Brief Psychological Therapies for Emotional Disorders in Primary Care: A Systematic Review and Meta-Analysis

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Abstract

Brief psychological therapies might be a solution for the treatment of emotional disorders in primary care. We aim to determine the effectiveness of these therapies compared with medication. Studies were selected from the Medline, Embase and PsycInfo databases. Eligibility criteria included adults with emotional disorders treated with 2–10 psychotherapeutic sessions provided in primary care. We analyzed 33 trials involving 3868 patients following PRISMA. A moderate effect size favorable to brief therapies was found at post-treatment (d = 0.37, 95% CI: 0.21 to 0.52) but this was not maintained at follow-up. The main limitation was the heterogeneity among the studies. We conclude that brief therapies could be superior to pharmacological interventions for the treatment of emotional disorders. These findings support their implementation in primary care. Prospero ID: CRD42019119910.

Keywords: brief psychological therapies; emotional disorders; primary care; metaanalysis

Public Health Statements

- Emotional disorders are mainly treated with psychotropic drugs in primary care, which is usually not the best therapeutic option.
- Brief psychological therapies are usually conceptualized as a range of 2–10 sessions and might be a possible solution for the treatment of emotional disorders in primary care.
- The current meta-analysis provides evidence that brief psychological therapies are as effective as or even more effective than medication and that they could be suitable for implementation in primary care.

1. Introduction

A wide range of diagnoses that present intense negative emotions associated with anxiety and depressive symptoms are usually called emotional disorders (EDs) (Bullis et al., 2019; NICE, 2011; WHO, 2017). These disorders are mostly treated in primary care (PC) with psychotropic drugs because there is usually no other intervention available in this setting (Moreno & Moriana, 2016; Roca et al., 2009). However, scientific studies and international clinical guides indicate psychological therapies as the treatment of choice for EDs (NICE, 2011; Wang et al., 2007; Watts et al., 2015). Consequently, most patients with EDs do not receive the best therapeutic option, which might put their health at risk (Bebbington et al., 2000; Smits et al., 2009). Despite the importance of implementing evidence-based interventions (Gálvez-Lara et al., 2018; Moriana et al., 2017), there are clear difficulties in applying the scientific data in practical contexts. For this reason, adapting conventional psychological therapies to an abbreviated format has been suggested as a possible solution for the treatment of EDs in public health systems (Shepardson et al., 2016).

Brief or time-limited psychological therapies have been conceptualized as a range of 2–10 sessions (Cape et al., 2010) in contrast to the 12–24 sessions usually required in traditional psychological therapies. Brief psychological therapies applied in PC have emerged as a good therapeutic option to respond to public health demands, as they have been shown to achieve favorable clinical results in reducing anxiety and depressive symptoms (Bernhardsdottir et al., 2013; Corpas et al., 2021; Churchill et al., 2000; Saravanan et al., 2017). In this vein, some countries have already begun to incorporate this type of treatment in PC, such as the Improving Access to Psychological Therapies (IAPT) program in the United Kingdom, which has been widely shown to achieve beneficial outcomes (Clark, 2018; Wakefield et al., 2020). However, the long-term effectiveness of low-intensity psychotherapies has been questioned due to high relapse rates (Ali et al., 2017; Hemmings, 2000).

The previous meta-analysis of Cape et al. (2010) reported that brief psychological therapies for anxiety and depression administered in PC were superior to treatment as usual, which included pharmacological therapies, but also wait-lists, placebo, or case management interventions. Although these results are potentially relevant, the heterogeneity of the control groups might not truly reflect the most frequent treatment for EDs in PC. Moreover, the authors did not take into account the fact that several of the

trials included both pharmacological interventions and brief psychological therapies. Therefore, clearer and more updated information is needed (Seekles et al., 2013).

The general objective of this study is to analyze the clinical effectiveness of brief psychological therapies in adult patients with EDs applied in PC compared to pharmacological interventions. Specifically, it aims to: a) compare the effectiveness of all types of brief psychological interventions to pharmacological interventions in PC for all EDs; b) compare the effectiveness of all brief psychological interventions to pharmacological interventions in PC for the different types of EDs; c) analyze the effectiveness of the different types of brief therapies in PC across and between disorders; d) explore the long-term effectiveness of brief psychological treatments compared to medication; e) determine whether the combined use of psychotropic drugs plus brief psychological therapy makes any clinical difference; and f) ascertain the influence of various moderator variables on the effect size of brief psychological therapies in PC.

2. Methods

2.1. Protocol and registration

In line with Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations (Moher et al., 2009), the present systematic review and meta-analysis was registered in PROSPERO with the code CRD42019119910.

2.2. Search strategy

Studies were mainly identified from a search in the Medline, Embase, and PsycInfo databases from their inception to December 2019 using a sensitive search strategy involving combinations of 'mental health' ('mental health' or psychol* or anx* or depress* or dysthymi* or psychiatr* or emotion* or counsel*) and 'primary care' terms ('primary care' or 'primary health care' or 'family physician*' or 'practice nurs*' or 'general pract*' or GP*). Additional papers were identified from reference lists, by hand-searching key journals, and by contacting other PC mental health researchers. The search was limited to randomized controlled trials (RCTs) published in English. The entire process was carried out by two independent researchers and discussed afterwards.

2.3. Selection of studies

2.3.1. Inclusion criteria

Studies were included when they met the following inclusion criteria according to PICOS criteria (Moher et al., 2009): (P) adult patients with anxiety disorders (generalized anxiety disorder, panic disorder, phobias, and posttraumatic stress disorder); depression disorders (major depression or dysthymia); and mixed or unspecified common mental health problems (where participants with a range of EDs or emotional distress were included); (I) brief psychological therapy provided by someone other than the patient's general practitioner (GP) in PC as an experimental group. 'Brief' was operationalized as more than two and a maximum of ten appointments. When the range of sessions was not available, we took the mean number of sessions instead, which also had to be more than two and less than ten; (C) any type of pharmacological treatment also provided in PC as a comparator; (O) reported symptoms of anxiety, depression, or both as an outcome; (S) studies (RCTs) providing the necessary data for the analyses.

2.3.2. Exclusion criteria

Studies of computerized psychological interventions, online therapy, facilitated self-help, psycho-educational groups, and psychological therapy carried out as part of collaborative care or case management were excluded. Studies were also eliminated when the control groups were wait-lists, another psychological intervention, and non-psychopharmacological treatment, or when medication was present but in combination with another intervention, such as psychoeducation or bibliotherapy (usually conceptualized as enhanced usual care). Trials conducted in specialized care or private clinics were not included. Additionally, trials that did not provide enough data for the analysis were excluded if the data could not be obtained from the authors upon request.

2.4. Data extraction

Data from the included studies were extracted into a structured summary table. Studies were classified according to type of psychological therapy and whether patients had depression disorders, anxiety disorders, or mixed anxiety and depression disorders. Information extracted also included: authors; date of publication; country where the study was performed; number of treatment sessions (mean and range); length of the sessions; type and format of intervention; length of follow-up (weeks from baseline); use of intention-to-treat analysis; primary symptom outcome measure; number of participants randomized per condition (samples); mean age of participants; and percentage of female participants. All data were extracted by two independent reviewers blinded to each other. Disagreements between reviewers were resolved by discussion.

2.5. Risk of bias assessment

Risk of bias was assessed using the Cochrane Collaboration 'Risk of Bias' tool (Higgins & Green, 2011), which allows researchers to identify the adequacy of the condition allocation sequence generation, the concealment of that sequence, how incomplete outcome data is addressed, the presence of selective and report bias, and possible data contamination. The quality of each study was assessed independently by two reviewers, and disagreements were resolved by discussion.

