TITLE: Couples Therapy for Adults Experiencing Relationship Distress: A Review of the Clinical Evidence and Guidelines

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CONTEXT AND POLICY ISSUES

The last iteration of the Canadian census (2008) that included questions regarding marriage and divorce reports that approximately 40% of marriages in that year will end in divorce before the 30th wedding anniversary.[1] While only a proxy, the high divorce rate in Canada suggests a similarly high prevalence of relationship distress, a situation where one or both partners are dissatisfied with their intimate relationship and that is characterized by conflict.[2] Relationship distress can result in higher levels of psychological and physical health concerns in both partners, in addition to health and social role impairments among children, other family members, co-workers and friends.[2,3]

Recent studies have helped to identify that the association between relationship distress and negative health outcomes is cyclical.[2] Not only does relationship distress lead to negative psychological health outcomes such as depression, anxiety and substance abuse, it can also result from situations where couples must respond to and cope with these concerns. Other contributors to relationship distress are varied[2] and can include such experiences as the diagnosis of a terminal illness,[4] living with chronic disease,[5] living with mental health disorders,[6-9] infidelity,[10] unresolved childhood trauma,[11] among others.

Couples therapy is widely practiced as a means to improve relationship distress, and is often an expected course of treatment when couples are faced with conflict.[2] The main premise of is that guiding couples through their conflict as a collaborative team is more beneficial than working with only one member alone. While couples therapy is widely practiced, the effectiveness of couples therapy as an intervention to improve relationship distress is unclear. The purpose of this review is to summarize published research and evidence-based guidelines regarding the effectiveness of couples therapy for adults experiencing relationship distress from any cause.

RESEARCH QUESTIONS

1. What is the clinical effectiveness of couples therapy for adults experiencing relationship distress?

2. What are the evidence-based guidelines regarding couples or marital therapy?

KEY FINDINGS

The published clinical effectiveness literature is limited due to potential for measurement and selection bias, in part due to the inability to blind patients and therapists but also due to the broad range of approaches to couples therapy, length of treatment and reasons for couples presenting to therapy. Despite these important limitations, overall results suggest that couples therapy could have a positive impact on relationship satisfaction for couples in distress. The literature is inconclusive regarding the effects of couples therapy on other relationship-related outcomes and psychological health outcomes in this population.

No evidence-based guidelines were found that met the eligibility criteria for this review.

METHODS

Literature Search Strategy

A focused search (with the main concepts appearing in the title or as a major subject heading) was conducted on key resources including Medline, PsycINFO, The Cochrane Library (2014, Issue 9), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies and guidelines. The search was also limited to English language documents published between January 1, 2009 and September 18, 2014.

Selection Criteria and Methods

One reviewer screened citations and selected studies. In the first level of screening, titles and abstracts were reviewed and potentially relevant articles were retrieved and assessed for inclusion. The final selection of full-text articles was based on the inclusion criteria presented in Table 1.

Table 1: Selection Criteria

Population	Adult couples experiencing marital or relationship distress from any cause
Intervention	Couples-based or marital therapy
Comparator	No intervention, usual care or no comparison group
Outcomes	Clinical effectiveness (e.g. relationship satisfaction, trust, improvement in psychosocial measures) Guidelines
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials (RCTs), observational studies and evidence-based guidelines

Exclusion Criteria

Studies were excluded if they did not satisfy the selection criteria, if they were duplicate publications, dissertations, case studies or case series, or were published prior to 2009. Health technology assessments, systematic reviews and meta-analyses were excluded if the eligibility criteria used within these reviews did not meet the eligibility criteria for this current review. In these cases, the list of included studies within the excluded review was screened as per the selection criteria presented in Table 1 for potential inclusion within this current review.

Due to the variability within couples therapy interventions, eligibility was assessed based on a definition for couples therapy that excluded education, skills training and rehabilitation focused programs. The review was likewise focused on couples therapy, but not family therapy, which would include family members other than two people in an intimate relationship. Studies were also excluded that compared one form of couples therapy to another form of couples therapy (e.g., individual couples therapy versus couples group therapy).

Critical Appraisal of Individual Studies

The quality of all included reports was assessed using a validated instrument specific to the study design: AGREE (Appraisal of Guidelines for Research and Evaluation)[12] for clinical practice guidelines, AMSTAR (Assessment of Multiple Systematic Reviews)[13] for systematic reviews and meta-analyses, or the Downs and Black checklist[13] for randomized controlled trials and observational studies. Numerical scores were not calculated; instead, the strengths and limitations of individual studies as identified through use of the checklist are summarized and presented.

SUMMARY OF EVIDENCE

Quantity of Research Available

A total of 335 citations were identified in the literature search. Following screening of titles and abstracts, 306 citations were excluded and 29 potentially relevant reports from the electronic search were retrieved for full-text review. 8 potentially relevant publications were retrieved from the grey literature search, and 3 from hand searching. Of these potentially relevant articles, 20 publications were excluded for various reasons, while 20 publications describing 18 studies[1] met the inclusion criteria and were included in this report. Appendix 1 describes the PRISMA flowchart of the study selection. Appendix 2 includes a list of publications that were not eligible for this review but might be of interest in regards to the treatment of relationship distress or related concerns through a couples-based approach.

Summary of Study Characteristics

A detailed summary of individual study characteristics is provided in Appendix 3.

[1] Two studies were reported in two separate publications: a main publication to report primary outcomes[9,14] and a secondary publication to report either predictors of outcome[15] or outcomes for partners only.[7]

Study Design

Overall, 20 publications were included. Eight publications described eight RCTs,[4,6,8,10,11,16-18] while 12 publications describe nine pre-post observational studies[7,9,14,15,19-25] and one cohort study.[26] No clinical practice guidelines met the inclusion criteria.

Country of Origin

Three of the included RCTs were conducted in Canada,[4,11,17] two in Iran[8,16] and one in each of Germany,[10] the United States[18] and both Canada and the United States.[6] Three of the pre-post observational studies were conducted in Canada,[22,23,25] two in the United States,[7,9,14,15] and one in each of Australia,[19] the United Kingdom,[20] the Netherlands[21] and both Germany and Austria.[24] The one included cohort study was conducted in the United States.[26]

Patient Population

Each of the included studies included adults experiencing relationship distress, for varied reasons. Some studies included participants referring or self-referring for outpatient[14-16,20,24] or inpatient[21] couples therapy due to distress from any or an unspecified cause. Other studies included participants with distress from a specific cause, for example one partner suffers from obsessive compulsive disorder,[7,9] post-traumatic stress disorder,[6] alcoholism,[26] borderline personality disorder,[8] history of intrafamilial child abuse,[11] insecure attachment,[23,25] or an unresolved emotional injury.[22] Others included couples where one partner is a pathological gambler,[17] recently received a cancer diagnosis,[5,19] is facing end-stage cancer,[4] or recently disclosed an affair.[10] The average ages of participants varied between studies, with a low of 33.1 years in a pre-post study including couples with one member with obsessive compulsive disorder[7,9] to a high of 64 years in a pre-post study including couples referred for therapy following a cancer diagnosis.[19] Most studies included participants with an average age in their 30's or 40's. Similarly, the average length of relationships among included participants varied from a low of seven years[6] to a high of 27 years.[5]

