² Marginal	0.065	0.040	0.061
R ² Conditional	0.546	0.607	0.499

Note. β unstandardized estimate, *SE* standard error, *ICC* intraclass correlation coefficient. All models controlled for participant sex, age, and session count. The effect of sex was significant for all outcomes ($ps < 0.05$), while age and session count were non-significant; they are omitted from the table for clarity. Planned pairwise contrasts between time points were adjusted using the Holm correction; the table reports fixed-effect coefficients from the fitted models. * $p < .05$, ** $p < .01$, *** $p < .001$

Longitudinal Symptom Reduction and the Role of Therapy Continuation

Across all three outcomes, there was a significant main effect of time, indicating substantial reductions in psychological distress, depression, and anxiety over the course of the intervention. The effect sizes for improvement from baseline to post-treatment were large for psychological distress (Cohen's $d=0.80$ [95% CI: 0.69, 0.90]) and medium for depression ($d=0.54$ [0.44, 0.64]) and anxiety ($d=0.60$ [0.49, 0.70]). These gains were maintained at the 6-month follow-up, with effect sizes in the medium range for distress

Table 4 Linear mixed models for symptom trajectories and the moderating role of treatment setting

	Distress (CORE-10)	Depression (PHQ-9)	Anxiety (GAD-7)
Predictors	β (SE)	β (SE)	β (SE)
Fixed Effects			
(Intercept)	13.33 (0.39)***	8.89 (0.33)***	3.13 (0.21)***
<i>Time Effects</i>			
Time: Post-Treatment vs. Baseline	-4.07 (0.43)***	-2.60 (0.32)***	-1.99 (0.25)***
Time: Follow-Up vs. Baseline	-3.09 (0.54)***	-2.36 (0.41)***	-2.09 (0.31)***
<i>Moderator (vs. Online)</i>			
Setting: In-person	-0.23 (1.07)	-0.84 (0.91)	-0.16 (0.58)
Setting: Blended	-0.53 (1.10)	-0.67 (0.93)	-0.25 (0.60)
<i>Interactions (vs. Online)</i>			
Post-Treatment \times In-person	1.31 (1.22)	1.80 (0.92)	0.63 (0.71)
Follow-Up \times In-person	1.50 (1.56)	1.11 (1.18)	1.43 (0.90)
Post-Treatment \times Blended	1.86 (1.25)	1.41 (0.95)	0.84 (0.72)
Follow-Up \times Blended	2.26 (1.59)	1.03 (1.21)	2.00 (0.92)
<i>Model Fit Statistics</i>			
ICC	0.52	0.59	0.47
R ² Marginal	0.063	0.037	0.059
R ² Conditional	0.547	0.607	0.501

Note. β unstandardized estimate, *SE* standard error, *ICC* intraclass correlation coefficient. All models controlled for participant sex, age, and session count. The effect of sex was significant for all outcomes ($ps < 0.05$), whereas age and session count were non-significant; these effects are omitted from the table for clarity. Planned pairwise contrasts between time points were adjusted using the Holm correction; the table reports fixed-effect coefficients from the fitted models. * $p < .05$, ** $p < .01$, *** $p < .001$

($d=0.58$ [0.45, 0.70]), depression ($d=0.57$ [0.44, 0.70]), and anxiety ($d=0.54$ [0.42, 0.67]). However, while gains were largely maintained, psychological distress showed a small but significant attenuation between post-treatment and 6-month follow-up, with scores rising slightly from an EMM of 12.1 at T1 to 13.1 at T2 ($d=-0.22$ [-0.35, -0.09]; Holm-adjusted $p = .001$). Depression and anxiety scores remained stable across this interval (both $ps > 0.40$). Continuation of psychotherapy beyond the PB-funded phase did not significantly moderate these improvement trajectories. As shown in Table 2, neither the main effect of continuation nor its interaction with time was statistically significant for any outcome. Thus, symptom improvement during and after the funded intervention phase did not differ significantly according to whether participants subsequently continued psychotherapy. Figure 1 illustrates the longitudinal trajectories across all three symptom domains.

Table 5 Cohen's d effect sizes with 95% confidence intervals for pairwise time contrasts across models

	T0 → T1	T0 → T2	T1 → T2
<i>Continuation model</i>			
CORE-10	0.80 [0.69, 0.90]	0.58 [0.45, 0.70]	-0.22 [-0.35, -0.09]
PHQ-9	0.54 [0.44, 0.64]	0.57 [0.44, 0.70]	-0.03 [-0.16, 0.09]
GAD-7	0.60 [0.49, 0.70]	0.54 [0.42, 0.67]	-0.05 [-0.18, 0.07]
<i>Orientation model</i>			
CORE-10	0.75 [0.67, 0.83]	0.59 [0.50, 0.69]	-0.16 [-0.25, -0.07]
PHQ-9	0.56 [0.48, 0.64]	0.60 [0.51, 0.70]	-0.05 [-0.14, 0.05]
GAD-7	0.61 [0.53, 0.68]	0.59 [0.50, 0.68]	-0.02 [-0.11, 0.08]
<i>Setting model</i>			
CORE-10	0.72 [0.61, 0.84]	0.61 [0.47, 0.74]	-0.11 [-0.25, 0.02]
PHQ-9	0.60 [0.49, 0.71]	0.64 [0.51, 0.78]	-0.04 [-0.17, 0.10]
GAD-7	0.61 [0.50, 0.72]	0.62 [0.49, 0.76]	-0.02 [-0.15, 0.12]