2.6. Analytic procedure

2.6.1. Calculation of effect sizes

For each study, Cohen's d (bias corrected) was calculated (Hedges, 1981) as a measure of the differences between the standardized mean changes (pre-post) of the experimental and control groups (Becker, 1988). First, we used the formula $d = c \cdot [(M_{pre} - M_{post}) / SD_{pre}]$ to obtain the standardized mean changes, where c is the bias correction factor, M_{pre} and M_{post} are the means of the pre-test and post-test scores, respectively, and SD_{pre} is the pre-test standard deviation score (Morris & DeShon, 2002). We used data from an intention-to-treat analysis rather than data from participants who completed the study if both were reported. For each study, *d* was calculated for the experimental and control group, providing the d index of the general size from the differences between them. According to Cohen (1988), *d* values close to 0.2 indicate low effect, values close to 0.5 indicate moderate effect, and those close to 0.8 or more indicate high effect. The 95% confidence intervals for every effect size were also calculated.

2.6.2. Meta-analytic procedure

The meta-analyses performed in this work were carried out using Comprehensive Meta-Analysis software (version 3.3). Due to the variety of interventions and diagnoses included and our sample characteristics, we expected a high heterogeneity among all the effect sizes of the studies. Therefore, a random effects model was used, which assumes that the effect size might vary from one study to another. Several meta-analyses were conducted by combining the variables "type of treatment", "type of psychological therapy," and "type of diagnosis". Effect size heterogeneity was analyzed by means of Q and I2 statistics. The Q statistic indicates whether the heterogeneity is significant and I^2

shows the percentage of heterogeneity. I^2 values around 25%, 50%, and 75% indicate low, moderate, and high heterogeneity, respectively.

2.6.3. Subgroup analyses and meta-regression

Comparative analyses of the subgroups were performed using a mixed-effects model. The aim of these analyses was to determine differences in effect size depending on whether the psychological therapy was implemented alone or in combination with psychotropic drugs, the type of psychological therapy, and the specific diagnosis. Furthermore, meta-regression analyses were conducted using a mixed-effects model to determine if the previous moderator variables, the number of sessions conducted, the demographic region, the quality of the studies, the gender, and the age of the patients might act as predictors of effect size.

2.6.4. Publication bias

The presence of publication bias was examined using a funnel plot analysis and Egger's linear regression test (Egger et al., 1997).

3. Results

3.1. Study selection

The flowchart outlining the search process is shown in Figure 1. Thirty-three studies met our inclusion criteria. One study (Ward et al., 2000) provided two different outcomes depending on the type of treatment (counseling and cognitive behavioral therapy). We included these results with the labels "Arm 1" and "Arm 2," and took them into account as independent studies for the systematic review. Therefore, we obtained a total of 34 results to be analyzed.

3.2. Description of included studies

3.2.1. Country of origin

Details of the included studies are provided in Table 1. Regarding the country of origin of the studies, 15 (44.1%) were conducted in the United Kingdom, six (17.7%) in the United States, three (8.8%) in the Netherlands, two (6%) in Australia, two (6%) in China, one (2.9%) in Zimbabwe, one (2.9%) in Pakistan, one (2.9%) in Germany, one (2.9%) in Taiwan, one (2.9%) in India, and one (2.9%) in Sweden. Therefore, according to our research criteria, a total of 11 countries have administered brief psychological therapies in PC.

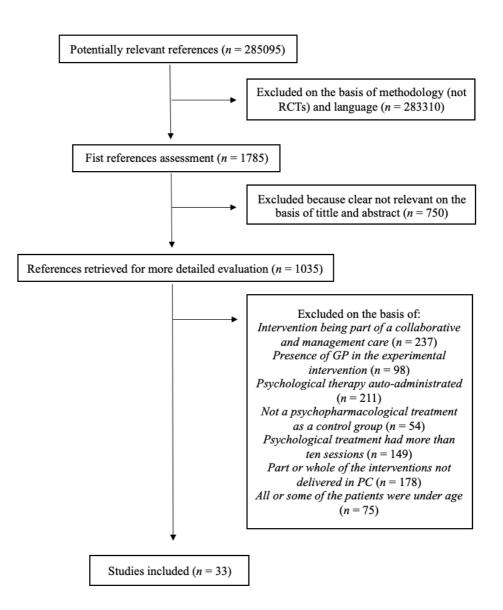


Figure 1. Results of literature searches and selection of included RCTs

3.2.2. Diagnoses

Regarding the diagnoses observed across the included studies, 18 of them (52.9%) were included in the category of depression, four (11.8%) in the category of anxiety, and 12 (35.3%) in the category of unspecified/mixed EDs.

3.2.3. Psychological treatments

The type of treatment was also reviewed with the following outcome: 12 studies (35.3%) referred to problem-solving therapy, 10(29.4%) to cognitive behavioral therapy, eight (23.5%) to counseling, two (6%) to mindfulness-based cognitive therapy, one

(2.9%) to interpersonal therapy, and one (2.9%) to psychodynamic therapy. Hence, a total of six different types of brief psychological therapies were carried out in PC settings. Ten (29.4%) studies were found to use combined treatment (psychological plus pharmacological therapy). Specifically, four (11.8%) studies implemented problem-solving treatment, three (8.7%) studies implemented cognitive behavioral therapy, two (6%) studies implemented counseling, and one (2.9%) study implemented psychodynamic therapy with some type of antidepressant or anxiolytic drugs. The remaining studies (70.6%) implemented the psychological treatment without any other complementary intervention.

The majority of the studies (29 studies; 85.3%) applied an individual format of intervention. The rest of the studies carried out the treatment in a group format. The mean number of sessions of all the studies was 5.5. The mean duration of the interventions was 9 weeks, representing a global estimation of one session per week. The mean length of the psychotherapy sessions was 43 minutes.

3.2.4. Measures

Primary outcome measures were highly heterogeneous. Eleven studies (32.7%) used the Hamilton Depression Rating Scale (HDRS), five studies (14.9%) used the Beck Depression Inventory (BDI), four studies (11.8%) used the Clinical Interview Schedule (CIS), three studies (8.7%) used the Montgomery–Asberg Depression Rating Scale (MADS), and three studies (8.7%) used the General Health Questionnaire (GHQ). The following measures were used in one study (2.9%): Patient Health Questionnaire (PHQ), Edinburgh Postnatal Depression Scale (EPDS), Hamilton Anxiety and Depression Scale (HADS), Mental Health Symptom Index (MHSI), Research Diagnostic Criteria (RDC), Clinical Global Impression (CGI), Beck Anxiety Inventory (BAI), and Brief Symptom Inventory (BSI).

Only 19 studies (55.9%) conducted a follow-up measure, which had a mean length of 36 weeks. As regards the precision of the data, 19 studies (55.9%) performed an intention-to-treat analysis, thus indicating the overall good quality of the included studies.

