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Existential Therapies: A Meta-Analysis of Their Effects on Psychological Outcomes

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Objective: To review the evidence on the efficacy of different types of existential therapies: a family of psychological interventions that draw on themes from existential philosophy to help clients address such issues in their lives as meaning and death anxiety. ***Method:*** Relevant electronic databases, journals, and reference lists were searched for eligible studies. Effects on meaning, psychopathology (anxiety and depression), self-efficacy, and physical well-being were extracted from each publication or obtained directly from its authors. All types of existential therapy for adult samples were included. Weighted pooled mean effects were calculated and analyses performed assuming fixed-effects model. ***Results:*** Twenty-one eligible randomized controlled trials of existential therapy were found, from which 15 studies with unique data were included, comprising a total of 1,792 participants. Meaning therapies (n = 6 studies) showed large effects on positive meaning in life immediately postintervention (d = 0.65) and at follow-up (d = 0.57), and had moderate effects on psychopathology (d = 0.47) and self-efficacy (d = 0.48) at postintervention; they did not have significant effects on self-reported physical well-being (n = 1 study). Supportive-expressive therapy (n = 5) had small effects at posttreatment and follow-up on psychopathology (d = 0.20, 0.18, respectively); effects on self-efficacy and self-reported physical well-being were not significant (n = 1 and n = 4, respectively). Experiential-existential (n = 2) and cognitive-existential therapies (n = 1) had no significant effects. ***Conclusion:*** Despite the small number and low quality of studies, some existential therapies appear beneficial for certain populations. We found particular support for structured interventions incorporating psychoeducation, exercises, and discussing meaning in life directly and positively with physically ill patients. It is important to study more precisely which existential intervention works the best for which individual client.

Keywords: existentialism, treatment effectiveness, psychotherapy, logotherapy, oncology

Across times and cultures, people have asked questions about the nature of human existence: For instance, What is the meaning of my life? How do I cope with my mortality? (Tillich, 1952) For some people, it has been hypothesized that these concerns can evoke such anxiety, uncertainty, and crisis that psychopathology can result (Yalom, 1980). People may be especially vulnerable to such a crisis when they are in a *boundary* situation (Jaspers, 1925), in which they are confronted with issues about their very existence, for instance, if they develop cancer. Many types of psychotherapy and counseling implicitly help clients to address such existential questions. Existential therapies are a group of psychological interventions that explicitly address questions about existence, and they assume that, by overcoming existential distress, psychopathology may be decreased or prevented.

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Existential therapies can be defined as psychological interventions that are informed, to a significant extent, by the teachings of existential philosophers, most notably Heidegger, Sartre, Buber, Tillich, Kierkegaard, and Nietzsche (Cooper, 2012). In this respect, they are based, either primarily or wholly, on one or more of the following existential philosophical assumptions: (a) Human beings are orientated to, and have a need for, meaning and purpose; (b) Human beings have a capacity for freedom and choice, and function most effectively when they actualize this potential and take responsibility for their lives; (c) Human beings will inevitably face limitations and challenges in their lives, and function most effectively when they face—rather than avoid or deny—these givens; (d) The subjective, phenomenological flow of the individual's experiencing—including all senses, both negative and positive experiences—is a key aspect of being human, and therefore a central focus for psychotherapeutic work; (e) Human experiencing is fundamentally interrelated with—rather than separate from—the experiencing of other human beings and with its world.

Four main schools have been identified in the existential therapies field (Cooper, 2003, 2012). First, *Daseinsanalysis* (Binswanger, 1963; Boss, 1963) provides patients with a permissive therapeutic relationship in which they can express themselves freely and develop greater openness toward their world (e.g., other

people, nature, activities). Second, *meaning* or *logo-therapies* (Wong, 2009, 2012) aim to help clients establish meaning and purpose in their lives, using a range of didactic techniques, such as Socratic dialogue (Frankl, 1986) and structured group exercises (Breitbart et al., 2010). Third, a *British school of existential therapy* (Spinelli, 2007; Van Deurzen-Smith, 2012) has derived from the work of Laing (Laing, 1965), which adopts a primarily descriptive, phenomenological stance, with clients encouraged to explore their lived experiences. Third, the *existential-humanistic* approach (May, Angel, & Ellenberg, 1958; Schneider, 2008; Yalom, 1980) draws on humanistic-supportive practices, as well as those of a more psychodynamic-interpretative nature, to help clients face the ultimate givens of life, in particular, mortality, freedom, isolation, and meaninglessness (Yalom, 1980). Two different schools have emerged from this approach. *Supportive-expressive group psychotherapy* aims to help cancer patients face and adjust to their existential concerns, express and manage disease-related emotions, increase social support, enhance relationships, and improve a sense of control (Classen et al., 2001; Spiegel, Bloom, Kramer, & Gottheil, 1989; Kissane, Grabsch, et al., 2004). *Experiential-existential* interventions combine an existential-humanistic approach with experiential interventions (Elliott, Watson, Goldman, & Greenberg, 2003; Gendlin, 1996) and focus on helping clients to openly face their experiences and existential processes (Van der Pompe, 1997; Vos, 2008). Other recent forms of existential practice include eclectic (Kissane et al., 1997, 2003) and brief existential therapies (Strasser & Strasser, 1997).

Thus, there are different types of existential therapies. On the one hand, they are similar regarding their focus on existential themes and their more or less phenomenological and person-centered approach. On the other hand, they seem to differ, for instance, in the specific types of existential concerns that are being addressed, and to the extent that the interventions are structured and directive (cf. Cooper, 2003, chp. 9). There have not been any quantitative review studies yet describing and testing possible differences in effects between different types of existential therapies.

Research on Existential Therapies

The basic tenets of an existential therapeutic approach are indirectly supported by a range of empirical findings. First, many studies showed that people would like to receive professional help with their existential questions and shattered assumptions about life (Janoff-Bulman, 1992). For instance, many cancer patients report questions about identity and meaning and would like to receive professional help with these questions (e.g., Henoch & Danielson, 2009; Lee, 2008; Lee, Cohen, Edgar, Laizner, & Gagnon, 2004). Second, meaning in life and positive well-being seem to be critical aspects of the coping process with stressful life events (Folkman & Moskowitz, 2000; Park, 2010; Park & Folkman, 1997) and seem to be strongly negatively associated with psychopathology (e.g., Debats, 1996; Steger, 2012; Zika & Chamberlain, 1992). Third, individuals may grow existentially when confronted with the givens of life—in boundary situations—as suggested by research on posttraumatic growth (Tedeschi & Calhoun, 2004). Fourth, experimental studies suggest that existential themes may play an important role in how people live their lives and how they react to situations (Greenberg, Koole, & Pyszczynski, 2004); for instance, salience of one's mortality seems to be associated with one's self-esteem and worldview (Burke & Martens, 2010).