Note. Effect sizes are Cohen's d estimated from estimated marginal means using the model residual SD as sigma. For T0→T1 and T0→T2, positive values indicate symptom reduction (improvement) from baseline. For T1→T2, negative values indicate partial attenuation of gains from post-treatment to follow-up, and positive values indicate further improvement. 95% confidence intervals in brackets. T0=baseline; T1=post-treatment; T2=6-month follow-up

Impact of Therapist Theoretical Orientation

The significant main effect of time was confirmed in the models examining therapist orientation (see Table 3). Across all three outcomes, participants showed significant symptom reductions from baseline to post-treatment and from baseline to follow-up. Effect sizes were large for psychological distress from baseline to post-treatment ($d=0.75$ [95% CI: 0.67, 0.83]) and medium for all other baseline contrasts across outcomes: depression T0→T1: $d=0.56$ [0.48, 0.64], T0→T2: $d=0.60$ [0.51, 0.70]; anxiety T0→T1: $d=0.61$

[0.53, 0.68], T0→T2: $d=0.59$ [0.50, 0.68]; distress T0→T2: $d=0.59$ [0.50, 0.69]. For psychological distress, a small but significant attenuation of gains was observed from post-treatment to follow-up ($d=-0.16$ [-0.25, -0.07]; Holm-adjusted $p = .0008$), consistent with the pattern observed in the continuation model, whereas post-treatment to follow-up differences were not significant for depression ($d=0.05$ [-0.05, 0.14]; Holm-adjusted $p = .343$) or anxiety ($d=0.02$ [-0.11, 0.08]; Holm-adjusted $p = .739$). The Time × Orientation interaction was not significant for any outcome, indicating that trajectories of symptom reduction were broadly comparable across therapeutic approaches. Relative to psychodynamic therapy, integrative therapy was associated with lower overall psychological distress, and cognitive-behavioural therapy was associated with lower overall depressive symptoms. Additional baseline comparisons showed a small but significant difference in psychological distress across orientation groups at study entry (CORE-10: $F(4, 2142)=3.38$, $p = .009$), whereas baseline depression and anxiety scores did not differ significantly across groups (PHQ-9: $p = .457$; GAD-7: $p = .407$). Post-hoc comparisons indicated that participants in psychodynamic treatment reported higher baseline psychological distress than those receiving systemic/relational therapy (16.5 [SD=6.97] vs. 15.2 [SD=6.67], $p = .040$) and those receiving other/integrative approaches (16.5 [SD=6.97] vs. 15.0 [SD=6.86], $p = .019$); no other pairwise comparisons reached significance. Figure 2 illustrates the longitudinal trajectories across all three symptom domains by therapist orientation.

Impact of Treatment Setting

The significant main effect of time was also replicated in the models examining treatment setting (see Table 4). Across all three outcomes, participants showed significant reductions in symptoms from baseline to post-treatment and to follow-up. For these baseline contrasts, effect sizes ranged from $d=0.60$ [95% CI: 0.49, 0.71] to $d=0.72$ [0.61, 0.84] across outcomes, with T0→T2 effect sizes ranging from

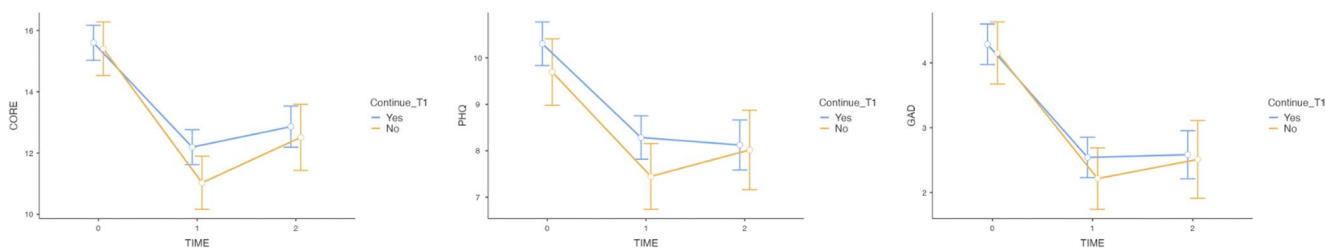


Fig. 1 Longitudinal trajectories of psychological distress, depressive symptoms, and anxiety symptoms by therapy continuation status. Note. The figure displays estimated marginal means for psychological distress (CORE-10), depressive symptoms (PHQ-9), and anxiety symptoms (GAD-7) across baseline (T0), post-treatment (T1), and 6-month follow-up (T2), stratified by therapy continuation status.

Across all three outcomes, there was a significant main effect of time. The interaction between time and continuation status was not significant for any outcome, indicating broadly comparable symptom trajectories regardless of whether participants continued therapy after the funded sessions. Error bars represent 95% confidence intervals