1	Trial				Psychol	ogical treatme			Measu	ires			Sample	es			R	lisk of l	bias	
Reference	Country	Diagnosis	Туре	F			ssions		Outcome	FU	ITT	Е	С	Age	%	а	b	с	d	е
		0			Mean	Range	Weeks	Length						0	Female					
Barret et al. (2001)	USA	Depression	PST*	Ι	5	4-6	11	30'	HDRS	#	Y	80	80	44.1	63.9	+	+	+	?	+
Brodaty & Andrews (1983)	AUS	Mixed	PP*	Ι	7	6-8	8	30'	GHQ	48	N	18	18	41.5	#	?	-	?	?	?
Catalan et al. (1991)	UK	Mixed	PST	Ι	4	≤4	7	30'	GHQ	24	N	21	23	33.5	68	?	+	-	+	?
Chibanda et al. (2014)	ZIM	Depression	PST	G	6	5-6	6	60'	EPDS	#	N	30	28	25.6	100	+	?	?	+	?
Dwight-Joh et al. (2011)	USA	Depression	CBT*	Ι	4.6	1-7	6	45'	PHQ	24	Y	50	51	39.8	78	?	+	+	?	?
Friedli et al. (1997)	UK	Mixed	COU	Ι	7.7	4-10	12	50'	BDI	36	Y	70	66	39	81	+	?	?	?	+
Hegerl et al. (2010)	GER	Depression	CBT	G	4.6	3-7	9	90'	HDRS	#	Y	61	83	46.4	68.2	+	+	+	?	?
Hemmings (1997)	UK	Mixed	COU*	G	5.7	#	8	15'	MHSI	#	N	136	52	37	74.5	?	?	-	?	?
Holden et al. (1989)	UK	Depression	COU	Ι	8	≤ 8	8	#	RDC	#	N	26	24	26.2	100	?	?	-	?	-
Husain et al. (2014)	PAK	Depression	CBT	G	6.3	4-9	10	75'	HDRS	24	Y	33	33	31.3	100	+	+	?	?	+
Kendrick et al. (2005)	UK	Mixed	PST	Ι	4.1	2-6	8	38'	CIS	26	Y	90	78	35.4	70.5	+	+	+	+	+
Lamers et al. (2010)	NL	Depression	CBT*	Ι	4	2-9	12	60'	BDI	36	Y	183	178	70.7	46.5	+	+	+	+	+
Lang et al. (2006)	USA	Mixed	PST*	Ι	3	≤4	11	45'	BSI	24	Y	32	30	46.6	53.2	+	?	?	?	-
Lindsay et al. (1987)	UK	Anxiety	CBT	Ι	5.5	3-8	4	#	GHQ	#	Ν	10	10	42	60	?	?	-	?	-
Liu et al. (2007)	TAI	Mixed	PST*	Ι	2.3	≤6	16	#	CIS	#	Y	63	66	43.7	80.7	+	+	?	?	-
Lynch et al. (2004)	USA	Depression	PST	Ι	6	≤6	6	#	HDRS	#	Ν	9	13	38.5	78	?	?	-	-	+
Magnani et al. (2016)	AUS	Depression	COU	Ι	#	≤6	8	30'	HDRS	24	Ν	44	46	46.2	74.1	?	-	-	?	-
Mitchell et al. (2009)	USA	Depression	COU*	Ι	#	≤9	9	45'	HDRS	96	Y	48	53	57	39.6	+	?	?	?	?
Mynors-Wallis et al. (1995)	UK	Depression	PST	Ι	6	≤6	12	30'	HDRS	#	Ν	29	27	37.1	76.2	?	+	-	?	?
Mynors-Wallis et al. (1997)	UK	Mixed	PST	Ι	4.5	4-5	8	#	CIS	26	Ν	34	29	38	77.1	?	+	-	-	-
Oxman et al. (2008)	UK	Depression	PST	Ι	5	4-6	4	30'	MADRS	35	Y	72	69	55.2	57	+	+	+	-	-
Patel et al. (2003)	IN	Mixed	COU	Ι	2.4	1-4	8	#	CIS	48	Y	150	150	48	83	+	-	+	?	+
Power et al. (1989)	UK	Anxiety	CBT	Ι	4	#	6	50'	HDRS	11	Ν	10	10	32	85	-	+	?	?	?
Power et al. (1990)	UK	Anxiety	CBT	Ι	5	≤7	9	40'	CGI	#	Ν	21	22	40.7	67.4	?	+	-	-	+
Schreuders et al. (2007)	NL	Mixed	PST*	Ι	5	4-6	12	30'	HADS	#	Ν	61	69	52.8	70.8	+	?	-	?	?
Scott & Freeman (1992)	UK	Depression	CBT	Ι	9.8	#	16	50'	HDRS	#	Y	30	30	30.2	78.3	?	+	-	?	?
Scott et al. (1997)	UK	Depression	CBT*	Ι	6	≤6	7	31'	HDRS	58	Ν	24	24	41	66.7	?	?	-	?	-
Van Schaik et al. (2006)	NL	Depression	IPT	Ι	8	≤10	8	#	MADRS	24	Y	69	74	68	69.5	+	-	+	+	?
Ward et al. (2000) Arm 1	UK	Mixed	CBT	Ι	5	2-9	12	50'	BDI	48	Y	63	67	37	75	+	-	+	-	?
Arm 2	UK	Mixed	COU	Ι	6.4	2-9	12	50'	BDI	48	Y	67	67	37	75	+	-	+	-	?
Wickberg & Hwang (1996)	SW	Depression	COU	Ι	6	≤6	8	#	MADRS	#	Ν	20	21	28.4	100	-	+	-	?	?
Williams et al. (2000)	USA	Depression	PST	Ι	5	4-6	11	30'	HDRS	#	Y	138	137	71	40	+	+	?	?	?
Wong et al. (2016)	CHI	Anxiety	MBCT	G	6.4	≤8	8	45'	BAI	#	Y	61	56	50	79.1	+	?	+	-	?
Wong et al. (2018)	CHI	Depression	MBCT	Ť	6.1	<8	8	45'	BDI	48	Y	115	116	54	93.1	+	+	+	2	9

Notes: Trial - AUS, Australia; CHI, China; GER, Germany; IN, India; NL, Netherlands; PAK, Pakistan; SW, Sweden; TAI, Taiwan; USA, United States of America; UK, United Kingdom; ZIM, Zimbabwe **Psychological treatment** – CBT, Cognitive-behavioural therapy; COU, Counselling; F, Format; G, Group; I, Individual; IPT, Interpersonal therapy; MBCT, Mindfulness-based cognitive therapy; PP, Psychodynamic psychotherapy; PST, Problem solving therapy **Measures** - BAI, Beck anxiety inventory; BDI, Beck depression inventory; BSI, Brief symptom inventory; CGI, Clinical global impression; CIS, Clinical interview schedule; EPDS, Edinburgh postnatal depression scale; GHQ, General health questionnaire; HADS, Hospital anxiety and depression scale; HDRS, Hamilton depression rating scale; MADRS, Montgomery-Asberg depression rating scale; MHSI, Mental health symptom index; PHQ, Patient health questionnaire; RDC, Research diagnostic criteria; FU, Follow-up (weeks) **Samples** - C, Control; E, Experimental; ITT, Intention to treat; N, No; Y, Yes **Quality assessment** - a, allocation sequence adequately generated; b, allocation adequately concealed; c, incompletely data adequately addressed; d, no evidence of selective reporting; e, adequate protection against contamination; +, low risk (included information protecting against bias); –, high risk (did not protect against source of bias); ?, unclear risk of bias

* Psychological treatment plus pharmacological treatment

Not available

7.3.2.5. Samples

The studies included a total of 3868 participants, which were distributed by treatment as follows: n = 1968 (50.9%) in the experimental brief psychological treatment and n = 1900 (49.1%) in the pharmacological control treatment. The sample size of the included studies varied considerably from 20 patients (Power et al., 1989) to 361 patients (Lamers et al., 2010). The mean age of the patients was 43 years (SD = 10.9). A total of 73.6% of the patients were females.