Until recently, however, little research has been conducted on the outcomes of existential therapies (Norcross, 1987; Walsh & McElwain, 2002). This may be explained by the diversity of existential approaches, but there is also a widespread reluctance within the existential community to engage with quantitative research methods and research in general (Cooper, 2003; Rowan, 2001; Spinelli, 2005). Quantitative research is seen as being unable to reflect the diversity of processes within individual therapeutic encounters, and as being reductionist and dehumanizing: an expression of Buber's (1958) I-It attitude rather than I-Thou. Hence, where research on the effects of existential therapies has been conducted, it has tended to be nonsystematic and qualitative in nature (Lantz, 2004; Norcross, 1987), describing relatively unstandardized interventions of diverse lengths. Research may also be limited because it has been considered difficult to operationalize meaning or other existential processes—which may be regarded as important primary outcomes of existential therapy—but recently, more psychometric instruments have been developed and validated (e.g., the Meaning in Life Questionnaire by Steger, Frazier, Oishi, & Kaler, 2006; Functional Assessment of Chronic Illness Therapy [FACIT] by Peterman, Fitchett, Brady, Hernandez, & Cella, 2002; the eudaimonia scale by Ryff, 1989), which allow for a full and meaningful evaluation of the effects of existential therapies.

Aims

The aim of this study was to conduct a systematic review of the outcomes of different types of existential therapies, conducting a meta-analysis on the reported posttreatment and follow-up effects in randomized controlled trials (RCTs). In doing so, we hope to develop an understanding of the efficacy of existential therapies, the types of existential therapy that may be most effective, and the outcomes for which they have the largest effect.

Method

Identification and Selection of Studies

We followed the review steps of the PRISMA guidelines (Liberati et al., 2009). We used four different search strategies to trace eligible studies, using existential therapy in any type of adult sample (Mullen, 1989; Rosenthal, 1991). First, we conducted several searches in literature databases (Medline, Embase, PubMed, PsycINFO, Web of Knowledge). We combined terms that indicated an intervention (*Intervention**, *Outcome**, *Result**, *Effect**, *Change**, *Eval**, *Assess**, *Trial**), the existential nature (*existential** *adj3 psychotherap**, *meaning-cent**, *meaning-making**, *logotherap**, *phenomenol** *adj2 psychotherap**, *Dasein-anal**), and the focus on research (*random**, *allocat**, *pre-post, case stud**, *test**, *study**). Second, we hand-searched the journal *Existential Analysis*. Third, authors of all eligible studies were contacted to identify further potentially eligible studies, and general invitations were sent to existential therapy newsletters, websites, and online discussion groups. Well-known authors in the field received a personal invitation. Fourth, reference lists in key books and book chapters and in eligible studies were scrutinized.

Searches were limited to adults and studies from 1970 to the present.

Studies were excluded from analyses in three stages (see Figure 1). In the first stage, the three authors (all qualified doctoral psychologists with training in existential psychotherapy) independently screened the abstracts for eligibility. In the second selection round, the first and second author conducted an independent assessment of full-text articles for eligibility. In both rounds, interrater reliability was calculated with Cohen's kappa, and disagreements were resolved through consensus. Articles were included when they described any existential therapeutic intervention for adults, defined as (a) explicitly using the term *existential* to describe *either* the therapeutic intervention *and/or* the focus of the therapeutic work and (b) based, primarily or wholly, on one or more of the five core existential assumptions stated above. Studies also needed to report quantitative or qualitative outcomes, and thus not only describe the development of therapy or therapeutic process. In the third round, we only included RCTs with a control condition, and we combined articles that described results about the same sample.

Risk of Bias

The methodological quality of each study was independently assessed by the second and third authors ($\kappa > .80$), and differences were discussed until agreement was achieved. We followed Cochrane's risk of bias criteria (Higgins & Green, 2008), with possible scores high/unknown and low for random sequence generation, allocation concealment, blinding of participants and personnel, incomplete outcome data, selective reporting, other. On the basis of these ratings, we provided each study with an overall risk of bias.

Analyses

We did not calculate an overall effect size summarizing all the effects over all possible outcome instruments because a very wide