Intervention and Comparators

The approach to couples therapy varied widely between included studies. Of the eight included RCTs, two assessed Emotionally Focused Couples Therapy,[4,11] and one each assessed Congruence Couples Therapy,[17] Hope and Forgiveness Focused Therapy,[16] Couple Dialectical Behavioural Therapy,[8] Cognitive Behavioural Conjoint Therapy,[6] Traditional Behavioural Couples Therapy,[10] and Conjoint Intimacy Enhancing Therapy.[5] Of the nine pre-post observational studies, two assessed Emotionally Focused Couples Therapy,[23,25] and one each assessed Cognitive Behavioural Conjoint Therapy,[7,9] Cognitive Existential Couples Therapy,[19] Psychodynamic Psychotherapy,[20] psychotherapy,[21] a combination of behavioural therapy or problem-focused therapy[14,15] and a variety of forms of couples therapy within the same study.[24] The one cohort study assessed Behavioural Couples Therapy.[26] Appendix 4 includes brief description of each of the included therapy types.

Among the RCTs included in the review, five used a waiting list control ranging from 12 weeks[6,10,17] to 24 weeks in duration.[11] The length of the waiting list was not reported (NR) for one study.[8] One RCT used a control group in which the participants received no intervention[16] and another used a control group in which the participants received usual care through a psychosocial oncology and palliative care program.[4] Among the pre-post observational studies,

participants served as their own control. The one cohort study in which the participants were couples with a female alcoholic included a demographically matched control group selected from a population of non-alcoholic males and females.[26]

Outcomes Measured

Many outcomes were measured in the included studies, and summarized within this review, all related to relationship distress and psychosocial health.

Seven of the eight included RCTs measured some aspect of relationship satisfaction using either the Dyadic Adjustment Scale,[4-6,11,17] Perceived Relationship Quality Components Inventory,[8] or the Partnership Questionnaire.[10] Other relationship centred outcomes measured within the RCTs include:

- marital partner function (Systemic therapy Inventory of Change)[17]
- caregiver burden (Relationship-focused Coping Scale)[4]
- relationship intimacy (Personal Assessment of Intimacy in Relationships)[5]
- communication (Communications Pattern Questionnaire)[5]
- infidelity (unvalidated instrument)[10]
- self- and partner disclosure of thoughts, information and feelings (unvalidated instrument)[5] and
- responsiveness (unvalidated instrument).[5]

Psychosocial outcomes measured within RCTs included:

- mental stress (Brief Symptom Inventory)[17]
- interpersonal cognitive distortions (Interpersonal Cognitive Distortions Scale)[16]
- trauma symptoms (Trauma Symptom Inventory)[11]
- depression (Beck Depression Inventory)[4,6,10]
- hopelessness (Beck Hopelessness Scale)[4]
- anxiety (State Trait Anxiety Inventory)[6]
- event-related distress (Impact of Event Scale)[5,10] and
- psychological distress (Mental Health Inventory).[5]

Six of the pre-post studies measured relationship satisfaction using either the Dyadic Adjustment Scale,[7,9,22,23,25] Martial Satisfaction Inventory[24] or the Quality of Marriage Index.[14,15] Other aspects of relationship quality and function that were assessed include:

- attachment anxiety (Experiences in Close Relationships, Attachment Injury Measure)[23,25]
- trust (Relationship Trust Scale, Trust Scale)[5,22,25]
- communication (Communication Patterns Questionnaire)[7,9]
- marital function (Family Relationship Index, Golombok Rust Inventory of Marital State)[19,20]
- relatedness (Personal Relatedness Profile)[20]
- problem-solving (Interactional Problem Solving Questionnaire)[21]
- forgiveness (Enright Forgiveness Inventory, Forgiveness Measure, Interpersonal Relationship Resolution Scale)[22,25]

- resolution of unfinished business (Unfinished Business Empathy and Acceptance, and Feelings and Needs, scales)[22] and
- couple specific problems (Target Complaints Discomfort and Change Scale).[22]

Psychosocial outcomes that were measured within the eight pre-post observational studies include:

- depression (Beck Depression Inventory, Hamilton Rating Scale for Depression, Center for Epidemiological Studies Depression Scale)[7,9,24]
- psychological distress (Mental Health Inventory, Symptom Check List, Global Symptom Index)[19,21,22]
- emotional control (Courtlauld Emotional Control Scale)[23]
- event-related distress (Impact of Event Scale)[19]
- coping (Brief Cope, Benefit Finding Scale)[19] and
- psychological state (Clinical Outcomes in Routine Evaluation).[20]

The one included cohort study assessed aggression and violence (Conflict Tactics Scale) as an outcome relevant to this review.[26]

Summary of Critical Appraisal

A detailed summary of the critical appraisal of individual studies is provided in Appendix 5.

Randomized Controlled Trials (RCTs)

The RCTs included in this review were of mixed quality. Some RCTs included design features such as blinding data analysts[4] and adverse event tracking,[4,6] and their reports included explicit descriptions of study methods to allow a comprehensive study appraisal. Others were poorly reported, and perhaps poorly conducted, for example omitting descriptions of important study processes such as randomization,[5,6,8,10,11,16,17] allocation concealment,[5,6,8,10,11,16,17] and intervention compliance.[8,16] Most of the included RCTs provided an explicit description of study objectives, hypotheses, eligibility criteria, outcomes and interventions, which allows for a thorough appraisal study quality relating to these elements. With most studies omitting details of randomization and allocation concealment, an assessment of the success of the randomization process to reduce or remove the influence of known and unknown confounders cannot be made. Similarly, only two of the RCTs included a power calculation and justification for the sample size,[4,6] as evidence for the ability of the study to detect a clinically meaningful difference in measured outcomes. These two RCTs likewise included an analysis of clinical significance for primary outcomes, as did one further RCT that did not include a sample size calculation within the report.[10] For the remaining five RCTs that did not include a power calculation, nor an analysis of clinical significance, it remains unclear as to whether these studies were sufficiently powered to detect meaningful differences. Of note, two of these five studies were small pilot studies that were not intended for hypothesis testing.[5,17] Two RCT reports included an explicit description of adverse events and a monitoring process,[4,6] while the remaining RCT reports do not discuss safety. In these cases it is unclear whether adverse events were not monitored, not reported, or did not occur.