7.32.6. Risk of bias assessment

The methodological quality of the studies varied significantly. There was very little evidence of selection bias, with only two studies (6%) (Power et al., 1989; Wickberg & Hwang, 1996) reporting the inadequacy of the allocation sequence (sufficient information was not provided to evaluate how groups were randomized or a randomization procedure was not used to ensure comparability between groups). Specifically, we found that the majority of studies (19 studies; 55.9%) had good allocation sequences, while around one-third (13 studies; 38.1%) had unclear allocation sequences. Similarly, only six studies (17.3%) (Brodaty & Andrews, 1993; Magnani et al., 2016; Patel et al., 2003; Van Scheik, 2006; Ward et al., 2006 – Arm 1/Arm 2) reported a high risk of allocation concealment, half (17 studies; 50%) reported the certainty of the blinding, and 11 (32.7%) provided unclear data about blinding issues. The risk of attrition bias was somewhat higher. Thirteen studies (38.1%) (Catalan et al., 1991; Hemmings, 1997; Holden et al., 1987; Lindsay et al., 1987; Lynch et al., 2004; Magnani et al., 2016; Mynors-Wallis et al., 1995, 1997; Power et al., 1990; Schreuders at al., 2007; Scott & Freeman, 1992; Scott et al., 1997; Wickberg et al., 1996) did not address the incomplete data, 12 studies (35.3%) addressed the issue, and nine studies (26.6%) reported ambiguous information. It was difficult to determine the presence or absence of the selective reporting bias since 22 studies (64.5%) were uncertain about it. Five studies (14.9%) indicated a low risk of bias and seven studies (20.6%) (Lynch et al., 2004; Mynors-Wallis et al., 1992; Oxman et al., 2008; Power et al., 1990; Ward et al., 2000 -Arm 1/Arm 2; Wong et al., 2016) indicated a high risk. Finally, there was moderate protection against contamination, considering that eight studies (23.5%) (Holden et al., 1989; Lang et al., 2006; Lindsay et al, 1987; Liu et al., 2007; Magnani et al., 2016; Mynors-Wallis et al., 1997; Oxamn et al., 2008; Scott et al., 1997) presented a high risk of bias, 18 studies (53%) were unclear, and only eight studies (23.5%) showed sufficient outcome care.

3.3. General meta-analyses

General meta-analyses were performed to test the effect of brief psychological therapies compared to pharmacological intervention at the end of treatment and at follow-up (see Figures 2 and 3). The results showed a significant moderate effect favorable to brief psychological therapies at post-treatment (k = 34, d = 0.37, 95% CI: 0.21 to 0.52) and a non-significant moderate effect at follow-up (k = 19, d = 0.29, 95% CI: -0.08 to 0.66). In both cases, the heterogeneity was high ($I^2 = 71.22$ for post-treatment; $I^2 = 89.56$ for follow-up).

Other subgroup analyses were carried out to determine the effect size according to whether the psychological therapy was applied alone or in combination with psychotropic drugs, the type of psychological therapy, and the specific diagnosis (see Tables 2 and 3).

udy name	Treatment	Diagnosis		-	Statistics f	or each s	tudy			Std diff in means and 95% Cl
			Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value	
arret et al. 2001	PST	Depression	0,100	0,170	0,029	-0,232	0,432	0,590	0,555	
odaty et al. 1983	PP	Mixed	0,650	0,335	0,112	-0,006	1,306	1,943	0,052	
atalan et al. 1991	PST	Mixed	0,170	0,411	0,169	-0,636	0,976	0,413	0,679	
hibanda et al. 2014	PST	Depression	0,600	0,497	0,247	-0,374	1,574	1,208	0,227	
wight-Johnson et al. 2011	CBT	Depression	1,270	1,016	1,031	-0,720	3,260	1,251	0,211	
iedli et al. 1997	COU	Mixed	0,190	0,179	0.032	-0,162	0,542	1,059	0,290	
xoerl et al. 2010	CBT	Depression	0.040	0.230	0.053	-0.411	0,491	0,174	0.862	
emmings et al. 1997	COU	Mixed	0,070	0,182	0,033	-0,288	0,428	0,384	0,701	
lden et al. 1989	COU	Depression	0,730	0,323	0,105	0,096	1,364	2,258	0.024	
isain et al. 2014	CBT	Depression	-0,620	0,526	0,276	-1,650	0,410	-1,180	0,238	
endrick et al. 2005	PST	Mixed	-0,100	0,190	0,036	-0,472	0,272	-0,526	0,599	
mers et al. 2010	CBT	Depression	1,140	0,114	0.013	0,916	1,364	9,964	0.000	
ng et al. 2006	PST	Mixed	0.660	0.250	0.062	0,170	1,150	2.640	0.008	
ndsay et al. 1987	CBT	Anxiety	1,230	1,071	1,147	-0,869	3,329	1,149	0,251	
et al. 2007	PST	Mixed	-0.010	0.225	0.051	-0.451	0.431	-0.044	0.965	
nch et al. 2004	PST	Depression	0,100	0,407	0,166	-0,699	0,899	0,245	0,806	
ionani et al. 2016	COU	Depression	-0.410	0.395	0.156	-1.184	0.364	-1.038	0.299	
tchell et al. 2009	COU	Depression	1,270	0,290	0,084	0,702	1,838	4,383	0,000	
nors-Wallis et al. 1995	PST	Depression	0.220	0.504	0.254	-0.767	1.207	0.437	0.662	
nors-Wallis et al. 1997	PST	Mixed	0.070	0,298	0.089	-0,513	0,653	0,235	0.814	
man et al. 2008	PST	Depression	0.550	0.230	0.053	0.099	1.001	2.390	0.017	
tel et al. 2003	COU	Mixed	-0,190	0,201	0.040	-0,583	0.203	-0.947	0.344	
wer et al. 1989	CBT	Anxiety	1.820	1,126	1,267	-0,386	4,026	1,617	0,106	
weretal. 1990	CBT	Anxiety	1,150	0.364	0,132	0.437	1.863	3,160	0.002	
hreuders et al. 2007	PST	Mixed	0,130	0.217	0.047	-0.296	0.556	0.598	0.550	
ott et al. 1992	CBT	Depression	0,580	0,420	0,176	-0,242	1,402	1,382	0,167	
ott et al. 1997	CBT	Depression	0,260	0,432	0,187	-0,587	1,107	0.602	0,107	
n Schaik et al. 2006	IPT	Depression	0,300	0,132	0.017	0.042	0,558	2,281	0,023	
ard et al. 2000 Arm 1	CBT	Mixed	0,720	0,240	0,058	0,249	1,191	2,999	0,003	
ard et al. 2000 Arm 2	COU	Mixed	0,720	0,240	0.048	0,129	0.991	2,535	0,000	
ckberg et al. 1996	COU	Depression	0,990	0,460	0,211	0,089	1,891	2,153	0,031	
lliams et al. 2000	PST	Depression	0,030	0,400	0,211	-0.239	0.299	0.219	0,827	
ong et al. 2016	MBCT	Anxiety	0,030	0,157	0.026	0,233	0,235	3,281	0,027	
ong et al. 2018	MBCT	Depression	0,410	0,102	0,020	0,213	0,619	3.847	0,001	
ong or di. 2010	NDO1	L'opression	0,410	0,080	0,006	0,201	0,525	4.633	0,000	
			5,505	0,000	3,000	0,210	0,020	4,000	0,000	-2,00 -1.00 0.00 1.00
										-, ,, ,, ,,
										Favours Control Favours Treatmen