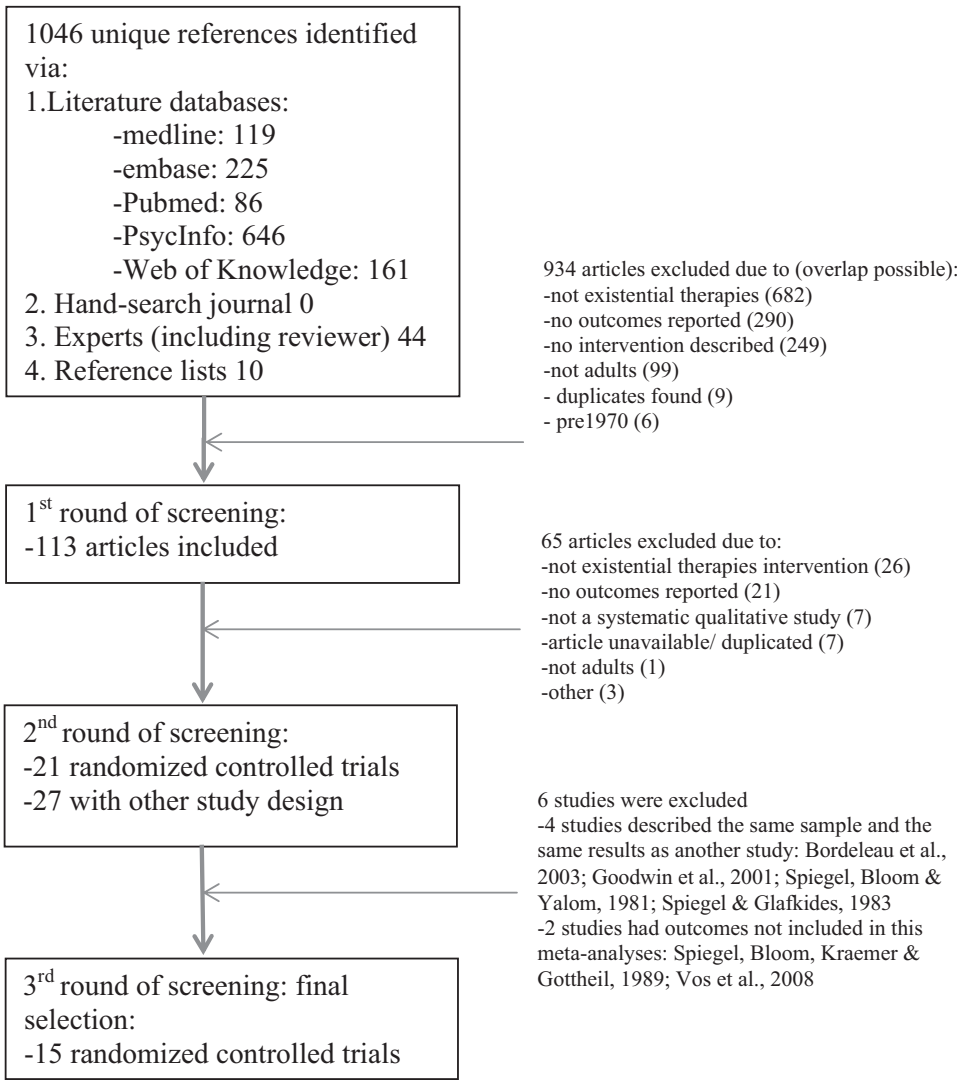

Figure 1. Flowchart of included studies.

range of validated measures were used in the studies. We felt that it would be conceptually unacceptable to combine totally different clinical constructs (i.e., meaning in life, depression/anxiety, self-efficacy, and physical well-being), and we also found initially high heterogeneity between the different types of measures ($I^2 > 50\%$). Therefore, we grouped the measures under four a posteriori formulated domains to create more homogenous groups of outcomes: meaning in life, psychopathology, self-efficacy, and physical well-being (see a detailed description of the domains in the Results section). We decided to exclude a measure from a group of outcomes when it was an aggregated score including several constructs; was used in only two studies or fewer (e.g., survival: $n = 3$ studies); was difficult to interpret; or caused moderate to high heterogeneity, as measured with Q and I^2 ($I^2 = 0\%$ implies no heterogeneity, 25% low, 50% moderate, and 75% high).

We calculated weighted posttreatment and follow-up effect sizes (Cohen's d) by subtracting the average score of the control group (Mc) from the average score of the experimental group (Me) and dividing the result by the pooled standard deviations of the experimental and control group ($SDec$); the effects were weighted for their sample size via the formula $d \times (1/\text{variance})$. Weighted effects were chosen because of the large differences in sample sizes. An effect size of 0.5 suggests that the mean of the experimental group is half a standard deviation larger than the mean of the control group. We call effect sizes of at least 0.56 large, effect sizes of 0.33–0.55 moderate, and effect sizes of 0–0.32 small (Lipsey & Wilson, 2001). To calculate weighted, pooled mean effect sizes, we used the software program Comprehensive Meta-analysis (Borenstein, Rothstein, & Cohen, 2000). In one case, results were derived from visual figures (Spiegel, Bloom, & Yalom, 1981).

Many studies used multiple measures in an outcome group, such as the Profile of Mood States-Depression scale (McNair, Lorr, & Droppleman, 1992) and the Impact of Event Scale (Horowitz, Wilner, & Alvarez, 1979), which were used to measure psychopathology. As there were relatively few studies using the same instruments, we decided in these cases to create an aggregate effect size per study, calculated from the mean of the effect size estimates (Cohen's d) and the pooled variance, using the most conservative estimate among the outcome measures ($R = 1.0$) (Rosenthal & Rubin, 1986). Most likely, this conservative correlation underestimated the true effect sizes, but the main positive direction and overall effect sizes (large, moderate, or small) of our meta-analyses did not seem to deviate much from explorative nonaggregated analyses with the unique outcome instruments (not presented).

Outcomes were considered posttreatment when these instruments were administered between 0 and 4 months after completion of the intervention. Instruments administered later were regarded as follow-up. When multiple instruments were available, we used the mean of these effect sizes. When not enough data were available from the articles, the authors were contacted to request additional results.

Significance tests of fixed-effects models assume that differences among studies leading to differences in effects are not random and that the study effect sizes are homogenous at population level (Rosenthal, 1995). However, homogeneity could not be assumed in our study, as we assumed large differences among studies, regarding both the samples (i.e., different studies had different inclusion criteria for participants' eligibility) and the therapeutic techniques and outcomes (e.g., meaning therapy vs. supportive-expressive therapy). Therefore, we only present random-effects models, which have been suggested as an adequate technique to mirror heterogeneity in behavioral studies, and use noninflated alpha levels (Hunter & Schmidt, 2000). We present only 95% confidence intervals (with one-tailed alphas set at 5%), because all studies tested the hypothesis of a positive effect of the intervention. To estimate robust effect sizes, we identified and discarded possibly spurious outliers by using a trimming technique, in which we excluded studies in which the 95% confidence interval (95% CI) was lower than the aggregated confidence interval of all studies ($n = 1$; see the Results section) (Borenstein et al., 2000).

We identified a range of a priori moderators that might be associated with outcomes, and we checked whether different ways of categorizing would lead to other outcomes. A detailed overview of these moderators is presented in the Results section.

Rosenthal (1991) concluded that published studies are often likely to be biased (i.e., showing better results), which may distort the results of the meta-analysis (Vevea & Woods, 2005). We tested potential publication bias for each separate meta-analysis by visual inspection of funnel plots and calculation of Egger intercepts and used a trim-and-fill procedure, which provides an estimate of the effect size after publication bias has been taken into account (Duval & Tweedie, 2000).

Results

Description of Studies

In the first round, we screened 1,046 unique references as found via electronic databases ($n = 1076$), bibliographic searches ($n = 10$), and as suggested by experts ($n = 43$) (see Figure 1). We selected 112 and excluded 934 articles on the basis of the title and abstract, primarily because they did not describe an existential intervention ($n = 682$) or any other intervention ($n = 249$), or did not have adults as the client population ($n = 99$). Full-text analyses resulted in exclusion of another 65 articles, mainly due to the nonexistential nature of the intervention ($n = 26$) or the lack of outcomes ($n = 21$). In both rounds, interrater reliability was good/acceptable (respective κs = .83 and .75). We found 21 RCTs and 27 studies in which some other non-RCT design was used. Finally, we combined articles that were describing the same results about the same sample, and this resulted in 15 RCT studies about existential therapy.