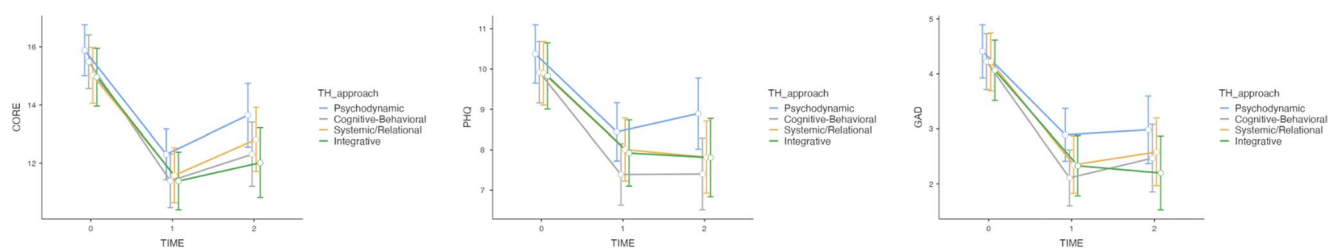


Fig. 2 Longitudinal trajectories of psychological distress, depressive symptoms, and anxiety symptoms by therapist theoretical orientation. *Note.* The figure displays estimated marginal means for psychological distress (CORE-10), depressive symptoms (PHQ-9), and anxiety symptoms (GAD-7) across baseline (T0), posttreatment (T1), and

6-month follow-up (T2), stratified by therapist theoretical orientation. Across all three outcomes, there was a significant main effect of time. The Time \times Orientation interaction was not significant for any outcome, indicating broadly comparable symptom trajectories across therapeutic approaches. Error bars represent 95% confidence intervals

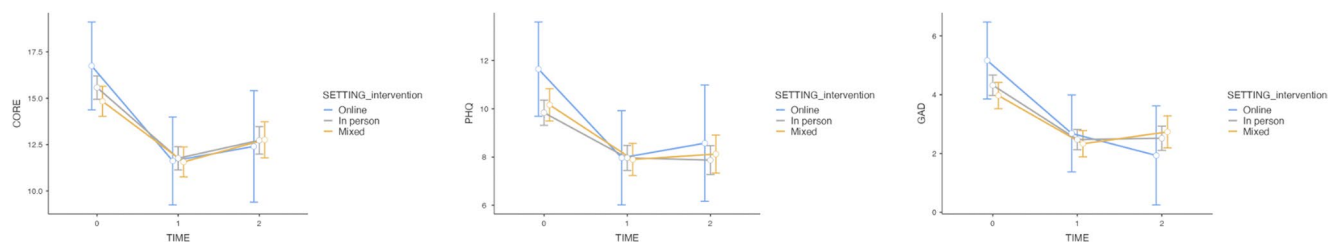


Fig. 3 Longitudinal trajectories of psychological distress, depressive symptoms, and anxiety symptoms by treatment setting. *Note.* The figure displays estimated marginal means for psychological distress (CORE-10), depressive symptoms (PHQ-9), and anxiety symptoms (GAD-7) across baseline (T0), posttreatment (T1), and 6-month follow-up (T2), stratified by treatment setting. Across all three outcomes, there was a significant main effect of time. Post hoc contrasts

indicated significant reductions from baseline to post-treatment and from baseline to follow-up across outcomes, whereas post-treatment to follow-up differences were not significant. Corrected post hoc interaction contrasts did not indicate significant differences in change trajectories across treatment settings. Error bars represent 95% confidence intervals

$d=0.61$ [0.47, 0.74] to $d=0.64$ [0.51, 0.78]. No significant post-treatment to follow-up differences emerged for psychological distress ($d=0.11$ [-0.02, 0.25]; Holm-adjusted $p = .092$), depression ($d=0.04$ [-0.10, 0.17]; Holm-adjusted $p = .581$), or anxiety ($d=0.02$ [-0.12, 0.15]; Holm-adjusted $p = .801$), indicating that treatment gains were generally maintained over time. Moreover, no significant differences in change trajectories emerged across treatment settings in the post hoc interaction contrasts. Figure 3 illustrates the longitudinal trajectories across all three symptom domains by treatment setting.

Discussion

The present study evaluated the effectiveness of the PB policy in reducing psychological distress, depressive symptoms, and anxiety through BPIs funded by the Italian Ministry of Health. This longitudinal evaluation provides evidence that government-funded BPIs can be associated with substantial reductions in psychological distress, depressive symptoms, and anxiety from baseline to post-treatment, with gains largely maintained at 6-month follow-up, although a small but significant attenuation of psychological distress scores was observed between post-treatment and follow-up.

The observed symptom reductions are consistent with international evidence supporting the effectiveness of BPIs in treating common mental health problems. Meta-analytic evidence has shown that time-limited psychotherapy can be associated with substantial improvements in emotional well-being (e.g., Cape et al. 2010; Corpas et al. 2021; Zhang et al. 2019a, b). This study contributes population-level data showing that BPIs, when publicly subsidized, can be clinically impactful across diverse groups and different types of patients (Benzi et al., 2025). In terms of benchmarking against international initiatives, the findings are broadly consistent with those reported in large-scale public psychotherapy initiatives such as the UK's Improving Access to Psychological Therapies (IAPT) programme, although direct comparison should be made cautiously (Wakefield et al., 2021; Delgadillo et al., 2022). Extending this evidence base, a recent RCT of the Norwegian IAPT equivalent (Prompt Mental Health Care; PMHC) linked clinical outcomes to registry data up to five years post-intervention, finding that symptom improvement mediated significant gains in work participation and an estimated benefit-cost ratio of 5.26, underscoring the broader societal value of publicly funded psychological care (Smith et al., 2025). However, the IAPT experience also serves as a cautionary tale. Independent evaluations have noted a significant “complexity mismatch”

between the program's original design—targeting mild to moderate issues—and the actual clinical complexity of its users, who often present with comorbidities, trauma histories, or psychotic symptoms (Hepgul et al., 2016; Martin et al., 2022). Similar concerns may arise in the Italian context, where many participants were seeking psychotherapy for the first time and may have lacked prior access to adequate care. From a policy perspective, this emphasizes the importance of integrating brief publicly funded care with triage procedures, stepped-care pathways, and referral options for individuals whose needs go beyond what a brief intervention can reasonably address.