Figure 2. Forest plot and data of studies included at post-treatment analysis

Study name	Treatment				Statistics f	or each s	study				Std dif	fin means and	95% CI	
			Std diff in means	Standard error	Variance	Lower limit	Upper limit	Z-Value	p-Value					
Brodaty et al. 1983	PP	Mixed	0,280	0,382	0,146	-0,469	1,029	0,733	0,463		1			- I
Catalan et al. 1991	PST	Mixed	0,250	0,406	0,165	-0,546	1,046	0,615	0,538					
D wight-Johnson et al. 201	1 C B T	Depression	4,100	1,678	2,817	0,811	7,389	2,443	0,015					
Friedliet al. 1997	COU	Mixed	0,190	0,195	0,038	-0,192	0,572	0,976	0,329			+∎	-	
Husain et al. 2014	CBT	Depression	-0,380	0,543	0,295	-1,444	0,684	-0,700	0,484		_		-	
Kendrick et al. 2005	PST	Mixed	-0,260	0,200	0,040	-0,652	0,132	-1,300	0,194		- 1	╼═┿╴		
Lamers et al. 2010	CBT	Depression	2,040	0,145	0,021	1,756	2,324	14,077	0,000					\rightarrow
Lang et al. 2006	PST	Mixed	0,180	0,242	0,059	-0,295	0,655	0,742	0,458			─┼╋─	-	
Magnani et al. 2016	COU	Depression	-0,780	0,518	0,269	-1,796	0,236	-1,505	0,132	<u> </u>		<u> </u>		
Mitchell et al. 2009	COU	Depression	0,240	0,378	0,143	-0,501	0,981	0,635	0,525			+∎	_	
Mynors-Wallis et al. 1997	PST	Mixed	0,070	0,296	0,087	-0,509	0,649	0,237	0,813				-	
Oxman et al. 2008	PST	Depression	0,070	0,388	0,151	-0,691	0,831	0,180	0,857				— I	
Patel et al. 2003	COU	Mixed	-0,100	0,188	0,035	-0,468	0,268	-0,532	0,595					
Power et al. 1989	CBT	Anxiety	2,790	1,437	2,066	-0,027	5,607	1,941	0,052				_	\rightarrow
Scott et al. 1997	CBT	Depression	0,600	0,899	0,809	-1,163	2,363	0,667	0,505				▰┼──	
Van Schaik et al. 2006	IPT	Depression	0,180	0,149	0,022	-0,112	0,472	1,206	0,228					
Ward et al. 2000 Arm 1	CBT	Mixed	0,340	0,318	0,101	-0,284	0,964	1,068	0,286					
Ward et al. 2000 Arm 2	COU	Mixed	-0,180	0,263	0,069	-0,695	0,335	-0,685	0,494		<u> </u>			
Wong et al. 2018	MBCT	Depression	0,480	0,109	0,012	0,266	0,694	4,399	0,000			_ -	┣-	
			0,287	0,189	0,036	-0,083	0,658	1,520	0,129				-	
										-2,00	-1,00	0,00	1,00	2,00
											Favours Cor	ntrol Fav	ours Treatn	nent

Figure 3. Forest plot and data of studies included at follow-up analysis

	nalyses at p	obt u	cutillent					
Trials in	cluded			Effect		Het	erogene	ity
Plus drugs	Diagnosis	k	d	95% CI	p	Q-value	р	I^2
All	All	34	0.37	0.21 to 0.52	.00	114.68	.00	71.22
No	All	24	0.30	0.15 to 0.44	.00	44.74	.00	48.59
Yes	All	10	0.49	0.12 to 0.86	.01	57.76	.00	84.42
All	Depression	18	0.41	0.17 to 0.65	.00	75.77	.00	77.56
No	Depression	13	0.28	0.10 to 0.45	.00	18.73	.09	35.93
Yes	Depression	5	0.75	0.14 to 1.36	.02	30.10	.00	86.70
No	Anxiety	4	0.78	0.34 to 1.22	.00	3.80	.28	21.16
All	Mixed	12	0.22	0.04 to 0.40	.02	20.51	.04	46.36
No	Mixed	7	0.20	-0.07 to 0.45	.14	13.75	.03	56.37
Yes	Mixed	5	0.25	-0.02 to 0.51	.06	6.64	.15	39.79
All	All	10	0.63	0.21 to 1.05	.00	30.90	.00	70.87
No	All	7	0.51	0.04 to 1.00	.03	14.37	.03	58.26
All	Depression	6	0.41	-0.22 to 1.05	.20	29.01	.00	82.76
All	All	8	0.37	0.02 to 0.71	.04	27.72	.00	74.75
No	All	6	0.27	-0.09 to 0.63	.14	14.42	.02	65.34
All	Depression	4	0.66	-0.04 to 1.37	.07	12.11	.01	75.24
All	Mixed	4	0.15	-0.13 to 0.43	.30	6.57	.09	54.37
All	All	12	0.14	0.01 to 0.27	.04	11.20	.42	1.76
No	All	8	0.11	-0.06 to 0.28	.20	6.28	.51	0.00
Yes	All	4	0.19	-0.07 to 0.45	.14	4.67	.20	35.85
All	Depression	6	0.16	-0.02 to 0.34	.08	4.71	.45	0.00
No	Depression	5	0.21	-0.03 to 0.46	.09	4.54	.33	11.88
All	Mixed	6	0.12	-0.10 to 0.35	.25	6.38	.27	21.72
	Trials in Plus drugs All No Yes All No Yes All No Yes All No All All All All All All All No Yes All No No Yes All No No All No No All No No All All No No No No No No No No No No No No No	Trials includedPlus drugsDiagnosisAllAllNoAllYesAllAllDepressionNoDepressionYesDepressionYesDepressionYesDepressionNoAnxietyAllMixedNoAnxietyAllMixedYesMixedAllAllAllAllAllDepressionAllAllNoAllAllDepressionAllAllNoAllNoAllNoAllAllAllNoAllAllAllNoAllAllDepressionNoDepressionNoDepression	Trials includedPlus drugsDiagnosis kAllAll34NoAll24YesAll10AllDepression18NoDepression13YesDepression5NoAnxiety4AllMixed12NoMixed7YesMixed5AllAll10NoAll7YesMixed5AllAll10NoAll7AllDepression6AllAll8NoAll6AllMixed4AllMixed4AllAll8YesAll4AllDepression6NoAll8YesAll4AllDepression6NoDepression5	Trials includedPlus drugsDiagnosis kkAllAll340.37NoAll240.30YesAll100.49AllDepression180.41NoDepression130.28YesDepression50.75NoAnxiety40.78AllMixed120.22NoMixed70.20YesMixed50.25AllAll100.63NoAll70.51AllDepression60.41AllAll80.37NoAll60.27AllDepression40.66AllMixed40.15AllAll120.14NoAll80.11YesAll40.19AllDepression60.16NoDepression50.21	EffectPlus drugsDiagnosis k kd95% CIAllAll340.370.21 to 0.52NoAll240.300.15 to 0.44YesAll100.490.12 to 0.86AllDepression180.410.17 to 0.65NoDepression130.280.10 to 0.45YesDepression50.750.14 to 1.36NoAnxiety40.780.34 to 1.22AllMixed120.220.04 to 0.40NoAnxiety40.780.34 to 1.22AllMixed70.20-0.07 to 0.45YesMixed50.25-0.02 to 0.51AllAll100.630.21 to 1.05NoAll70.510.04 to 1.00AllAll80.370.02 to 0.71NoAll60.27-0.09 to 0.63AllAll80.11-0.06 to 0.28YesAll40.15-0.13 to 0.43AllAll80.11-0.06 to 0.28YesAll40.19-0.07 to 0.45AllDepression60.16-0.02 to 0.34NoDepression60.16-0.02 to 0.34NoAll80.11-0.03 to 0.46	Trials includedEffect Plus drugsDiagnosis k k d 95% CI p AllAll340.370.21 to 0.52.00NoAll240.300.15 to 0.44.00YesAll100.490.12 to 0.86.01AllDepression180.410.17 to 0.65.00NoDepression130.280.10 to 0.45.00YesDepression50.750.14 to 1.36.02NoAnxiety40.780.34 to 1.22.00AllMixed120.22.004 to 0.40.02NoMixed70.20-0.07 to 0.45.14YesMixed50.25-0.02 to 0.51.06AllAll100.630.21 to 1.05.00NoAll70.510.04 to 1.00.03AllAll80.370.02 to 0.71.04NoAll80.370.02 to 0.71.04NoAll60.27-0.09 to 0.63.14AllDepression40.66-0.04 to 1.37.07AllMixed40.15-0.13 to 0.43.30AllAll120.140.01 to 0.27.04NoAll80.11-0.06 to 0.28.20YesAll40.19-0.07 to 0.45.14AllDepre	Trials includedEffectHetPlus drugsDiagnosis Allkd95% CI 0.37p Q -valueAllAll340.370.21 to 0.52.00114.68NoAll240.300.15 to 0.44.0044.74YesAll100.490.12 to 0.86.0157.76AllDepression180.410.17 to 0.65.0075.77NoDepression130.280.10 to 0.45.0018.73YesDepression50.750.14 to 1.36.0230.10NoAnxiety40.780.34 to 1.22.003.80AllMixed120.220.04 to 0.40.0220.51NoMixed70.20-0.07 to 0.45.1413.75YesMixed50.25-0.02 to 0.51.066.64AllAll100.630.21 to 1.05.0030.90NoAll70.510.04 to 1.00.0314.37AllDepression60.41-0.22 to 1.05.2029.01AllAll80.370.02 to 0.71.0427.72NoAll60.27-0.09 to 0.63.1414.42AllDepression40.66-0.04 to 1.37.0712.11AllMixed40.15-0.13 to 0.43.306.57AllAll120	Effect HeterogenePlus drugsDiagnosis k kd95% CI 95% CIpQ-value Q-valuepAllAllAll340.370.21 to 0.52.00114.68.00NoAll240.300.15 to 0.44.0044.74.00YesAll100.490.12 to 0.86.0157.76.00AllDepression180.410.17 to 0.65.0075.77.00NoDepression50.750.14 to 1.36.0230.10.00NoAnxiety40.780.34 to 1.22.003.80.28AllMixed120.220.04 to 0.40.0220.51.04NoMixed70.20-0.07 to 0.45.1413.75.03YesMixed50.25-0.02 to 0.51.066.64.15AllAll100.630.21 to 1.05.0030.90.00NoAll70.510.04 to 1.00.0314.37.03YesMixed50.27-0.09 to 0.63.1414.42.02AllAll100.66-0.04 to 1.37.0712.11.01AllDepression60.41-0.22 to 1.04.336.57.09AllAll120.140.01 to 0.27.0411.20.42NoAll8 <td< td=""></td<>