All but one report provided an explicit description of the sampling process,[8] which raises the potential for selection bias within this RCT. All but two reports included a description of the

therapist(s) and training related to providing the study intervention,[8,16] raising the potential for variation within intervention delivery within these studies and therefore the ability to associate the intervention with observed outcomes. Intervention compliance was adequate in four of the RCTs,[4,6,11,17] not reported in two,[8,16] and low in two.[5,10] Low intervention compliance reduces internal validity of study results, as the ability to measure relevant outcomes associated with the intervention decreases. An intent to treat analysis was completed in three RCTs[5,6,10]. For the remaining studies, non-compliant patients were excluded from the analysis raising the potential for overestimating treatment results.

While validated outcome questionnaires were used to assess outcomes across all included RCTs, the potential for social desirability bias cannot be ruled out with these self-report measures. Further, due to the nature of the intervention, blinding of patients or therapists is not possible; although in one study personnel who entered and checked data were blind to group assignment.[4] The lack of blinding of patients and therapists across all included studies, in addition to the use of self-report measures, increases the potential for bias in outcome assessment, in particular since participants are aware that they received the intervention and the desired direction of effect.

Observational Studies

As with the RCTs, most of the included observational studies were of mixed quality. Two common study design features within this group are the non-randomized, uncontrolled nature of the nine included pre-post studies,[7,9,14,15,19-25] and the non-randomized nature of the one included cohort study.[26] The lack of randomization increases the potential for selection bias, while the uncontrolled nature of the pre-post studies makes it impossible to distinguish intervention effects from other effects such as regression to the mean, natural progression, or social desirability. As with the RCTs, validated outcome measures were used across all observational studies, but due to the subjective nature of these self-report instruments, especially within a non-blinded, non-randomized, uncontrolled design, the potential for measurement error is increased. Finally, due to the nature of the intervention, neither blinding of patients nor therapists was possible. The lack of blinding, in addition to the use of self-report measures, increases the potential for bias in outcome assessment, in particular since participants are aware they received the intervention and the desired direction of effect.

As with the RCTs, most observational studies included an explicit description of study objectives, hypotheses, eligibility criteria, outcomes, and interventions, allowing for a comprehensive appraisal of study quality. Further, an explicit description of the therapist(s) and their related training across all studies provides assurance the intervention was delivered consistently and as intended.

None of the included studies, however, provided a power calculation nor justification for the number of included couples, although three studies were identified as pilot studies,[7,9,19,20] where hypothesis testing was not the main goal. Despite not providing justification for the sample size, four of the included observational studies included an analysis of clinical significance of the primary outcome, suggesting these studies were adequately powered to detect a meaningful difference.[14,15,20,23,24] As with the RCT reports, none of the observational studies included information about adverse event tracking raising the potential that these important outcomes were not tracked, as opposed to not reported. External validity is further limited in five of the pre-post studies due to poor reporting of sampling procedures, in particular whether people who

agreed to participate were different in any meaningful way from those who did not participate.[7,9,19-21,24]

Intervention compliance was adequate within seven of the ten included observational studies,[7,9,19,20,22,23,25,26] but low within two.[14,15,24] Compliance was not reported within one study report.[21] For each of the observational studies, non-compliant patients were excluded from the analysis, which raises the likelihood of overestimating treatment results especially for those studies with low compliance.[14,15,24] In one pre-post study compliance was low within both study sites, but compliance rates differed significantly between study sites.[14,15] In addition, for this particular study, the publication notes considerable differences in participant characteristics across study sites in terms of ethnicity, religion, education and income, in addition to differences in intervention delivery in terms of focus, scope, and treatment duration.[14,15] Given results for this study were combined across study sites, these between site differences increase the potential for bias in outcome measurement since measurement effects will be impacted differently by both compliance and the intervention across included participants.

Summary of Findings

The main findings of included studies are summarized in detail in Appendix 6.

Relationship Satisfaction

Results were mixed among the seven RCTs that measured some aspect of relationship satisfaction.[4-6,8,10,11,17] In two studies, a statistically significant improvement was reported between pre- and post-treatment between the intervention and wait list control groups for pathological gamblers ($P < 0.01$),[17] couples self-referring for treatment due to a history of intrafamilial child abuse in the female ($P < 0.05$ for both couples and females only)[11] and for PTSD patients (change in Dyadic Adjustment Scale 12.22, 95% confidence interval [CI]: 5.72 to 18.72, P = NR) but not their partners (change in Dyadic Adjustment Scale 3.23, 95% CI: -2.35 to 8.81, P = NR).[6] Two further RCTs reported statistically significant differences between treatment and control groups immediately post-treatment for people diagnosed with end-stage cancer ($P < 0.0001$)[4] and 1 month post treatment among couples referred for therapy for borderline personality disorder in the male ($P \leq 0.01$ for all but the trust subscale of the Perceived Relationship Quality scale).[8] Three RCTs included an analysis of clinical significance and each reported a greater proportion of couples within the treatment group observing a clinically meaningful improvement as compared to couples in the control group.[4,6,11] Additionally, two studies measured the duration of effect by re-assessing relationship satisfaction 3-months post-treatment.[4,6] In both cases improvements in relationship satisfaction were maintained at the follow-up assessment.

Two RCTs reported non-statistically significant changes in relationship satisfaction following couples therapy as compared to a wait list[10] or usual care[5] control group. In one RCT including couples self-referring for therapy due to a recently disclosed affair,[10] the difference in effect size pre-post intervention between the treatment group and a wait list control was not statistically significant for either the deceived ($P = 0.225$) or unfaithful ($P = 0.141$) partners. The other RCT included couples in therapy due to a recent diagnosis of prostate cancer and no statistically significant change was reported for either men diagnosed with prostate cancer or their partners.[5]

Relationship satisfaction was also measured in six of the pre-post studies where consistent improvements were documented.[7,9,14,15,22-25] Differences in relationship satisfaction pre- and post- treatment were documented for couples in therapy due to insecure attachment ($P < 0.001$)[23] for OCD patients ($P < 0.01$) and their partners ($P < 0.05$),[7,9] for couples in therapy due to unresolved emotional injury for both the injured partner ($P < 0.001$) and the injurer ($P < 0.001$),[22] and for both males ($P < 0.001$) and females ($P < 0.001$) self-referring for therapy.[14,15] In this last study, improvements were greater for those with greater levels of pre-counselling distress.[14,15] One study demonstrated mixed results with statistically significant improvements pre- and post-intervention for couples self-referring for therapy for some subscales of the Marital Satisfaction Inventory ($P < 0.001$ for each of global distress, affective communication, problem-solving communication, time together) but not others (P = not significant [NS] for each of sexual dissatisfaction, role orientation, family history of distress, dissatisfaction with children, conflict over child rearing).[24] Results were mixed in terms of the long term nature of improvements in relationship satisfaction. In the study including OCD patients and their partners, improvements were maintained 6 months post-treatment for OCD patients ($P < 0.01$) but not for their partners (P = NS). At 12 months, changes were nearly significant among OCD patients ($P = 0.053$) but again not significant for their partners.[7,9] Among couples with an unresolved emotional injury, post-treatment improvements were not maintained over the 3 month follow up (P = NR),[22] but for a cohort of couples self-referring for therapy due to attachment injury, post-treatment improvements were maintained 3-years post-treatment ($P < 0.005$).[25]