Table 1 describes the characteristics of the 15 included studies. Seven of these 15 studies were conducted in the United States, four in Canada, two in the Netherlands, and two in Australia. The control conditions included waiting-list or care-as-usual ($n = 9$), a social support group ($n = 2$), receiving education material ($n = 2$), or participation in a relaxation class ($n = 2$). The mean age of participants across the studies was 50 years; 26% were men, and 42% had a bachelor's or master's degree.

Types of Interventions and Samples

Six studies described meaning-orientated therapy (Breitbart et al., 2010; Fillion et al., 2009; Henry et al., 2010; Lee, Cohen,

Table 1
Description of the Included Studies

Study	Intervention characteristics				Study characteristics							No. of measurements (max. time after intervention)	Overall risk of bias
	Type of existential therapy	Format	Target population	No. of sessions	Country	Control condition	Outcome instrument	*N*	Male (%)	Mean age	Higher education (%)		
Meaning therapies													
Breitbart et al., 2010	Meaning	Group	Advanced cancer	8	USA	Social support	PM: FACIT-meaning PP: HADS-depression/anxiety, IES-intrusion/avoidance	90	49+	60		2 (<4 months)	Low
Fillion et al., 2009	Meaning	Group	Palliative care nurses	4	Canada	Waiting list	PM: FACIT-meaning	109	9	44		4 (<4 months)	High
Henry et al., 2010	Meaning	Individual	Advanced ovarian cancer	4	Canada	Waiting list	PM: FACIT-meaning, McGill-existential subscale PP: HADS-anxiety/depression SE: self-efficacy scale	24	0	55		3 (<4 months)	Low
Lee et al., 2006	Meaning	Individual	Breast or colorectal cancer	4	Canada	Waiting list	SE: self-efficacy scale, Rosenberg self-esteem	74	19	56	55	1 (immediate)	Low
Starck, 1981	Meaning	Group	Spinal cord injuries	6	USA	Waiting list	PM: purpose in life scale, SONG seeking noetic goals test	37	60	33		3 (<4 months)	High
Zuehlke & Watkins, 1977	Meaning	Group	Terminally ill	8	USA	Waiting list	PM: purpose in life scale	20	100	55		1 (immediate)	High
Supportive-expressive													
Bordeleau et al., 2003; Goodwin et al., 2001	Supportive-expressive	Group	Metastatic breast cancer	52	Canada	Waiting list	PP: POMS-anxiety/depression PW: EORTC-physical scales, Spiegel pain scales, POMS-fatigue	235	0	51		3 (<8 months)	Low
Classen et al., 2001	Supportive-expressive	Group	Metastatic cancer	52	USA	Educational material	PP: IES, POMS-depression/anxiety	125	0	54		3 (<12 months)	Low
Classen et al., 2008	Supportive-expressive	Group	Primary breast cancer	12	USA	Educational material	PP: HADS-anxiety/depression, IES-intrusion/avoidance SE: CARES-health costs, CESC-emotional control, SESEC self-efficacy	353	0	50	72	3 (<12 months)	Low
Kissane et al., 2004, 2007	Supportive-expressive	Group	Metastatic breast cancer	52	Australia	Relaxation class	PP: IES-intrusion/avoidance, BDI depression/anxiety, Affect Balance Scale-negative PW: EORTC	227	0	52	42	5 (24 months)	Low

(*table continues*)

Table 1 (*continued*)

Study	Intervention characteristics				Study characteristics							No. of measurements (max. time after intervention)	Overall risk of bias
	Type of existential therapy	Format	Target population	No, of sessions	Country	Control condition	Outcome instrument	*N*	Male (%)	Mean age	Higher education (%)		
Spiegel et al., 1981; Spiegel & Glafkides, 1983	Supportive-expressive	Group	Metastatic cancer	52	USA	Waiting list	PP: POMS-anxiety/depression, PW: Spiegel pain scale	58	0	54		3 (<12 months)	High
Weiss et al., 2003	Supportive-expressive	Group	HIV-infected gay men	17	The Netherlands	Social support	PP: BDI-depression, POMS-anxiety	85	100	40	13	3 (<12 months)	High
							Experiential						
Barren, 2005	Experiential	Group	Police officers	20	USA	Waiting list	SE: self-efficacy scale	20	70	40	40	1 (immediate)	Low
Van der Pompe et al., 1997, 2001; Vos, 2008	Experiential	Group	Early stage breast cancer	12	The Netherlands	Waiting list	PP: BDI-depression, POMS-depression/anxiety, STAI-trait/state anxiety, PW: POMS-fatigue	32	0	59	24	2 (<24 months)	High
							Cognitive-existential						
Kissane et al., 2003	Cognitive + relaxation	Group	Primary breast cancer	20	Australia	Relaxation class	PP: HADS-anxiety/depression PM: Epstein self-growth scale	303	0	46	40	3 (<12 months)	Low
Summary	Meaning: 6 Supportive-expressive: 5	Group: 13	Cancer: 10	52 weeks or longer: 4	USA: 7	Waiting list: 9	PM: 6	Total: 1,792	Mean: 26%	Mean: 50	Mean: 42% (7 studies)		
	Experiential: 2	Individual: 2	Other physical disease: 3	10–20: 5	Canada: 4	Educational material: 2	PP: 10	Supportive-expressive: 1,103					
	Cognitive: 1		Professionals: 2	<10: 6	The Netherlands: 2	Social support: 2	SE: 4	Meaning: 354					
					Australia: 2	Relaxation: 2	PW: 6	Experiential: 32 Cognitive: 303					

Note. No. = Number; max. = maximum; PM = positive meaning in life; PP = psychopathology; FACIT = Functional Assessment of Chronic Illness Therapy; HADS = Hospital Anxiety and Depression Scale; IES = Impact of Events Scale; POMS = Profile of Mood States; PW = physical well-being; EORTC = European Organisation for Research and Treatment of Cancer quality of life questionnaire; SE = self-efficacy; CARES = Cancer Rehabilitation Evaluation System; CESC = Courtauld Emotional Control Scale; SESEC = Stanford Emotional Self-Efficacy Scale–cancer; BDI = Beck Depression Inventory.

Edgar, Laizner, & Gagnon, 2006; Starck, 1981; Zuehlke & Watkins, 1977), of which four were group interventions. These meaning interventions are highly structured interventions with detailed manuals, generally with fewer than 10 sessions, and usually for patients with physical diseases. They involve discussing, explaining, and supporting clients to act directly and positively with respect to their meaning in life.