 Table 2. Meta-analyses at post-treatment

Notes: Table reports only analyses for which 4 or more studies were available – CBT, Cognitive-behavioural therapy; COU, Counselling; PST, Problem-solving therapy.

	Trials in	cluded		•	Effect		Hete	rogene	ity
Therapy	Plus drugs	Diagnosis	k	d	95% CI	р	Q-value	р	I^2
All	All	All	19	0.29	-0.08 to 0.66	.13	172.41	.00	89.56
All	No	All	13	0.08	-0.12 to 0.28	.42	24.75	.02	51.51
All	Yes	All	6	0.92	-0.11 to 1.95	.08	65.64	.00	92.38
All	All	Depression	9	0.47	-0.20 to 1.15	.17	121.81	.00	93.43
All	No	Depression	5	0.14	-0.20 to 0.48	.41	9.60	.04	58.34
All	Yes	Depression	4	1.39	0.03 to 2.75	.04	23.33	.00	87.14
All	All	Mixed	9	0.03	-0.14 to 0.18	.76	5.96	.65	0.00
All	No	Mixed	7	-0.01	-0.19 to 0.17	.91	4.95	.55	0.00
CBT	All	All	6	1.20	0.03 to 2.36	.04	42.17	.00	88.14
CBT	All	Depression	4	1.29	-0.35 to 2.98	.12	22.18	.00	86.47
COU	All	All	5	-0.02	-0.26 to 0.21	.84	4.33	.36	7.80
COU	No	All	4	-0.06	-0.33 to 0.21	.65	3.81	.28	21.42
PST	All	All	5	-0.01	-0.25 to 0.23	.93	2.70	.61	0.00
PST	No	All	4	-0.08	-0.36 to 0.20	.59	1.87	.60	0.00
PST	All	Mixed	4	-0.02	-0.27 to .023	.88	2.65	.44	0.00

Table 3. Meta-analyses at follow-up

Notes: Table reports only analyses for which 4 or more studies were available – CBT, Cognitive-behavioral therapy; COU, Counselling; PST, Problem-solving therapy.

3.4. Comparison between groups

3.4.1. Type of treatment

The comparative group analysis did not show significant differences between the effect achieved from the psychological treatment (k = 24, d = 0.30, 95% CI: 0.15 to 0.44) compared to the effect achieved from the combined treatment (k = 10, d = 0.49, 95% CI: 0.12 to 0.86) at the end of the intervention (Q = .90, df = 1, p = .34). Similarly, the results did not point to significant differences at follow-up (Q = 2.45, df = 1, p = .12) between the psychological treatment (k = 13, d = 0.08, 95% CI: -0.12 to 0.28) and the combined treatment (k = 6, d = 0.92, 95% CI: -0.11 to 1.95).

3.4.2. Type of psychological therapy

The analysis to determine the effect size depending on the type of psychological therapy revealed significant differences between cognitive behavioral therapy (k = 10, d = 0.63, 95% CI: 0.21–1.05) and problem-solving therapy (k = 12, d = 0.14, 95% CI: 0.01–0.27) at post-treatment (Q = 4.74, df = 1, p = .03) when they were applied in combination with pharmacological intervention. All other comparisons between psychological therapies alone or in combination with drugs did not show significant differences either at the end of treatment or at follow-up (see Table 4).

	Combined treatment				Psychological treatment						
	Post-trea	tment	ent Follow-up		Post-treat	nent	Follow-up				
	Q-value	р	Q-value	р	Q-value	р	Q-value	р			
CBT vs COU	0.88	.34	4.02	.05	0.63	.42	0.54	.46			
CBT vs PST	4.74	.03	3.92	.05	2.48	.12	0.58	.45			
COU vs PST	1.39	.24	0.01	.93	0.61	.44	0.00	.94			

 Table 4. Specific comparisons between therapies

Notes: CBT, Cognitive-behavioral therapy; COU, Counselling; PST, Problem-solving therapy.