Other Relationship Outcomes

A range of other relationship-related outcomes were assessed across the seven RCTs included in this review, each assessed in one RCT:

- Marital partner function: Among couples with a pathological gambling member, a statistically significant difference in improvement in systemic function was observed between treatment and control groups post-intervention ($P = 0.023$) that was not maintained after 8-weeks of follow up ($P = 0.054$).[17]
- Caregiver burden: A statistically greater improvement in relationship-focused coping was observed among people in therapy due to a recent diagnosis of end-stage cancer as compared to a usual care control group ($P = 0.02$), but no difference was observed between groups in terms of demand ($P = 0.88$) or difficulty ($P = 0.09$) of caregiver burden.[4]
- Relationship intimacy, communication, self- and partner disclosure, responsiveness: One RCT including couples faced with a recent diagnosis of prostate cancer examined several aspects of relationship function, including intimacy, communication, self- and partner-disclosure and responsiveness. No significant differences were observed between the treatment and usual care control group on either of these measures.[5]

Among the observational studies, a similar range of relationship-related outcomes were assessed. For example, the one cohort study included in this review assessed aggression and violence using the Conflict Tactics Scale.[26] In this study, significantly less verbal aggression, overall violence and severe violence was observed within the intervention group that included couples in counselling for alcoholism in the female as compared to a matched control group. These significant differences applied for both male-to-female and female-to-male violence.

Trust was assessed in three pre-post studies.[22,23,25] In one study including couples self-referring for therapy for an unresolved emotional injury, an improvement in trust was observed immediately following treatment for the injured partner ($P < 0.05$) but not for the injuring partner (P = NS).[22] The improvement for the injured partner was not maintained at a 3-month follow up.[22] In a long term follow up study, assessment of trust at 3-years post-treatment suggested that couples who observed an improvement in their attachment injury during treatment had greater trust after 3 years as compared to those who did not resolve their attachment injury.[25] In this study injured partners reported a lower level of trust than did their offending partner at the 3-year follow up.[25] Finally, a study including couples in therapy due to insecure attachment reported that trust is not a significant predictor of relationship satisfaction, nor the rate of change of relationship satisfaction while in therapy.[23]

Two pre-post studies assessed attachment anxiety.[23,25] One study including couples in therapy for insecure attachment observed that attachment anxiety is a significant predictor of improvement in relationship satisfaction, such that individuals with a higher level of attachment anxiety were more likely to observe an increase in marital satisfaction post-therapy.[23] In this same study, it was reported that attachment avoidance does not predict relationship satisfaction.[23] In the same long-term follow up study described above, improvements in attachment injury were maintained 3-years after treatment for those who had resolved their attachment injury and people with unresolved attachment injuries reported higher levels of avoidant attachment.[25]

Marital function was assessed as an outcome in two pre-post studies and neither reported a significant improvement following therapy.[19,20]

Two studies assessed forgiveness. In one study among couples self-referring for therapy for an unresolved emotional injury, forgiveness improved significantly for the injured partner only immediately post-treatment ($P < 0.001$), but the improvement was not maintained through the 3 month follow up period.[22] No changes in forgiveness were observed among the injuring partner. In a long-term follow up study, injured partners who had resolved their attachment injuries with therapy reported more forgiveness than injured partners who did not resolve their injury at a 3-year follow up.[25] In this study, forgiveness was only assessed in the injured partner.

Other relationship outcomes were assessed in one pre-post study each:

- Communication patterns: In one study including couples self-referring to couples therapy due to a member with obsessive compulsive disorder (OCD), significant improvements were observed among OCD patients immediately post-treatment for both constructive communication ($P < 0.05$) and demand/withdrawal communication patterns ($P < 0.05$). For demand/withdrawal communication only, the improvements were maintained at both 6 months ($P < 0.05$) and 12 months ($P < 0.01$) post-treatment. No significant improvement was observed in terms of avoidance/withholding communication. For the partners of OCD patients, constructive communication was significantly improved immediately post-treatment as well as after 6 and 12 months post treatment ($P < 0.001$ for all). Avoidant communication patterns improved significantly following treatment ($P < 0.05$), and the improvements remained through 6 months post-treatment ($P < 0.05$) but after 12 months, there was no change from baseline (P = NS). Demand/withdrawal communication patterns did not significantly improve among partners with treatment.[7,9]

- Relatedness: One study that employed a time-limited approach to therapy reported a significant improvement post-therapy on both scales of depressive and paranoid schizoid relatedness.[20]
- Problem solving capacity: In one study including couples referred for inpatient couples therapy, problem solving capacity increased with treatment for people with a functional model of others and improvements were maintained at 6 and 18 months post-treatment ($P = 0.01$). For people with a dysfunctional model of others, problem solving capacity also increased during treatment but at a lower level, and improvements were not maintained at 6 and 18 months post-treatment ($P = 0.14$).[21]
- Resolution of feelings and needs: In the study including couples self-referring for therapy for an unresolved emotional injury, the resolution of feeling and needs improved for both the injured ($P < 0.001$) and the injuring partner ($P < 0.05$), as did feelings of acceptance and empathy ($P < 0.001$ for the injured partner; $P < 0.05$ for the injuring partner).[22]
- Couple identified complaints: In the study described above, couples identified specific complaints at the beginning of the study to address in therapy. These were likewise improved post-treatment from the perspective of both the injured and injuring partner on scales that measure both discomfort ($P < 0.001$) and change ($P < 0.001$) related to the complaint.[22]

Psychosocial Health Outcomes

Depression was the most common psychosocial outcome measured within the RCTs included in this review, being measured in three studies with mixed results.[4,6,10] In one study including couples faced with an end-stage cancer diagnosis, no difference between the intervention and the usual care control group was observed post-treatment ($P = 0.46$).[4] Similarly, in a study including couples coping with PTSD no difference was found in depressive symptoms after treatment between the treatment and a waiting list control group.[6] In another study including couples in counselling for a recently disclosed affair, improvements in depressive symptoms were observed in the deceived partners ($P = 0.037$) but not the unfaithful partners ($P = 0.082$).[10]