Five studies, which were described in multiple articles, were about supportive-expressive group therapies (Bordeleau et al., 2003; Classen et al., 2001, 2008; Goodwin et al., 2001; Spiegel et al., 1981, 1989; Spiegel & Glafkides, 1983; Weiss et al., 2003), which are manualized unstructured group interventions for patients diagnosed with advanced disease who are experiencing difficulties in adjusting to their illness, mainly lasting 52 weeks (Spiegel & Spira, 1991) or 12 weeks (Classen et al., 1993). The primary aims of these groups are to create a supportive environment, in which patients are encouraged to share their experiences, to improve their self-worth, decrease their isolation, and receive support. They are also encouraged to "detoxify death" through a range of different techniques, such as discussion, meditation, experiential exercises, and self-reflection (LeMay & Wilson, 2008).

Three studies described experiential-existential group therapy (Barren, 2005; Van der Pompe et al., 1997, 2001), which are manualized nonstructured and/or phenomenological interventions, lasting 20 sessions or fewer. As with supportive-expressive interventions, these groups included the sharing of experiences, receiving group support, and focusing on the here and now, but without focusing on death.

One study (Kissane et al., 2003) described a highly structured and manualized cognitive-existential therapy, which consisted of 20 group sessions in which existential and cognitive themes were discussed, explained, and exercised, in addition to relaxation classes.

Thirteen of the 15 interventions were aimed at clients with specific physical conditions. In 10 studies, the intervention was aimed at cancer patients, and in three studies at people with other physical diseases (HIV, terminally ill patients, and spinal cord injuries); seven of these 13 studies were focused on work with potentially life-threatening diseases (i.e., metastatic cancer, terminal illness, HIV) and five on less life-threatening diseases (i.e., spinal cord injuries, primary early stage cancer). Two of the 15 studies were aimed at professionals (nurses/police officers). Despite these differences in samples, we included all studies in our meta-analyses, including the latter two, because the content of the intervention and the effect sizes/confidence intervals were similar to other studies. Heterogeneity in the analyses appeared to be low, and moderation effects were nonsignificant.

Types of Outcomes

We categorized all instruments into four outcome groups: positive meaning in life; psychopathology; self-efficacy; and self-reported physical well-being (see included instruments and grouping in Table 1). In six studies, positive meaning in life was measured, which included finding positive meaning in life, achieving and striving for purposes in life, experiencing life as peaceful, and experiencing self-growth. In nine studies, psychopathology was measured, which included symptoms of anxiety, depression, avoidance, and intrusions. In four studies, self-efficacy was studied, which included the experience of self-efficacy, self-esteem, and control over oneself and one's emotions. In five studies, the subjective experience of physical well-being was measured, which included, among others, experiencing pain and fatigue.

Quality Assessment

Random sequence generation was unclear in five of the 15 studies. As in most studies on psychological interventions, concealment of random allocation and blinding of participants and personnel was not possible. We found partially incomplete data in 11 studies (e.g., missing data) and selective reporting in four (e.g., the results were presented more positively than the data seemed to justify), and other problems in three. The incompleteness of originally presented data was overcome by deriving data indirectly from the article, or the data were sent by the authors to us. Individual trials frequently showed multiple problems; therefore, we evaluated the overall quality of each article. In four of the 15 studies, the overall quality was assessed as low but considered acceptable for inclusion of the article in our meta-analyses. This decision was statistically corroborated, as the quality assessment items were not significant in moderation analyses. Publication bias was absent or acceptable for several meta-analyses, as shown by visual inspection of funnel plots and nonsignificant Egger intercepts. Most studies did not report percentages of dropout and attrition, and therefore a summary of this data cannot be provided. Finally, we checked Wampold,'Minami, Baskin, and Callen Tierney's (2002) criteria for "bona fide" interventions, and all articles were considered to fulfill those criteria, though most did not elaborate extensively on the underlying models for therapeutic change and active treatment ingredients, though they did refer to other articles and books in which these models were explicated.

Effects on Positive Meaning in Life

All six studies using positive meaning in life as an outcome involved a meaning therapy intervention. They had a total of 245 participants. In the first round of analyses, the mean posttreatment effect size was moderate ($d = 0.45$, CI: [0.05, .85], $p < .01$) and heterogeneity large ($I^2 = 41.6$). In the second round of analyses, Fillion et al. (2009) was excluded as an outlier (see Table 2 and Figure 2). Excluding Fillion et al. (2009), the mean posttreatment effect size was large ($d = 0.65$, CI [0.24, 1.04], $p < .01$) and heterogeneity small ($I^2 = 0$). There were no studies with a follow-up more than 4 months postintervention.

Effects on Psychopathology

Nine studies described the effects of existential therapies on psychopathology compared with control conditions, with a total of 1,229 participants (see Figure 3). The overall post-effect size was small ($d = 0.20$, $p < .01$, $I^2 = 0$). Meaning therapy had moderate effect sizes ($n = 2$ studies, $d = 0.47$, $p < .08$, $I^2 = 0$), and supportive-expressive therapy had small homogenous effect sizes ($n = 6$, $d = 0.18$, $p < .02$, $I^2 = 0$). The follow-up effect sizes were small and not significant, overall ($n = 6$, $d = 0.18$, $p > .05$, $I^2 = 0$), and in specific for supportive-expressive therapies ($n = 5$, $d = 0.18$, $p > .05$, $I^2 = 0$) and one cognitive-existential intervention ($d = 0.16$, $p > .05$); changes between posttreatment and follow-up were not significant ($p > .05$).