3.4.3. Type of diagnosis

Comparisons by type of diagnosis indicated significant differences (Q = 5.37, df = 1, p = .02) between the effect obtained from brief psychological therapies at posttreatment for anxiety (k = 4, d = 0.78, 95% CI: 0.34 to 1.22) and mixed depression and anxiety (k = 12, d = 0.22, 95% CI: 0.04 to 0.40). The rest of the comparisons showed no significant differences (see Table 5). Because only one study (Power et al., 1989) provided follow-up data for the diagnosis of anxiety, comparisons made at follow-up were limited to the diagnosis of depression (k = 9, d = 0.47, 95% CI: -0.20 to 1.15) and mixed depression and anxiety (k = 9, d = 0.03, 95% CI: -0.14 to 0.19), with no significant differences between both effects (Q = 1.62, df = 1, p = .20).

 Table 5. Specific comparisons according to the type of diagnosis

	Q-value	p
Anxiety vs Depression	2.09	.15
Anxiety vs Mixed anxiety and depression	5.37	.02
Depression vs Mixed anxiety and depression	1.59	.21

3.5. Meta-regression

The results of the meta-regression analyses are shown in Table 6. As can be seen, the type of treatment (alone or in combination with drugs) did not act as an effect size predictor at post-treatment, but it clearly did at follow-up. Additionally, the type of psychological therapy functioned as an effect size predictor at post-treatment when comparing cognitive behavioral therapy to problem-solving therapy, but not when compared to counseling. At follow-up, this variable acted as an effect size predictor when comparing cognitive behavioral therapy to problem-solving therapy and counseling. Moreover, the diagnosis acted as an effect size predictor when comparing anxiety to mixed anxiety and depression at post-treatment. This result did not appear at follow-up. The rest of the variables (treatment format, mean number of therapy sessions, quality of the studies, mean age of participants, gender, demographic region, and length of the sessions) did not act as effect size predictors either at post-treatment or at follow-up.

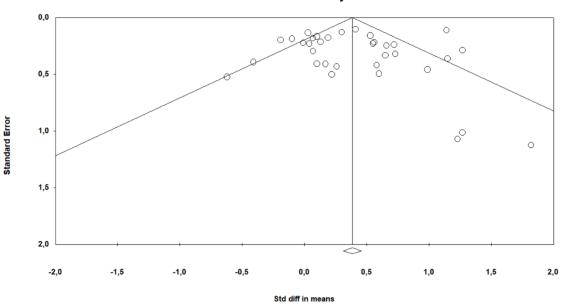
Variable	Time	β		SE	<i>p</i> -value
Treatment	Post-treatment				
Psychological		Ref			
Combined			.17	.16	.30
Treatment	Follow-up				
Psychological		Ref			
Combined			.78	.33	.02
Therapy	Post-treatment				
CBT		Ref			
COU			28	.22	.19
PST			45	.21	.03
Therapy	Follow-up				
CBT	-	Ref			
COU			-1.15	.42	.01
PST			-1.03	.42	.01
Diagnosis	Post-treatment				
Anxiety		Ref			
Depression			43	.30	.15
Mixed			62	.31	.04
Diagnosis	Follow-up				
Depression	1	Ref			
Mixed			39	.35	.26
Format	Post-treatment				
Individual		Ref			
Group			22	.22	.31
Format	Follow-up				
Individual	I	Ref			
Group			69	.91	.44
Mean sessions	Post-treatment		.04	.05	.42
Mean sessions	Follow-up		06	.12	.60
Mean age	Post-treatment		.00	.00	.73
Mean age	Follow-up		.02	.01	.05
Sessions length	Post-treatment		.00	.00	.41
Sessions length	Follow-up		07	.12	.60
Gender	Post-treatment		01	.00	.18
Gender	Follow-up		01	.01	.17
Country	Post-treatment				
Europe		Ref			
USA			00	.22	.98
Rest of the world			27	.20	.17
Country	Follow-up				
Europe	-r	Ref			
USA			.47	.83	.56
Rest of the world			35	.58	.54
Quality of the studies	Post-treatment		01	.05	.79
Quality of the studies	Follow-up		.10	.14	.49

Table 6. Standardized regression coefficients of the moderator variables regarding the effect size of brief psychological therapies at post-treatment and follow-up

Notes: CBT, Cognitive-behavioral therapy; COU, Counselling; PST, Problem-solving therapy; Ref, Reference group; SE, Standard error; USA, United States of America

3.6. Publication bias

The funnel plot analysis (see Figure 4) and Egger's linear regression test (Egger et al., 1997) did not indicate the presence of publication bias in the studies included in this work [t(32) = .04; p = .96].



Funnel Plot of Standard Error by Std diff in means

Figure 4. Funnel plot of brief therapies effect size data at post-treatment

4. Discussion

4.1. Main findings

The main aim of this study was to estimate the overall effects of brief psychological therapies applied in PC for the treatment of EDs compared to the more common pharmacological interventions in these settings. When all the studies were considered, we found a moderate effect that is favorable to time-limited psychological therapies. Although the number of sessions did not seem to be an important moderator factor, we might be able to support the idea that most gains are made within the first ten appointments. In fact, according to the majority of results (30/34), the mean number of sessions is between four and eight, with the mode being six sessions. In other words, and in accordance with Nieuwsma et al. (2012), just around six sessions of psychological therapy for EDs could be enough to produce a clinical change.

The outcome of the present analysis showed that brief psychological therapies are as effective as pharmacological interventions in the long-term. There is controversy in the scientific community about the long-term effectiveness of brief psychotherapies (Ali et al., 2017; Hemmings, 2000; Smit et al., 2007). However, some studies applied lowintensity therapies or supportive interventions. Thus, our result might be explained by looking at our restrictive selection criteria: we only took into account studies that carried out psychological therapies provided by a specialized mental health professional and no other health professional such as GPs. Moreover, we only included studies that implemented structured psychological treatments and no other potentially less powerful ones, such as self-help therapies or psychoeducational interventions. In other words, the risk of relapse seems to be small even if the psychological treatment is limited in time, as long as the intensity of the intervention is not reduced, and it is delivered by a mental health professional.

In accordance with the meta-analysis of Cape et al. (2010), we find that brief psychological therapies are effective in PC, but there is a slight discrepancy regarding the effect sizes obtained. However, it is remarkable that even when only brief psychological therapies are compared to pharmacological intervention, which is an active and proven effective treatment, and not with others like placebo or wait-lists, we obtained a higher effect size for depression and the previous effect sizes for anxiety and mixed anxiety and depression were maintained. Therefore, our results might be more precise and promising since they are circumscribed to the reality of the PC setting.

Some studies have argued that including medication in the treatment of EDs should be considered (Bortolotti et al., 2008; Cuijpers et al., 2014; Gonçalves & Byrne, 2011). However, we did not find any differences in the effect size of brief psychological therapies by themselves or in combination with drugs at the end of the intervention. Nevertheless, we found that the combined treatment might be effective in the long-term, but this result could be explained by the loss of a great number of the studies that did not provide follow-up data (19/34). In accordance with Collings et al. (2015), these findings are especially relevant for professional practice in PC, because psychological interventions are recommended as the first therapeutic option for EDs in this setting. The use of drugs to treat EDs would not be necessary in all cases, and would only be recommended when combined with psychological therapies and not the other way around.