Continuation of psychotherapy beyond the funded sessions did not significantly moderate symptom trajectories for any outcome. On the one hand, some individuals who improved during the funded phase might have felt that their immediate goals had been met and therefore did not continue. On the other hand, those who continued therapy may have had more complex or persistent clinical issues that required longer-term care. Therapy continuation should therefore not be interpreted as a simple indicator of treatment success or failure (Wampold, 2015). Rather, the findings suggest that optimal treatment length may need to be individualized rather than standardized.

Taken together, these findings underscore the public health relevance of expanding timely access to psychological care. Beyond their clinical efficacy, brief interventions such as those examined here represent a promising public investment in mental health promotion, early intervention, and the reduction of long-term burden on individuals, families, and healthcare systems. In this respect, the Psychological Bonus represents a promising institutional model for integrating psychological care into public health policy in a way that is responsive to unmet population needs. This is especially relevant in light of the overwhelming demand observed for the PB programme.

The absence of differential symptom trajectories across orientations is broadly consistent with psychotherapy literature suggesting that outcomes are not determined solely by formal theoretical orientation. Previous work has highlighted the potential role of common therapeutic processes, such as therapeutic alliance, therapist empathy, therapist responsiveness, and clients' expectations for improvement, across modalities (Compare & La Tona, 2024; Cuijpers et al., 2023; Delgado et al., 2022; Wampold, 2015). However, the present study did not directly assess these factors, and therefore, these interpretations should remain cautious.

However, although trajectories of improvement were parallel across orientations, the models showed differences in overall symptom levels between groups. Relative to psychodynamic therapy, integrative therapy was associated with lower overall distress, and cognitive-behavioural therapy with

lower overall depressive symptoms. These findings should not be interpreted as evidence of superior effectiveness over time. Rather, they likely reflect, at least in part, pre-existing differences in the patients entering different modalities. In supplementary baseline comparisons, participants in psychodynamic treatment showed higher baseline psychological distress than those receiving systemic/relational therapy and other/integrative approaches, whereas no significant baseline differences emerged for depression or anxiety. This pattern supports the interpretation that the observed overall differences in distress levels are more plausibly related to referral patterns, self-selection, symptom profiles, or broader case-mix variation than to differential effectiveness over time. This interpretation is especially important in naturalistic settings, where therapeutic orientations may overlap, and clinicians are likely to integrate techniques from different approaches more than would be apparent in manualized treatments, a factor that may itself contribute to more comparable outcomes across orientations (Norcross & Wampold, 2018). Consistent with this, a recent naturalistic study in a public healthcare setting similarly found no significant differences in symptom outcomes across psychotherapeutic frameworks using the CORE-10 and PHQ-9, and noted that content overlap between orientations in routine care likely reduces between-group differences (Malkki et al., 2026).

Finally, we examined the impact of treatment setting, in-person, online, or blended, on clinical outcomes. Overall, the results indicated broadly comparable symptom trajectories across modalities, a pattern consistent with previous literature suggesting that therapist-delivered remote psychotherapy can achieve outcomes broadly comparable to face-to-face care for common mental health problems (Carlbring et al., 2018; Gullo et al., 2022; Olthuis et al., 2015; Wagner et al., 2014; Fernandez et al., 2021; Rosenström et al., 2025). This is particularly relevant in the post-pandemic context, in which telepsychology has become an important component of mental health care delivery (Pierce et al., 2021). In the present study, corrected post hoc contrasts did not support significant differences in longitudinal change trajectories across treatment settings. These findings therefore suggest that, within a naturalistic public policy framework, BPIs may be delivered effectively across different modalities.

Strengths and Limitations

One key strength of this study is its ecological validity. By examining a large and diverse group within a policy-driven setting, the findings provide insight into how BPIs work outside controlled research environments. A second strength is the inclusion of a 6-month follow-up, offering valuable long-term evidence of treatment gains. A third strength is

the use of linear mixed models, which enabled the inclusion of all available repeated observations and supported reliable estimation even with unbalanced longitudinal data.

The findings of the study should also be interpreted in light of its limitations. First, outcomes were assessed exclusively through self-report questionnaires rather than structured clinical interviews. Second, the study was naturalistic and non-randomized, which limits causal inference and leaves open the possibility of selection effects across treatment orientations and settings. Indeed, the naturalistic design did not allow for more detailed characterization of some treatment features, including the duration of psychotherapy continuation beyond T1, the exact proportion of in-person versus online sessions within blended treatments, therapist training beyond declared orientation, and waiting time before treatment onset. These unmeasured aspects may have contributed to variability across treatment settings and therapeutic orientations. Third, while the absence of treatment standardization across therapists is inherent to the naturalistic design of this study and consistent with its aim of examining how interventions are delivered in routine care, therapist adherence to their declared theoretical orientation was not assessed. This represents a genuine limitation, as it is unknown to what extent therapists' actual clinical practice aligned with their self-reported orientation, and findings related to theoretical orientation should therefore be interpreted with caution. Additionally, sensitivity analyses indicated that participants who did not complete the 6-month follow-up showed marginally higher baseline psychological distress on the CORE-10 compared to those who did, suggesting some degree of selective attrition at T2 that should be considered when interpreting follow-up outcomes.