Table 2
Meta-Analyses of Studies Examining the Effects of Existential Therapies Compared With Control Conditions at Posttreatment

Variable	*N*	*d* (*SE*)	95% CI	*Z*	*Q*	I^2 (%)
Positive meaning in life						
Round 1: All studies						
Posttreatment						
meaning-therapy[a]	5	.45 (.20)**	[.05, .85]	2.1	6.8	41.6
Round 2: Excl. outliers						
Posttreatment						
meaning-therapy	4	.65 (.20)**	[.24, 1.05]	3.1	2.2	0
Psychopathology (anxiety and depression)						
Posttreatment						
overall	9	.20 (.06)**	[.07, .33]	3.1	6.3	0
meaning-therapy	2	.47 (.27)*	[−.06, 1.00]	1.7	0	0
supportive-expressive	6	.19 (.07)*	[.05, .33]	2.8	5.3	0
experiential-existential	1	.09 (.30)	[−.49, .66]	0.3	0	0
Follow-up						
overall[b]	6	.18 (.07)	[−.05, .31]	2.6	1.4	0
supportive-expressive	5	.18 (.08)	[.02, .34]	2.2	1.3	0
cognitive-existential	1	.16 (.12)	[−.06, .34]	1.4	0	0
Self-efficacy						
Posttreatment						
overall	4	.22 (.09)*	[.02, .34]	2.2	0	0
meaning-therapy	2	.48 (.21)*	[.07, .88]	2.3	0.4	0
supportive-expressive	1	.11 (.12)	[−.12, .33]	0.9	0	0
experiential-existential	1	.62 (.46)	[−.28, 1.51]	1.3	0	0
Follow-up						
overall[b]	1	.11 (.12)	[−.13, .35]	0.9	0	0
Self-reported physical well-being						
Posttreatment						
overall	5	.12 (.09)	[−.05, .29]	1.4	0.4	0
meaning-therapy	1	.04 (.19)	[−.34, .41]	0.19	0	0
supportive-expressive	3	.13 (.07)	[−.06, .3]	1.4	0	0
experiential-existential	1	.19 (.30)	[−.40, .79]		0	0
Follow-up						
overall[b]	3	.13 (.10)	[−.11, .38]	1.1	0.72	0

Note. All *Q* tests for homogeneity were nonsignificant ($p > .05$). I^2 test for heterogeneity (in %). *d* = standardized difference in means; CI = confidence interval; Excl. = excluding.
[a] Only studies about meaning-therapy included existential well-being as outcome. [b] The differential effects for different therapies were not calculated because of the small number of studies.
* $p < .05$. ** $p < .01$.

Effects on Self-Efficacy

Four studies described effects of existential therapies on self-efficacy compared with control conditions, with a total of 475 participants (see Figure 4). The overall posttherapy effect size was small ($d = 0.22$, $p < .05$, $I^2 = 0$). Meaning therapy had moderate effect sizes ($n = 2$, $d = 0.48$, $p < .02$, $I^2 = 0$), but supportive-expressive and experiential-existential therapies did not have significant effects (respectively, $n = 1$, $d = 0.11$, $p > .05$; $n = 1$, $d = 0.62$, $p > .05$). The overall follow-up effect size of the only included supportive-expressive study was small and not significant, and did not differ significantly from the posttreatment effect size ($d = 0.11$, $p > .05$).

Effects on Physical Well-Being

Five RCTs examined the effects of existential therapies on physical well-being with a total of 669 participants (see Figure 5). In all analyses, we found small effects that did not reach significance level ($p > .05$). This was with regard to overall posttreatment effect size ($n = 5$, $d = .12$); overall follow-up effect size ($n = 3$, $d = .13$); and the specific effect sizes for meaning therapy ($n = 1$, $d = .04$), supportive-expressive therapy ($n = 3$, $d = .04$), and experiential-existential therapy ($n = 1$, $d = .19$).

Moderators

We identified and tested the following a priori identified moderators, as shown between apostrophes. No significant differences were found between "different types of therapy"; although meaning therapies had larger mean effects than most other interventions, these studies had large standard errors (we categorized types of therapies in two different ways: four groups of meaning therapies, supportive-expressive, experiential-existential, and cognitive-existential therapies, categorized in two groups of meaning and humanistic interventions with the latter, including supportive-expressive and experiential therapies). Similarly, the "number of sessions" (N) and "the extent to which the sessions are structured" (low-moderate-high structured) showed different, although not significant, effects; this seemed to overlap with "the type of

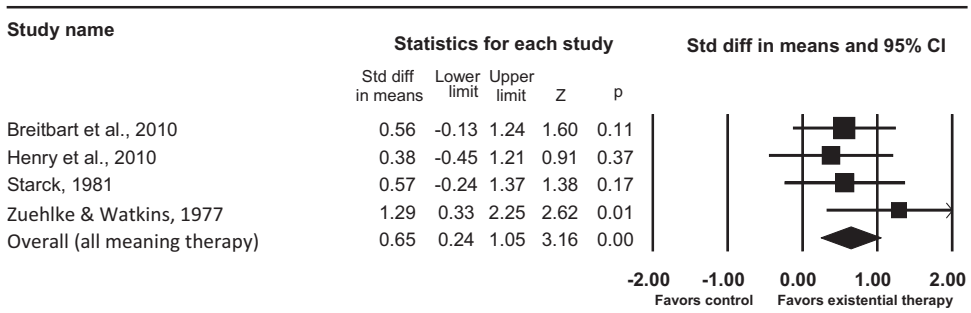

Figure 2. Standardized effect sizes of psychological treatments compared with control conditions at posttreatment: positive meaning in life (excluding outlier). Std diff = standard difference; CI = confidence interval.

therapy," as all meaning therapies had fewer than 10 sessions and were highly structured, whereas other therapies had more than 10 sessions and had moderate or low structure. We also found no moderation effects for "group or individual format," "type of outcome" (positive meaning in life, psychopathology, self-efficacy, physical well-being), "type of control condition" (waiting list, education, social support, relaxation); "type of population" (formulated and tested in two different ways: first, patients with cancer, HIV/AIDS or another physical disease, other), "education level of participants" (categorized as seven categories, and as higher education and lower education), "age" (absolute number), "year of publication," "sample size" (*n*), "country" (United States, Canada, the Netherlands, Australia), "number of follow-up measurements," and "the 7 Cochrane risks of bias" plus "overall assessment of the risk of bias" (thus, in total eight moderators). No significant differences were found for the seven studies reporting "proportion of male participants" (%; N) and five that described "level of distress (anxiety and/or depression) at baseline."

Discussion

Fifteen RCT studies were found on the outcomes of existential therapies. Most studies described meaning therapy or supportive-expressive therapy in clients with cancer or other physical diseases who were approximately 50 years old. We found large, but not significant, differences between types of existential therapies and between types of outcomes. The lack of significant findings may be due to several reasons, such as studies not completely reporting on all relevant outcomes and moderators, the small number of studies, and the fact that not all studies used the same instruments.