Although our results are limited to emotionally distressed outpatients, brief psychotherapies have also been tested on inpatients with optimal clinical results (Driessen et al., 2010; Hopko et al., 2003). In fact, some studies suggest that the long-term effectiveness of brief psychotherapies does not depend so much on the initial severity, but on the level of functioning, the number of comorbid disorders, and the residual symptoms (Bower et al., 2013; Gallagher-Thompson et al., 1990; Luborsky et al., 1996). However, in accordance with our results, the scientific evidence indicates that combined treatment should be applied when treating chronic or resistant depressive disorders (Cuijpers et al., 2014; Dekker et al., 2013; Dunlop et al., 2019).

There is some debate as to whether the type of psychological therapy matters when it comes to clinical effectiveness. In line with studies which indicated that cognitive behavioral therapy is the most powerful psychological treatment for EDs (NICE, 2011; Tolin, 2020; Wang et al., 2007), we found that this type of therapy might be more effective than problem-solving therapy in PC, but achieve similar clinical outcomes to counseling immediately after the end of the treatment. However, these differences seem to disappear afterwards, with the three of them being equally effective. In this regard, other studies have defended the clinical equivalence of a wide variety of evidence-based psychotherapies (Churchill et al., 2001; Cuijpers et al., 2008; Nieuwsma et al., 2012; Wampold et al., 1997). To explain this, it has been argued that the role of common factors and therapeutic alliance is the main predictor of change among psychological treatments (Horvath et al., 2011; Vernmark et al., 2019; Wampold, 2015). For this reason, some studies have reported that the success of brief psychological therapies resides in the use of time as a tool to enhance therapeutic alliance (Fosha, 2004; Lyons & Low, 2009). Limiting the number of sessions would help both the patient and the therapist to focus on the treatment and to clarify goals, considering each session as an intervention with a particular outcome in order to achieve clinical improvement as soon as possible (Fosha, 2004).

Furthermore, we found that the effect of brief psychological therapies might vary depending on the diagnosis. Specifically, brief therapies seem to be especially effective for anxiety disorders compared to mixed disorders, but not when compared to depression. However, we were unable to determine if these differences remain when seeking longterm effectiveness because the number of studies was insufficient to conduct the appropriate analyses. Nevertheless, it is clear that most EDs are related to depression or mixed symptoms and not to pure anxiety disorders. For that reason, it makes sense to consider a transdiagnostic perspective, which defends a dimensional conceptualization of EDs and aims to address their underlying characteristics (Barlow et al., 2004, 2017; McManus et al., 2011). The transdiagnostic approach would appear to be particularly appropriate for EDs, as several studies have shown that depression and anxiety share important psychopathological aspects that can be treated effectively without a specific-disorder intervention (Barlow et al., 2017; Cassiello-Robbins et al., 2020; Sakiris & Berle, 2019; Newby et al., 2015). Within this transdiagnostic framework, brief psychological therapies could be a possible solution for the high comorbidity among EDs in the PC setting. In fact, brief transdiagnostic therapies have been designed, protocolized, and successfully applied (Gálvez-Lara et al., 2019; Corpas et al., 2021). Additionally, the recent systematic review of Cassiello-Robbins et al. (2020) endorses their effectiveness for a wide range of patients with different characteristics and comorbid disorders worldwide.

The meta-regression analyses suggest that the type of treatment influences the effect size at follow-up, which might be related with the idea that the combined treatment could be the most effective option in the long-term. Moreover, the type of psychological therapy also acted as an effect size predictor, being more likely to archive better outcomes when applying cognitive-behavioral therapy. Lastly, the analyses confirm our results regarding the effect size differences between the type of diagnosis. No other characteristics of the participants, the intervention, or the quality of the studies seem to influence the effectiveness of this type of therapies.

4.2. Limitations and future research

The first limitation is related to our selection criteria, which was restricted to published studies and to English-language publications. As concerns the diagnoses, caution should be taken with regard to the result about anxiety disorders since we only obtained four studies for this condition. As expected, the high variability among the type of outcome measures, follow-up intervals, country, or number of randomized participants increased the heterogeneity. Although this was approached statistically using a random effects model, which assumes the differences between the effect sizes of the studies, this might decrease the strength of our findings. In general, the more specific the analyses are, the more homogeneity is obtained and hence the more accurate our results become (see Table 2 and 3). We analyzed age, gender, and demographic region as effect size

moderator variables. However, we did not analyze other possible variables, such as culture or socioeconomic level. In spite of the fact that therapeutic alliance has been proposed as an explanation for the success of brief psychological interventions (Fosha, 2004; Lyons & Low, 2009), it was not possible to analyze this relation because the studies did not provide therapeutic alliance measures.

Following the indications of Hofmann et al. (2012), the results of meta-analyses such as ours should not be generalized to other populations that are not considered in the inclusion criteria. Consequently, brief psychological interventions in PC might not be suitable for children or patients with other mental disorders or with disabilities. In that sense, the severity of anxiety or mood disorders has not been taken into account. Despite the evidence that brief psychotherapies could be successfully applied for severe cases (Bower et al., 2013), it would be plausible to assume that the therapeutic effect of these therapies compared to pharmacological interventions was not as high as it could have been when excluding chronic patients and comorbid conditions.

It has been argued that when studies presenting questionable quality are excluded, the effect sizes tend to be smaller (A-Tjak et al., 2015). We found that none of the included studies present a high risk of all the biases considered in the meta-analysis, while two studies present a clearly low risk of all of them (Kendrick et al., 2005; Lamers et al., 2010). Even though we analyzed and rejected the possible link between the quality of the included studies and the effect sizes obtained, more well-designed studies would be required.

In light of the above, future research efforts could be focused on widening the search for studies in other languages, enlarging the sample of studies on pure anxiety disorders, narrowing the severity of the disorders, and studying other moderator variables related to population characteristics. Finally, more RCTs comparing brief psychological therapies to pharmacological interventions are needed to verify our findings.

5. Conclusion

There is some evidence that brief psychological therapies applied in PC may be at least equivalent to, or in some cases even superior to, brief uses of pharmacological interventions for the treatment of EDs. Furthermore, it is possible that brief cognitive behavioral therapy involves better clinical outcomes in the short term compared to problem-solving therapy, but not when compared to counseling. However, the particular type of therapy does not seem to be important afterwards, which might be related to the idea that therapeutic alliance and time limitations are key factors to enhance and hasten the effectiveness of the psychological treatment. Regarding the diagnoses, it is difficult to deduce whether brief psychological therapies are more effective for anxiety or depressive disorders. Nevertheless, due to the high comorbidity usually present in real contexts, the transdiagnostic perspective could be considered here as an important therapeutic approach. Furthermore, it appears that the combination of both time-limited psychological treatment and medication may be the best therapeutic option in the long term. However, it should be noted that it is probably the combination of both treatments which leads to that outcome, and not the more powerful effect of prescribed drugs. Since it is known that nearly half of all PC consultations are related to anxiety and depressive symptoms (Kroenke et al., 2007) and given the innovative nature, practical applications, and accessibility of brief psychological therapies, these treatments could be a good option for patients. Therefore, expanding the use of these therapies in PC settings would likely contribute to the correct treatment of a higher number of patients in a relatively short amount of time.

The implications of these conclusions are substantive in that they may reinforce the scientific evidence supporting the implementation of brief psychological treatments in PC, which has been argued to be a public health need that demands a policy change to enable the best possible treatments for EDs (Gatchel & Oordt, 2003; McDaniel & DeGruy, 2014). Nevertheless, important aspects, such as data on the ideal characteristics of the patients or suitable ways of accomplishing brief psychological therapies in PC, are as yet poorly studied. In this sense, Bower et al. (2011) argued that this issue requires more research and dedication with the hope of developing effective treatments for EDs in public health systems.

6. References

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