Conclusions

Overall, the present study provides longitudinal support for the Psychological Bonus as a public mental health initiative associated with meaningful reductions in psychological distress, depressive symptoms, and anxiety in a large naturalistic sample, many of whom were accessing psychotherapy for the first time (Benzi et al., 2025). In this sense, the PB appears to represent a promising strategy for expanding access to psychological care and responding to Italy's persistent mental health treatment gap. Further research is needed to strengthen causal claims, clarify longer-term outcomes, and identify which patients may benefit most from different forms of delivery within publicly funded care.

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Author Contributions L.P. and I.M.A.B. conceptualized the study. L.P. supervised the project and managed its administration. I.M.A.B. and A.L.T. developed the methodology and conducted the formal analyses. I.M.A.B. and R.S. carried out the investigation and curated the data. I.M.A.B., A.L.T., and C.Z. wrote the original draft. All authors (L.P., I.M.A.B., A.L.T., C.Z., N.C., R.S., M.L., A.C., S.D.N., D.L., E.C., V.L., and G.L.C.) contributed to the review and editing of the manuscript. G.L.C. also provided methodological input.

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Data Availability The data that support the findings of this study are not publicly available due to privacy and ethical restrictions. De-identified data may be made available from the corresponding author upon reasonable request and with appropriate institutional and ethical approvals.

Declarations

Competing interests The authors declare no competing interests.

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References

- Ahmed, N., Barnett, P., Greenburgh, A., Pemovska, T., Stefanidou, T., Lyons, N., Ikhtabi, S., Talwar, S., Francis, E. R., Harris, S. M., Shah, P., Machin, K., Jeffreys, S., Mitchell, L., Lynch, C., Foye, U., Schlieff, M., Appleton, R., Saunders, K. R. K., & Johnson, S. (2023). Mental health in Europe during the COVID-19 pandemic: A systematic review. *The Lancet Psychiatry*, 10(7), 537–556. [https://doi.org/10.1016/s2215-0366\(23\)00113-x](https://doi.org/10.1016/s2215-0366(23)00113-x)
- Ahrens, K. F., Neumann, R. J., Kollmann, B., Plichta, M. M., Lieb, K., Tüscher, O., & Reif, A. (2021). Differential impact of COVID-related lockdown on mental health in Germany. *World Psychiatry*, 20(1), 140.
- Barkham, M., Bewick, B., Mullin, T., Gilbody, S., Connell, J., Cahill, J., Mellor-Clark, J., Richards, D., Unsworth, G., & Evans, C. (2013). The CORE-10: A short measure of psychological distress for routine use in the psychological therapies. *Counselling and Psychotherapy Research*, 13(1), 3–13. <https://doi.org/10.1080/14733145.2012.729069>
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2014). *Fitting linear mixed-effects models using lme4* (No. arXiv:1406.5823). arXiv. <https://doi.org/10.48550/arXiv.1406.5823>
- Benzi, I. M., Compare, A., Tona, A. L., Di Nuovo, S., Lazzari, D., Lingiardi, V., & Parolin, L. (2023). PsyCARE study: Assessing impact, cost-effectiveness, and transdiagnostic factors of the Italian ministry of health's "psychological bonus" policy. *BMC Psychology*, 11(1), 306.