Meaning Therapy

In general, clients seem to benefit from meaning group therapy interventions as compared with participating in a social support group, being on a waiting list, or receiving care as usual. In particular, they seemed to find greater meaning or purpose in life,

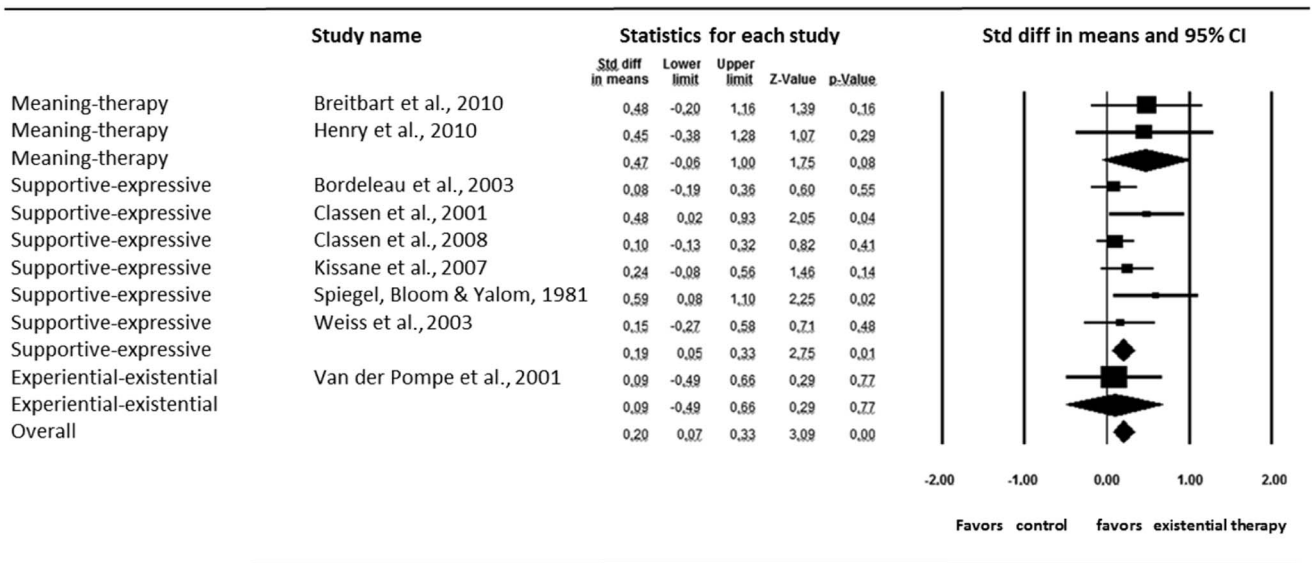

Figure 3. Standardized effect sizes of psychological treatments compared with control conditions at posttreatment: psychopathology. Std diff = standard difference; CI = confidence interval.

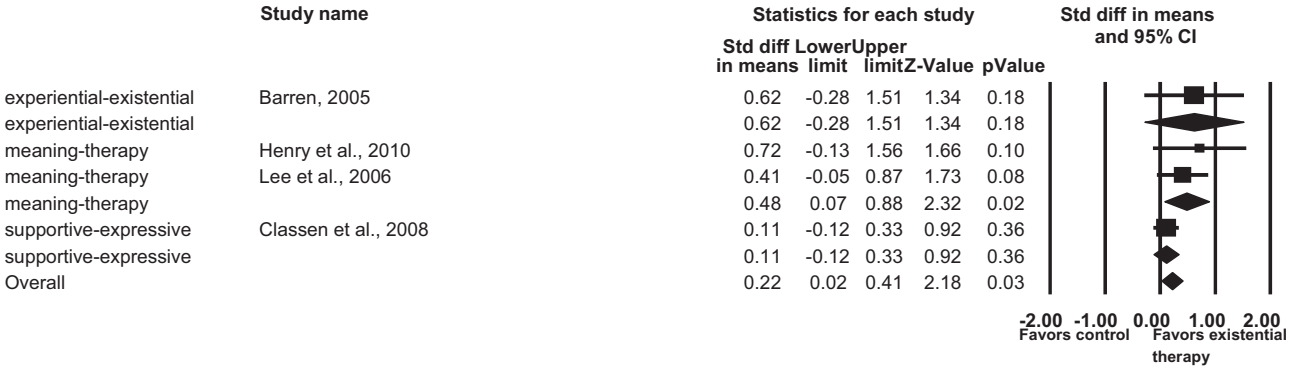

Figure 4. Standardized effect sizes of psychological treatments compared with control conditions at posttreatment: self-efficacy. Std diff = standard difference; CI = confidence interval.

their level of psychopathology decreases to a moderate extent, and their self-efficacy was strengthened moderately. Thus, this type of existential therapy seems to be promising as a means of addressing meaning-orientated and existential concerns in people with serious and life-threatening illnesses and deserves further investigation and development as an evidence-based treatment in this area. In contrast, supportive-expressive and experiential-existential therapies reduced psychopathology only to a small, albeit significant, extent, compared with control conditions.

Alternative Explanations and Limitations

These findings could suggest that meaning therapies are more effective than supportive-expressive and experiential-existential therapies. However, alternative explanations are possible.

First, the studies on meaning therapies seem to have different clinical characteristics than supportive-expressive and experiential-existential therapies; these characteristics may explain the larger effects. For instance, supportive-expressive and experiential-existential therapies seem to be more exploratory, emotion-based, and less directive than meaning therapies, which focus on positive, direct education, exercise, and discussion about meaning in life. However, cognitive-existential therapy (Kissane et al., 2003) was also a structured intervention that discussed existential themes directly, but this did not result in significant effect sizes on the instruments that we included (although it did show significant effects on family functioning and therapy evaluation).

Second, another possible explanation may be that meaning therapies are the only interventions that were also given in an individual format. When the group intervention of Fillion et al. (2009) was included in the analyses of all meaning therapies, the effect sizes dropped significantly. This may suggest that existential therapies may be more effective in an individual format; however, moderation analyses did not confirm this.

Third, also study-related aspects may have influenced the results. Meaning therapy studies had a relatively lower risk of bias than articles on other existential interventions. Moreover, the average effect size of meaning therapies improved when we excluded Fillion et al. (2009) as an outlier, because the confidence interval of this study was lower than the average confidence interval, and it seemed to cause large heterogeneity between studies on meaning therapy.