Depressive symptoms were assessed in two pre-post studies,[7,9,24] and in contrast to the RCTs consistent improvements were documented. In one pre-post study including couples self-referring for therapy significant improvements in depressive symptoms were observed immediately after therapy.[24] Similarly, in another pre-post study including couples with one partner with OCD, a significant improvement in depressive symptoms was observed pre- and post-intervention that was maintained through follow ups at 6 and 12 months (P for all comparisons < 0.001 as per the Beck Depression Inventory, and $P = 0.02$ for all comparisons as per the Hamilton Rating Scale for Depression).[7,9]

Event-related distress was assessed in two RCTs[5,10] and one pre-post study.[19] In one RCT including couples in counselling for a recently disclosed affair, significant improvements were observed in terms of the intrusion subscale of the Impact of Events scale for both the deceived and unfaithful partners (P = NR), and for the unfaithful partner only in terms of hyperarousal (P = NR).[10] In a second RCT, no significant change was found between a treatment and usual care group in terms of event-related distress for couples faced with a recent cancer diagnosis.[5] In one pre-post study including couples referred for therapy following a recent cancer diagnosis, a significant improvement was found between pre-and post-treatment for the avoidance (P = 0.021) and hyperarousal (P = 0.019) subscales of the Impact of Events Scale, but not the Intrusion subscale (P = NS).[19]

Psychological distress was assessed in three pre-post studies, with mixed results.[19,21,22] In one study including couples referred for inpatient couples therapy, among people with functional and dysfunctional models of others psychopathology improved with treatment.[21] The increase was different between these groups at post-treatment only (P = 0.04) but not during treatment (P = 0.38). In another study including couples faced with a cancer diagnosis, no change in psychological distress was observed pre- and post-treatment.[19] In a further study including couples in therapy for an unresolved emotional injury, significant improvement in terms of psychological distress was observed for the injured partners immediately post-treatment (P < 0.001), a change that was not maintained at a 3-month follow up. No change was observed among the injuring partners.[22]

Other psychological outcomes were assessed in one RCT each:

- Hopelessness: In one study including couples faced with an end-stage cancer diagnosis, no difference between the intervention and the usual care control group was observed post-treatment in terms of feelings of hopelessness (P = 0.24).[4]
- Trauma-related symptoms: In a study including couples in therapy for the female with a history of intrafamilial child abuse, no difference was observed between a treatment and waiting list control groups in terms of trauma-related symptoms.[11]
- In a study including couples with a pathological gambling partner, significant differences in improvement in mental distress were observed between people in a treatment and wait list control group immediately post-treatment (P = 0.001) and after an 8 week follow up (P = 0.035).[17]
- Interpersonal cognitive distortions: In one study including couples referred to pre-divorce counselling, interpersonal cognitive distortions were assessed for couples enrolled in a hope- and forgiveness-focused therapy group, a hope-focused therapy group, a forgiveness-focused therapy group, and a group who received no treatment. Improvements were observed among the combined therapy group as compared to the control group (P = 0.05), but not between the hope-focused group (P = 0.85) or the forgiveness focused group as compared to the control group (P = 0.74).[16]
- Anxiety: In a study including couples coping with PTSD, anxiety as measured by the State-Trait Anxiety Inventory decreased significantly among the intervention group (-10.60, 95% CI: -19.04 to -2.16, P = NR), but not the control group (0.84, 95% CI: -4.40 to 6.08, P = NR).[6]
- Anger: In the above study, anger expression decreased significantly among the treatment group (−8.02, 95% CI:−12.63 to −3.42) but not the wait list control group (−1.16, 95% CI: −4.55 to 2.23).[6]
- Psychological distress: In a study including couples faced with a recent cancer diagnosis, no significant difference in terms of psychological distress was found between couples in a treatment versus a usual care group.[5]

Finally, outcomes assessed in one pre-post study each included:

- Emotional control: In a study including couples referred to or self-referring for couples therapy due to insecure attachment, it was found that emotional control is not a significant predictor of relationship satisfaction, nor the rate of change of relationship satisfaction over the course of therapy.[23]

- Coping: In the same study described above, no significant difference was found in terms of coping (*P* = NR).[19]
- Psychological function: One study that employed a time-limited approach to therapy measured overall psychological function and reported a non-significant decrease in the proportion of both males (*P* = 0.066) and females (*P* = 0.103) in terms of psychological function.[20]

Limitations

The evidence to support the clinical effectiveness of couples therapy for adults experiencing relationship distress is limited primarily by the quality of published research in addition to the limited number of studies for any particular therapy/condition combination. Twelve different interventions were included as "couples-based therapy" in this review, each with a unique theoretical foundation, and each delivered for different lengths of time. Further, thirteen unique conditions were studied ranging from self-identified relationship distress, to distress that was secondary to OCD, alcoholism, emotional injury, cancer, or a recently disclosed affair, among other situations. The broad range of therapeutic approaches and the broad range of conditions studied means only one study was reviewed for any given therapy/indication combination. While this body of research is sufficient to guide a discussion about the clinical effectiveness of couples therapy in a broad sense, it is insufficient to answer more focused questions for example which form of couples therapy might be the most effective for a given condition.

The ability for some of the included studies to detect a meaningful difference in outcomes of interest is further limited by the length of the treatment provided. Therapy outcomes are believed to vary by the length of therapy, with improved outcomes being observed after prolonged treatment.[20] Clinical practice guidelines developed in the United Kingdom for depression, for example, suggest 15-20 sessions of therapy over 5-6 months to observe meaningful outcomes.[27] The treatment length within some of the included studies is far from this threshold, which increases the likelihood these studies were unable to appropriately identify meaningful treatment outcomes.

The evidence regarding the effectiveness of couples therapy is also limited by the nature of published research in this field over the past 5 years. Most of the studies included in this review are pre-post observational studies, which are inherently limited by their uncontrolled and non-randomized design. Eight RCTs were included in this review; however, the general lack of reporting of sampling, randomization and allocation concealment procedures among these studies means that important sources of bias cannot be ruled out. Further, the use of self-report measures coupled with an inability to blind patients and therapists, as is inherent to this subject area, raises the potential for social desirability and measurement bias. Finally, the generalizability of results is threatened due to narrow eligibility criteria in some studies. Six studies explicitly include only heterosexual couples,[10,11,14,21,23,26] and three include only married couples.[8,16,21] Only one study explicitly describes including homosexual couples.[5] Given the current diversity in relationship arrangements, and specific challenges within each, the limited eligibility criteria applied within many of the reviewed studies suggests results might not be applicable to homosexual couples or common-law couples.

Only two included studies described a process for tracking adverse events following couples therapy.[4,6] It is unclear whether adverse events were not assessed within the remainder of included studies, not reported or did not occur. In one study that described tracking adverse

events, one incident of severe intimate aggression was reported,[6] and in the other study no adverse events were reported.[4] While the adverse event rate is low within these two studies, overall this review is limited in its ability to describe the safety profile of couples therapy, in particular for at risk populations.

CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING

This review provides a summary of 20 publications describing 18 studies published in the last five years regarding the effectiveness of couples therapy for adults experiencing relationship distress due to any cause. No evidence-based guidelines, systematic reviews, or health technology assessments on the topic were found. The evidence is limited by the quality of published research, which is in part due to the nature of couples therapy and precludes blinding of patients and therapists and also due to the observational nature of many of the studies and the reliance on self-report data.

There is debate within the psychological literature regarding the appropriate use of study designs to assess the safety and effectiveness of psychological interventions, including couples therapy. There is some support for the use of the RCT as the most rigorous design, which is hampered by the argument that the highly controlled design is not a good fit for the complex and individualized manner in which therapy is practiced.[28] To be inclusive, all study designs are included within this review, although the results from RCTs and observational studies are presented separately.

While important sources of selection and measurement bias are likely within this body of research, in particular among the pre-post studies included in this review, overall results suggest that couples therapy could have a positive impact on relationship satisfaction. All of the observational studies that measured relationship satisfaction reported improvements in this outcome, as did five of the seven RCTs, including the two most well-designed RCTs.[4,6] A couple's initial state of relationship satisfaction and/or attachment anxiety could impact treatment outcomes. Couples who are more distressed going into therapy might observe larger gains,[14,15] as might couples with a higher level of attachment anxiety,[23] perhaps because these couples have greater gains to make as compared to couples who enter therapy in a less distressed state. Other relationship-related outcomes were only assessed in one study or in a few studies with mixed results, limiting the ability to draw meaningful conclusions. Similarly, the literature is inconclusive in regards to the effectiveness of couples therapy to impact psychological outcomes.

While research has begun to accumulate regarding the effectiveness of couples therapy, Lebow et al.[2] describe this field as a "cottage industry" (p. 146) due to limited government funding and lack of recognition of couple distress as a disorder within the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. Accordingly, most research regarding couples therapy for relationship distress has been small scale with limited potential for generalizability. Given the substantial physical and psychological impact of relationship distress on individuals, couples, families and society, and the positive trend for the effectiveness of couples therapy for relationship distress, there is a need for more definitive larger-scale rigorously designed studies. Future studies could also focus on a review of the comparative effectiveness of the range of available couples therapy interventions, to begin to answer the question of what forms of couples therapy are effective under what circumstances.

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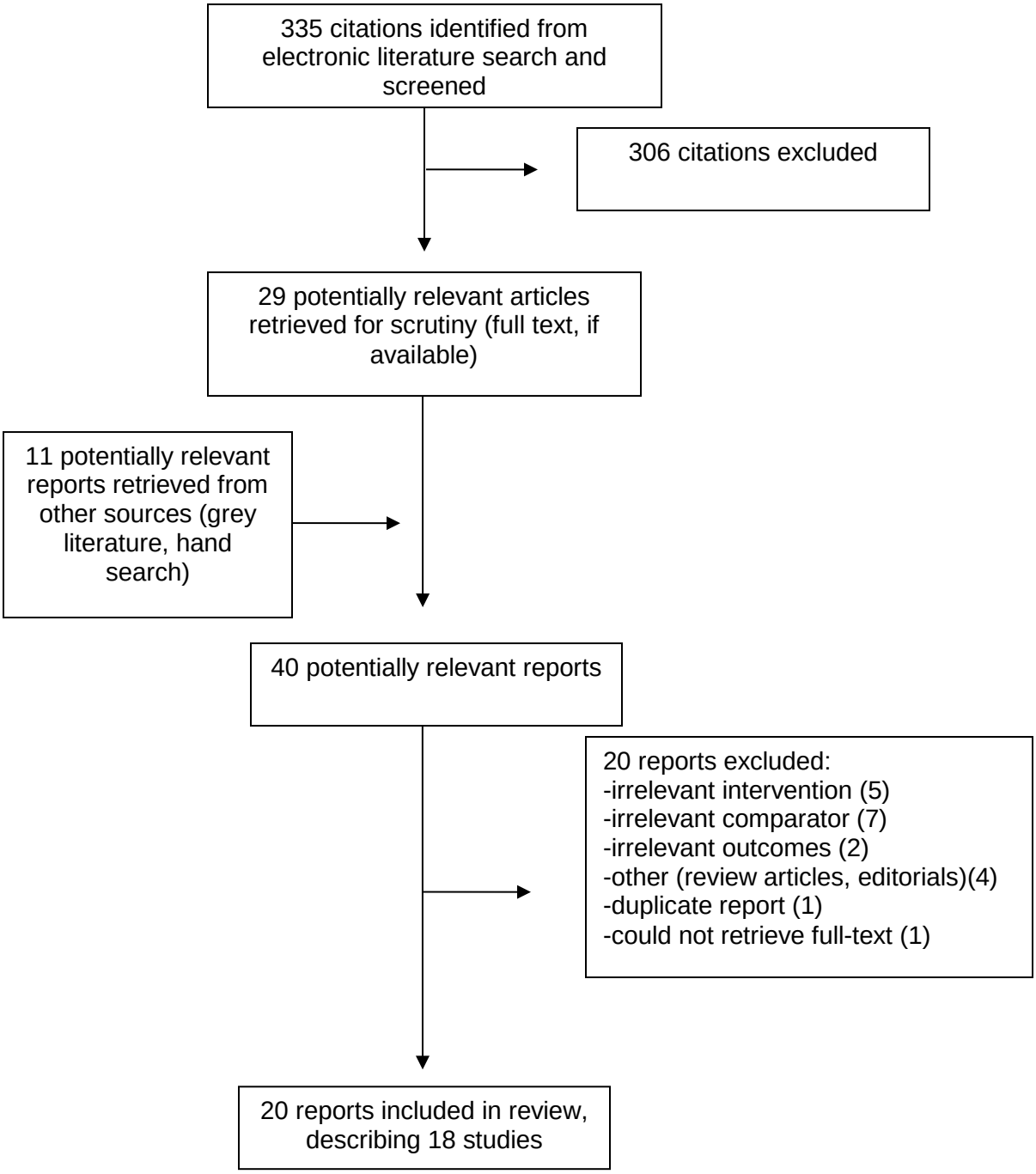
APPENDIX 1: Selection of Included Studies



APPENDIX 2: Other References of Potential Interest

Clinical Practice Guidelines:

These clinical practice guidelines are condition focused, not therapy focused. They include reference to the use of couples therapy as part of a management program for the targetted conditions but do not present guidelines for the practice of couples therapy.

National Institute for Health and Care Excellence. Common mental health disorders: Identification and pathways to care. London: NICE; 2011. (NICE clinical guideline 123).