- Benzi, I. M., La Tona, A., Zarbo, C., Compare, A., Di Nuovo, S., Lazzeri, D., & Parolin, L. (2025). Beyond symptoms: A person-centered approach to psychological assessment using transdiagnostic factors. Insights from the PSYCARE study on Italy's 'psychological bonus' policy. *Journal of Affective Disorders*, *385*, 119390.
- Berryhill, M. B., Culmer, N., Williams, N., Halli-Tierney, A., Betancourt, A., Roberts, H., & King, M. (2019a). Videoconferencing psychotherapy and depression: a systematic review. *Telemedicine and e-Health*, *25*(6), 435–446.
- Berryhill, M. B., Halli-Tierney, A., Culmer, N., Williams, N., Betancourt, A., King, M., & Ruggles, H. (2019b). Videoconferencing psychological therapy and anxiety: a systematic review. *Family practice*, *36*(1), 53–63.
- Bolgeo, T., Di Matteo, R., Simonelli, N., Molin, D., Lusignani, A., Bassola, M., Vellone, B., Maconi, E., A., & Iovino, P. (2023). Psychometric properties and measurement invariance of the 7-item General Anxiety Disorder scale (GAD-7) in an Italian coronary heart disease population. *Journal of Affective Disorders*, *334*, 213–219. <https://doi.org/10.1016/j.jad.2023.04.140>
- Cape, J., Whittington, C., Buszewicz, M., Wallace, P., & Underwood, L. (2010). Brief psychological therapies for anxiety and depression in primary care: Meta-analysis and meta-regression. *BMC Medicine*, *8*(1). <https://doi.org/10.1186/1741-7015-8-38>
- Carlbring, P., Andersson, G., Cuijpers, P., Riper, H., & Hedman-Lagerlöf, E. (2018). Internet-based vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: An updated systematic review and meta-analysis. *Cognitive Behaviour Therapy*, *47*(1), 1–18. <https://doi.org/10.1080/16506073.2017.1401115>
- Ciharova, M., Karyotaki, E., Miguel, C., Walsh, E., de Ponti, N., Amarnath, A., & Cuijpers, P. (2024). Amount and frequency of psychotherapy as predictors of treatment outcome for adult depression: A meta-regression analysis. *Journal of affective disorders*, *359*, 92–99.
- Compare, A., & La Tona, A. (2024). Towards an integrated approach to evidence-based practice in psychotherapy. In B. Poletti, G. A. Tasca, L. Pievani, & A. Compare (Eds.), *Training in integrated relational psychotherapy: An evidence-based approach* (pp. 3–21). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-71904-2_1
- Corpas, J., Moriana, J. A., Venceslá, J. F., & Gálvez-Lara, M. (2021). Brief psychological therapies for emotional disorders in primary care: A systematic review and meta-analysis. *Clinical Psychology: Science and Practice*, *28*(4), 363–376. <https://doi.org/10.1037/cps0000009>
- Costantini, L., Pasquarella, C., Odone, A., Colucci, M. E., Costanza, A., Serafini, G., Aguglia, A., Belvederi Murri, M., Brakoulias, V., Amore, M., Ghaemi, S. N., & Amerio, A. (2021). Screening for depression in primary care with Patient Health Questionnaire-9 (PHQ-9): A systematic review. *Journal of Affective Disorders*, *279*, 473–483. <https://doi.org/10.1016/j.jad.2020.09.131>
- Cuijpers, P., Miguel, C., Ciharova, M., Ebert, D., Harrer, M., & Karyotaki, E. (2023). Transdiagnostic treatment of depression and anxiety: A meta-analysis. *Psychological Medicine*, *53*(14), 6535–6546. <https://doi.org/10.1017/s0033291722003841>
- De Girolamo, G., Polidori, G., Morosini, P., Scarpino, V., Reda, V., Serra, G., Mazzi, F., Alonso, J., Vilagut, G., Visonà, G., Falsirollo, F., Rossi, A., & Warner, R. (2006). Prevalence of common mental disorders in Italy: Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD). *Social Psychiatry and Psychiatric Epidemiology*, *41*(11), 853–861. <https://doi.org/10.1007/s00127-006-0097-4>
- Delgadillo, J., Deisenhofer, A. K., Probst, T., Shimokawa, K., Lambert, M. J., & Kleinstäuber, M. (2022). Progress feedback narrows the gap between more and less effective therapists: A therapist effects meta-analysis of clinical trials. *Journal of Consulting and Clinical Psychology*, *90*(7), 559–567. <https://doi.org/10.1037/ccp0000747>
- Di Blasi, M., Gullo, S., Mancinelli, E., Freda, M. F., Esposito, G., Gelo, O. C. G., Lagetto, G., Giordano, C., Mazzeschi, C., & Pazzagli, C. (2021). Psychological distress associated with the COVID-19 lockdown: A two-wave network analysis. *Journal of Affective Disorders*, *284*, 18–26.
- Fernandez, E., Woldgabreal, Y., Day, A., Pham, T., Gleich, B., & Aboujaoude, E. (2021). Live psychotherapy by video versus in-person: A meta-analysis of efficacy and its relationship to types and targets of treatment. *Clinical Psychology & Psychotherapy*, *28*(6), 1535–1549.
- Gallucci, M. (2019). *GAMLj: General analyses for linear models*. [jamovi module].
- Gullo, S., Lo Coco, G., Leszcz, M., Marmarosh, C. L., Miles, J. R., Shechtman, Z., Weber, R., & Tasca, G. A. (2022). *Therapists' perceptions of online group therapeutic relationships during the COVID-19 pandemic: A survey-based study* (Vol. 26, p. 103). Theory, Research, and Practice 2.
- Heggul, N., King, S., Amarasinghe, M., Breen, G., Grant, N., Grey, N., Hotopf, M., Moran, P., Pariente, C. M., Tylee, A., Wingrove, J., Young, A. H., & Cleare, A. J. (2016). Clinical characteristics of patients assessed within an Improving Access to Psychological Therapies (IAPT) service: Results from a naturalistic cohort study (Predicting Outcome Following Psychological Therapy; PROMPT). *Bmc Psychiatry*, *16*(1), 52. <https://doi.org/10.1186/s12888-016-0736-6>
- Italian Ministry of Health (2024). *Rapporto salute mentale: Analisi dei dati del Sistema Informativo per la Salute Mentale (SISM)—Anno 2023*.
- Javaid, S. F., Hashim, I. J., Hashim, M. J., Stip, E., Samad, M. A., & Ahabbi, A. A. (2023). Epidemiology of anxiety disorders: Global burden and sociodemographic associations. *Middle East Current Psychiatry*, *30*(1), 44. <https://doi.org/10.1186/s43045-023-00315-3>
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9. *Journal of General Internal Medicine*, *16*(9), 606–613. <https://doi.org/10.1046/j.1525-1497.2001.016009606.x>
- La Arias-de, J., Vilagut, G., Ronaldson, A., Serrano-Blanco, A., Martín, V., Peters, M., Valderas, J. M., Dregano, A., & Alonso, J. (2021). Prevalence and variability of current depressive disorder in 27 European countries: A population-based study. *The Lancet Public Health*, *6*(10), e729–e738. [https://doi.org/10.1016/s2468-2667\(21\)00047-5](https://doi.org/10.1016/s2468-2667(21)00047-5)
- La Tona, A., Brugnera, A., Poletti, B., Aiello, E. N., Coco, L., Del Piccolo, G., L., & Compare, A. (2023). Italian validation of the clinical outcomes in routine evaluation-10 (CORE-10): A short measure for routine outcome monitoring in clinical practice. *Research in Psychotherapy: Psychopathology Process and Outcome*, *26*(1). <https://doi.org/10.4081/ripppo.2023.671>
- Lo Coco, G., Salerno, L., Albano, G., Pazzagli, C., Lagetto, G., Mancinelli, E., Freda, M. F., Bassi, G., Giordano, C., & Gullo, S. (2023). Psychosocial predictors of trajectories of mental health distress during the COVID-19 pandemic: A four-wave panel study. *Psychiatry Research*, *326*, 115262.
- Lu, L., Contrand, B., Dupuy, M., Ramiz, L., Sztal-Kutas, C., & Lagarde, E. (2022). Mental and physical health among the French population before and during the first and second COVID-19 lockdowns: Latent class trajectory analyses using longitudinal data. *Journal of Affective Disorders*, *309*, 95–104.
- Löwe, B., Decker, O., Müller, S., Brähler, E., Schellberg, D., Herzog, W., & Herzberg, P. Y. (2008). Validation and standardization of the Generalized Anxiety Disorder Screener (GAD-7) in the general population. *Medical Care*, *46*(3), 266–274. <https://doi.org/10.1097/MLR.0b013e318160d093>