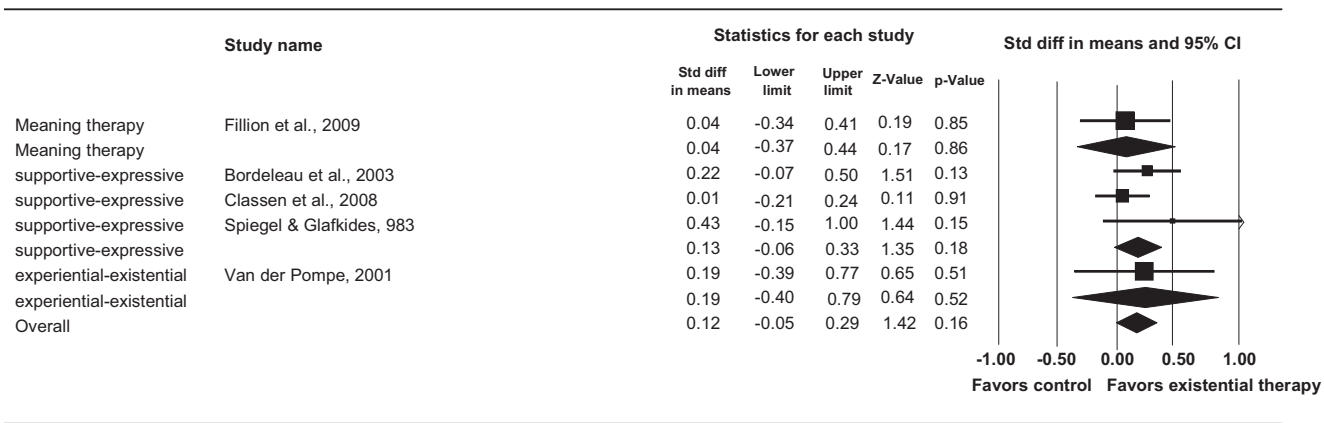

Figure 5. Standardized effect sizes of psychological treatments compared with control conditions at posttreatment: physical well-being. Std diff = standard difference; CI = confidence interval.

Fourth, one may also hypothesize that an intervention shows high effect sizes when the outcome instruments precisely measure the specific aim of the intervention. This may explain why meaning therapies show large effects on meaning outcomes, and moderate effects on other instruments. Supportive-expressive interventions may show relatively low effects on psychopathology, because reduction of distress is not the primary aim of these interventions.

Fifth, it may be possible that the small effect sizes of supportive-expressive and experiential-existential interventions could be partially attributed to the relatively low quality of the aticles mainly caused by unclear reporting (Spiegel et al., 1981, 1983; Van der Pompe et al., 1997; Weiss et al., 2003), selective reporting (Classen et al., 2008; Spiegel et al., 1981, 1983), and incomplete reporting (Spiegel et al., 1981, 1983). The relatively low quality of the Fillion et al. (2009) and Starck (1981) articles were also caused by unclear reporting. Unfortunately, we cannot draw any definite conclusions on the basis of our moderation analyses, and we therefore cannot differentiate between the main effects of the type of intervention or these characteristics in our moderation analyses, due to the inconsistent reporting and the small number of studies in general.

Comparing and Tailoring Existential Interventions

Meaning therapies generated moderate to large effect sizes, and other types of existential therapies (ET) small effects. How large are these effects compared with other interventions? Humanistic therapies, which use a similar phenomenological and client-centered approach as ET,demonstrated large changes in a meta-analyses, but this study focused on therapeutic change in mainly uncontrolled, nonmanualized studies (Elliott, Greenberg, Watson, Timulak, & Freire, 2013). Interventions with a positive psychological focus, hich may be compared with meaning therapies in which a positive focus is oriented at finding meaning, showed similarly moderate effects (Sin & Lyubomirsky, 2009). Interventions, including acceptance-based and mindfulness-based stress reduction and support groups, in similar populations (i.e., medical disorders such as cancer) yielded similar moderate effects to those in the present studies (Bohlmeijer, Prenger, Taal, & Cuijpers, 2010; Van Straten, Geraedts, Verdonck-de Leeuw, Andersson, & Cuijpers, 2010; Veehof, Oskam, Schreurs, & Bohlmeijer, 2011; Zimmermann, Heinrichs, & Baucom, 2007). This seems to suggest that structured meaning-oriented existential therapies may be of similar efficacy to other interventions with similar populations.

Recommendations

One explanation for the relatively small overall effects of existential therapies is the large variation between individuals within the unique studies. That is, the 95% confidence intervals were broad, and tau-squared was relatively large in subanalyses. Several explanations are possible for this large within-study variation, such as the fact that most studies did not have specific inclusion criteria *regarding severity of distress or type of requested psychological support*. Several variables could also have moderated the effectiveness, such as unique characteristics of the participants and the groups. Due to the small number of studies, we could not perform adequate moderation analyses to test these hypotheses. We suggest that future studies focus on the question of which patient would benefit from which type of existential therapies with which effect, and caused by which underlying therapeutic process (Paul, 1967). We also recommend selecting outcome instruments that directly measure the aims of an intervention, and not only general outcomes such as level of psychopathology.

We included only therapies that were explicitly existential in nature to limit the range of our literature review and to start with interventions with an explicit existential focus. We suggest including in future literature reviews other interventions with some existential components. More studies on existential therapy are needed, as the number of included interventions was relatively small in our meta-analyses. We also recommend that future research improves the scientific quality, for instance, by reporting all complete data, including an active intervention as control condition and adding samples other than people with physical diseases.

This review was limited to quantitative, effect-oriented studies, but as existential therapists have argued, such studies may not fully account for the idiosyncrasies of existential therapeutic practice and its subjective benefits to clients. Speaking in general about RCTs, RCTs inherently assume a certain distance from the actual delivery of psychotherapy in practice settings (Barkham et al., 2008). Many studies show a preference of high internal validity as opposed to external or ecologic validity, and therefore had rigid inclusion/exclusion criteria (such as only including cancer patients in a study), a focus on clearly identifiable pathologies and diagnosis, exclusion of co-morbidity, and rigid, manualized treatments (Barkham et al., 2008; Benson & Hartz, 2000; Concato, Shah, & Horwitz, 2000). Therefore, we recommend that the results of our meta-analyses should be validated ecologically with data from clinical experience and qualitative research, which can also be both rigorous and relevant (Barkham et al., 2008), and enable practitioners to generate clinically meaningful questions and guidelines (Margison et al., 2000). Therefore, we recommend combining qualitative and quantitative outcomes in future studies and literature reviews.

Thus, many questions have still to be answered. Until then, our findings suggest that existential therapies are a promising group of interventions from which individuals with existential questions may benefit.

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