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Management of Post-Traumatic Stress Working Group. VA/DoD clinical practice guideline for management of post-traumatic stress. Washington (DC): Veterans Health Administration, Department of Defense; 2010

Systematic Reviews and Meta-Analyses

These reviews did not meet the eligibility criteria because they fell outside of the date range for this review and/or included ineligible interventions or comparator groups.The reference list of these reviews were screened for eligible studies following the eligibility criteria for the review.

Badr H, Krebs P. A systematic review and meta-analysis of psychosocial interventions for couples coping with cancer. Psycho-Oncology.2013;22(8):1688-1704

Wood, ND, Crane DR, Schaalje GB, Law DD. What works for whom: a meta -analytic review of marital and couples therapy in reference to marital distress. The American Journal of Family Therapy. 2005; 33: 273-287.

Johnson S, Hunsley J, Greenberg L, Schindler D. Emotionally focused couples therapy: status & challenges (a meta-analysis). Journal of Clinical Psychology: Science and Practice. 1999; 6: 67-79.

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Comparative Effectiveness Research

These studies were excluded because the comparator group did not meet the eligibilty criteria for this review; however, the reports might be of interest as they will include data on the effectiveness of various forms of couples therapy as compared to other forms of couples therapy.

Baucom KJ, Sevier M, Eldridge KA, Doss BD, Christensen A. Observed communication in couples two years after integrative and traditional behavioral couple therapy: outcome and link with five-year follow-up. J Consult Clin Psychol. 2011 Oct;79(5):565-76.

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Schumm JA, O'Farrell TJ, Kahler CW, Murphy MM, Muchowski p. A Randomized Clinical Trial of Behavioral Couples Therapy Versus Individually Based Treatment for Women With Alcohol Dependence. J Consult Clin Psychol. 2014 Jul 21.

Family Therapy

Therapy that included family members other than the intimate couple were excluded from this review but could be of interest due to the systemic nature of therapy.

Keitner G, . Family and couples therapy for treating depressed adults. 2014. In: UpToDate. Waltham (MA): UpToDate; c2005.

Meis LA, Griffin JM, Greer N, Jensen AC, Macdonald R, Carlyle M, et al. Couple and family involvement in adult mental health treatment: a systematic review. Clin Psychol Rev. 2013 Mar;33(2):275-86.

O'Farrell TJ, Clements K. Review of outcome research on marital and family therapy in treatment for alcoholism. J Marital Fam Ther. 2012 Jan;38(1):122-44.

Education and Relationship Skills Training

Education, skills training and rehabilitation focused studies were excluded from this review in favour of interventions with a more therapeutic intent.

Allen ES, Rhoades GK, Stanley SM, Loew B, Markman HJ. The effects of marriage education for army couples with a history of infidelity. J Fam Psychol. 2012 Feb;26(1):26-35.

Blanchard VL, Hawkins AJ, Baldwin SA, Fawcett EB. Investigating the effects of marriage and relationship education on couples' communication skills: a meta-analytic study. J Fam Psychol. 2009 Apr;23(2):203-14.

Cleary Bradley RP, Gottman JM. Reducing situational violence in low-income couples by fostering healthy relationships. J Marital Fam Ther. 2012 Jun;38 Suppl 1:187-98, 2012 Jun.:-98

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Lu YY, Haase JE, Weaver M. Pilot testing a couples-focused intervention for mild cognitive impairment. J Gerontol Nurs. 2013 May;39(5):16-23.

Lucier-Greer M, dler-Baeder F. Does couple and relationship education work for individuals in stepfamilies? A meta-analytic study. Family Relations: An Interdisciplinary Journal of Applied Family Studies. 2012;61(5):756-69.

Owen J, Manthos M, Quirk K. Dismantling study of prevention and relationship education program: the effects of a structured communication intervention. J Fam Psychol. 2013 Apr;27(2):336-41.

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Wilde JL, Doherty WJ. Outcomes of an intensive couple relationship education program with fragile families. Fam Process. 2013 Sep;52(3):455-64.

APPENDIX 3: Summary of Characteristics of Included Studies

First Author, Publication Year, Country(s)	Patient Population, mean age, mean length of relationship	Intervention, Number of Couples, length of treatment	Comparator, Number of Couples, length of treatment	Outcomes Measured	Validated Questionn-aires
Randomized Controlled Trial					
Lee, 2014, Canada[17]	Couples with a pathological gambling member, 49 years (35-70 years), 18 years	Congruence couple therapy, n = 9, 12-20 sessions	Waiting list, n=9, 12 weeks	Relationship satisfaction Systemic functioning Mental stress	Dyadic Adjustment Scale Systemic Therapy Inventory of Change Brief Symptom Inventory
Navidian, 2014, Iran[16]	Couples referred to pre-divorce counselling, males: 32.5 years, females: 40.3 years (overall 23-63 years), 11 years	Hope- and forgiveness-focused therapy, n=15, 8 sessions Hope-focused therapy, n=15, 8 sessions Forgiveness-focused therapy, n=15, 8 sessions	No intervention, n=15, N/A	Interpersonal cognitive distortions	Interpersonal Cognitive Distortions Scale
Dalton, 2013, Canada[11]	Couples referred to or self-referring for couples therapy for the female with a history of intrafamilial child abuse, 43 years (22-65 years), 14 years	Emotionally focused couples therapy, n = 12, 24 sessions	Waiting list, n=10, 24 weeks	Relationship satisfaction Trauma symptoms	Dyadic Adjustment Scale Trauma Symptom Inventory
McLean, 2013, Canada[4]	Couples indicated for or self-requesting psychosocial referral for couple distress due to end stage cancer, 50.25 years,	Emotionally focused therapy, n=22, mean 8 (SD = 0.94) weekly sessions	Usual care, n=20, 2-8 sessions	Relationship satisfaction Caregiver burden Depression	Revised Dyadic Adjustment Scale Relationship-focused Coping Scale Beck Depression