- Malkki, V. K., Saarni, S. E., Lutz, W., & Rosenström, T. H. (2026). Targeted learning for optimal patient assignment to psychotherapy. *Psychotherapy Research*, 36(4), 643–657.
- Martin, C., Iqbal, Z., Airey, N. D., & Marks, L. (2022). Improving Access to Psychological Therapies (IAPT) has potential but is not sufficient: How can it better meet the range of primary care mental health needs? *British Journal of Clinical Psychology*, 61(1), 157–174. <https://doi.org/10.1111/bjc.12314>
- Matsumoto, K., Hamatani, S., & Shimizu, E. (2021). Effectiveness of videoconference-delivered cognitive behavioral therapy for adults with psychiatric disorders: Systematic and meta-analytic review. *Journal of medical Internet research*, 23(12), e31293.
- McGinty, E. E., Alegria, M., Beidas, R. S., Braithwaite, J., Kola, L., Leslie, D. L., Moise, N., Mueller, B., Pincus, H. A., Shidhaye, R., Simon, K., Singer, S. J., Stuart, E. A., & Eisenberg, M. D. (2024). The Lancet Psychiatry Commission: transforming mental health implementation research. *The Lancet Psychiatry*, 11(5), 368–396. [https://doi.org/10.1016/S2215-0366\(24\)00040-3](https://doi.org/10.1016/S2215-0366(24)00040-3)
- Norcross, J. C., & Wampold, B. E. (2018). A new therapy for each patient: Evidence-based relationships and responsiveness. *Journal of clinical psychology*, 74(11), 1889–1906.
- OECD (2023). *Health at a glance 2023: OECD indicators*. OECD. <https://doi.org/10.1787/7a7afb35-en>
- OECD & European Observatory on Health Systems and Policies. (2023). *Italy: Country health profile 2023*. OECD. <https://doi.org/10.1787/633496ec-en>
- Olthuis, J. V., Watt, M. C., Bailey, K., Hayden, J. A., & Stewart, S. H. (2015). Therapist-supported Internet cognitive behavioural therapy for anxiety disorders in adults. *The Cochrane Database of Systematic Reviews*, 3, CD011565. <https://doi.org/10.1002/14651858.CD011565>
- Pierce, B. S., Perrin, P. B., Tyler, C. M., McKee, G. B., & Watson, J. D. (2021). The COVID-19 telepsychology revolution: A national study of pandemic-based changes in US mental health care delivery. *American Psychologist*, 76(1), 14.
- Robinson, E., Sutin, A. R., Daly, M., & Jones, A. (2022). A systematic review and meta-analysis of longitudinal cohort studies comparing mental health before versus during the COVID-19 pandemic in 2020. *Journal of Affective Disorders*, 296, 567–576.
- Rosenström, T. H., Saarni, S. E., Saarni, S. I., Tammilehto, J., & Stenberg, J. H. (2025). Efficacy and effectiveness of therapist-guided internet versus face-to-face cognitive behavioural therapy for depression via counterfactual inference using naturalistic registers and machine learning in Finland: a retrospective cohort study. *The Lancet Psychiatry*, 12(3), 189–197.
- Santomauro, D. F., Herrera, M., Shadid, A. M., Zheng, J., Ashbaugh, P., Pigott, C., Abbafati, D. M., Adolph, C., Amlag, C., Aravkin, J. O., Bang-Jensen, A. Y., Bertolacci, B. L., Bloom, G. J., Castellano, S. S., Castro, R., Chakrabarti, E., Chattopadhyay, S., Cogen, J., Collins, R. M., & Ferrari, J. K., A. J (2021). Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *The Lancet*, 398(10312), 1700–1712. [https://doi.org/10.1016/s0140-6736\(21\)02143-7](https://doi.org/10.1016/s0140-6736(21)02143-7)
- Shevlin, M., Butter, S., McBride, O., Murphy, J., Gibson-Miller, J., Hartman, T. K., Levita, L., Mason, L., Martinez, A. P., & McKay, R. (2023). Refuting the myth of a ‘tsunami’ of mental ill-health in populations affected by COVID-19: Evidence that response to the pandemic is heterogeneous, not homogeneous. *Psychological Medicine*, 53(2), 429–437.
- Shevlin, M., Butter, S., McBride, O., Murphy, J., Gibson-Miller, J., Hartman, T. K., Levita, L., Mason, L., Martinez, A. P., McKay, R., Stocks, T. V., Bennett, K. M., Hyland, P., Vallieres, F., Valiente, C., Vazquez, C., Contreras, A., Peinado, V., Trucharte, A., & Bental, R. P. (2022). Measurement invariance of the Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder scale (GAD-7) across four European countries during the COVID-19 pandemic. *Bmc Psychiatry*, 22(1), 154. <https://doi.org/10.1186/s12888-022-03787-5>
- Smith, O. R. F., Clark, D. M., Hensing, G., Layard, R., & Knapstad, M. (2025). Cost-benefit of IAPT Norway and effects on work-related outcomes and health care utilization: results from a randomized controlled trial using registry-based data. *Psychological Medicine*, 55, e86. <https://doi.org/10.1017/S003329172500025X>
- Spitzer, R. L., Kroenke, K., Williams, J. B. W., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: The GAD-7. *Archives of Internal Medicine*, 166(10), 1092–1097. <https://doi.org/10.1001/archinte.166.10.1092>
- The jamovi project. (2025). *Jamovi* (Version 2.6). <https://www.jamovi.org>
- Van Daele, T., Mathiasen, K., Carlbring, P., Bernaerts, S., Brugnera, A., Compare, A., Duque, A., Eimontas, J., Gosar, D., & Haddouk, L. (2022). Online consultations in mental healthcare: Modelling determinants of use and experience based on an international survey study at the onset of the pandemic. *Internet Interventions*, 30, 100571.
- Wagner, B., Horn, A. B., & Maercker, A. (2014). Internet-based versus face-to-face cognitive-behavioral intervention for depression: A randomized controlled non-inferiority trial. *Journal of Affective Disorders*, 152–154, 113–121. <https://doi.org/10.1016/j.jad.2013.06.032>
- Wakefield, S., Kellett, S., Simmonds-Buckley, M., Stockton, D., Bradbury, A., & Delgadillo, J. (2021). Improving Access to Psychological Therapies (IAPT) in the United Kingdom: A systematic review and meta-analysis of 10-years of practice-based evidence. *British Journal of Clinical Psychology*, 60(1), 1–37. <https://doi.org/10.1111/bjc.12259>
- Wampold, B. E. (2015). How important are the common factors in psychotherapy? An update. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA)*, 14(3), 270–277. <https://doi.org/10.1002/wps.20238>
- Wright, D., & Abrahams, D. (2015). An investigation into the effectiveness of Dynamic Interpersonal Therapy (DIT) as a treatment for depression and anxiety in IAPT. *Psychoanalytic Psychotherapy*, 29(2), 160–170. <https://doi.org/10.1080/02668734.2015.1035740>
- Zhang, A., Bornheimer, L. A., Weaver, A., Franklin, C., Hai, A. H., Guz, S., & Shen, L. (2019a). Cognitive behavioral therapy for primary care depression and anxiety: a secondary meta-analytic review using robust variance estimation in meta-regression. *Journal of behavioral medicine*, 42(6), 1117–1141.
- Zhang, A., Franklin, C., Jing, S., Bornheimer, L. A., Hai, A. H., Himle, J. A., & Ji, Q. (2019b). The effectiveness of four empirically supported psychotherapies for primary care depression and anxiety: A systematic review and meta-analysis. *Journal of affective disorders*, 245, 1168–1186.

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Authors and Affiliations

Ilaria Maria Antonietta Benzi¹ · Antonino La Tona² · Cristina Zarbo¹ · Nicola Carone³ · Marianna Liotti⁴ · Rossana Smeriglio⁵ · Angelo Compare^{2,6} · Santo Di Nuovo⁵ · David Lazzari⁷ · Elisabetta Camussi^{1,8} · Vittorio Lingiardi⁴ · Gianluca Lo Coco⁹ · Laura Antonia Lucia Parolin¹

✉ Ilaria Maria Antonietta Benzi
ilaria.benzi@unimib.it

Antonino La Tona
antonino.latona@unibg.it

Cristina Zarbo
cristina.zarbo@unimib.it

Nicola Carone
nicola.carone@uniroma2.it

Marianna Liotti
marianna.liotti@uniroma1.it

Rossana Smeriglio
rossanasmeriglio@gmail.com

Angelo Compare
angelo.compare@unibg.it

Santo Di Nuovo
sdiuovo@unict.it

David Lazzari
davidlazzari888@gmail.com

Elisabetta Camussi
elisabetta.camussi@unimib.it

Vittorio Lingiardi
vittorio.lingiardi@uniroma1.it

Gianluca Lo Coco
gianluca.lococo@unipa.it

Laura Antonia Lucia Parolin
laura.parolin@unimib.it

- ¹ University of Milano-Bicocca, Milan, Italy
- ² University of Bergamo, Bergamo, Italy
- ³ University of Rome Tor Vergata, Rome, Italy
- ⁴ Sapienza University of Rome, Rome, Italy
- ⁵ University of Catania, Catania, Italy
- ⁶ Centro Diagnostico Italiano, Milan, Italy
- ⁷ Osservatorio sul Benessere Psicologico e Salute, Rome, Italy
- ⁸ Fondazione della Professione Psicologica Adriano Ossicini, Rome, Italy
- ⁹ University of Palermo, Palermo, Italy