First Author, Publication Year, Country(s)	Patient Population, mean age, mean length of relationship	Intervention, Number of Couples, length of treatment	Comparator, Number of Couples, length of treatment	Outcomes Measured	Validated Questionn-aires
	20.8 years			Hopelessness	Inventory Beck Hopelessnes s Scale
Kamalabadi, 2012, Iran[8]	Couples referred for therapy for borderline personality disorder in the male, 18-50 years, NR	Couple dialectical behavioural therapy, n=15, 14 weekly sessions	Waiting list, n=15, NR	Relationship quality	Perceived Relationship Quality Components Inventory
Kroger, 2012, Germany[10]	Couples self-referred to therapy for a recently disclosed affair, 45.3 years, 17 years	Traditional behavioral couples therapy, N=46, mean 29 weekly sessions (range 22-35)	Waiting list, n=43, 3 months	Relationship satisfaction Depression Event related distress	Partnership Questionnair e Beck Depression Inventory Impact of Event Scale-Revised
Monson, 2012, Canada and United States[6]	Couples self-referring for couples therapy for PTSD, 37.4 years, 6.8 years	Cognitive behavioural conjoint therapy, n=20, 15 sessions over 12 weeks	Waiting list, n=20, 12 weeks	Relationship satisfaction Depression Anxiety Anger	Dyadic Adjustment Scale Beck Depression Inventory State-Trait Anxiety State-Trait Anger Expression
Manne, 2011, United States[5]	Couples in therapy for prostate cancer, 58 years, 27 years	Conjoint intimacy enhancing therapy, n=37, 5 sessions	Usual care, n= 34, NR	Relationship satisfaction Relationship intimacy Self-disclosure Perceived partner disclosure Perceived partner responsivenes s	Dyadic Adjustment Scale Personal Assessment of Intimacy in Relationships Unvalidated instrument Unvalidated instrument Unvalidated instrument

First Author, Publication Year, Country(s)	Patient Population, mean age, mean length of relationship	Intervention, Number of Couples, length of treatment	Comparator, Number of Couples, length of treatment	Outcomes Measured	Validated Questionn-aires
				Communication Psychological distress and psychological well-being Event related distress	Communication Communications Pattern Questionnaire Mental Health Inventory Impact of Events Scale
Cohort Study					
Schumm, 2009, United States[26]	Couples enrolled in couples counselling for alcoholism in the female, males: 42.2 years, females 40.0 years, 11.5 years	Behavioural couples therapy, n=103, 20-22 weekly sessions	Demographically matched non-alcoholic males and females, n=103, no treatment	Verbal aggression and violence	Conflict Tactics Scale
Pre-Post observational					
Dalgleish, 2014, Canada[23]	Couples referred or self-referring for couples therapy due to insecure attachment, 44.6 years (28-64 years), 15.9 years	Emotionally focused couple therapy, n=32, 13-35 sessions	N/A	Relationship satisfaction Attachment anxiety Emotional control Trust	Dyadic Adjustment Scale Experiences in Close Relationships Courtauld Emotional Control Scale-Revised Relationship Trust Scale
Abramowitz, 2013;[9] Belus, 2014, United States[7]	Couples self-referring to couples therapy due to a member with obsessive compulsive disorder, OCD partner 33.1 years, partner: 34.7 years, NR	Couple-based cognitive behavioural therapy, n=21, 16 sessions	N/A	Relationship satisfaction Communication Depression	Dyadic Adjustment Scale Communication Patterns Questionnaire Beck Depression Inventory, Hamilton

First Author, Publication Year, Country(s)	Patient Population, mean age, mean length of relationship	Intervention, Number of Couples, length of treatment	Comparator, Number of Couples, length of treatment	Outcomes Measured	Validated Questionn-aires
					Rating Scale for Depression
Collins, 2013, Australia[19]	Referred during a follow up visit at cancer centre, 64 years (median), NR	Cognitive existential couple therapy, n=12, 6 weekly sessions	N/A	Psychological distress Marital function Coping Event-related distress	Mental Health Inventory Family Relationship Index Brief Cope, Benefit Finding Scale Impact of Event Scale-Revised
Balfour, 2012, United Kingdom[20]	Couples applying for or referred to couples therapy, 38.3 years (28-53 years), NR	Psychodynamic psychotherapy, n=18, 40 weekly sessions	N/A	Relatedness Couple functioning Psychological function	Personal Relatedness Profile Golombok Rust Inventory of Marital State Clinical Outcomes in Routine Evaluation
Doss, 2012, United States;[14] Rowe, 2011[15]	Referred or self-referred to couples therapy at Veterans Affairs Medical Centres, men: 49.8 years, women: 46.5 years, 13.6 years	San Diego site Behavioural therapy, with cognitive and emotion-focused goals, n=94, mean 12.3 sessions (SD=7.75) Charleston site Problem focused therapy, n=83, mean 4.49 sessions (SD=3.37)	N/A	Relationship satisfaction	Quality of Marriage Index
Conradi, 2011, Netherlands[21]	Couples referred for inpatient couples	Psychotherapy, n=36, daily for 7 weeks	N/A	Problem solving capacity	Interactional Problem Solving Questionnair

First Author, Publication Year, Country(s)	Patient Population, mean age, mean length of relationship	Intervention, Number of Couples, length of treatment	Comparator, Number of Couples, length of treatment	Outcomes Measured	Validated Questionn-aires
	therapy, males: 53.9 years (27-72), females 51.0 years (25-70 years), 23.5 years			Psychological stress	e Symptom Check List
Klann, 2011, Germany and Austria[24]	Couples self-referring for couples therapy, males: 41.0 years, females: 38.6 years, NR	Couples therapy (varied approaches), n=305 (plus 47 individuals from couples where the partner refused), approximately six months of therapy	Similar group from a study published in 1997	Relationship satisfaction Depression	Marital Satisfaction Inventory Center for Epidemiological Studies Depression Scale
Greenberg, 2010, Canada[22]	Couples self-referring for therapy for an unresolved emotional injury, 45.2 years (25-74 years), 16.5 years	Emotion-focused couples therapy, n=20, 10-12 weekly sessions	N/A	Relationship satisfaction Forgiveness Trust Resolution of unfinished business Couple specific problems Symptom distress	Dyadic Adjustment Scale Enright Forgiveness Inventory, Forgiveness Measure Trust Scale Unfinished Business Empathy and Acceptance Scale, Unfinished Business Feelings and Needs Scale Target Complaints Discomfort and Change Scale Global Symptom Index
Halchuk, 2010,	Couples self-referring for	Emotionally focused	N/A	Relationship satisfaction	Dyadic Adjustment

First Author, Publication Year, Country(s)	Patient Population, mean age, mean length of relationship	Intervention, Number of Couples, length of treatment	Comparator, Number of Couples, length of treatment	Outcomes Measured	Validated Questionn-aires
Canada[25]	couples therapy for attachment injury, 36.5 years, 10.1 years	therapy, n=12, approximately 13 weeks		Trust Relationship experience Forgiveness Attachment injury	Scale Relationship Trust Scale Experiences in Close Relationships Interpersonal Relationship Resolution Scale Attachment Injury Measure

APPENDIX 4: Summary of Included Couples Therapy Interventions

Behavioural Couples Therapy[3]

Behavioural couple therapy (BCT) is based on the assumption that relationship distress and related conflict results from an unfair relationship bargain, whereby partners fail to negotiate a fair exchange of preferred responses. There is a resulting sense of injustice, which leads to conflict. The aim of BCT is therefore to help partners develop communication and problem-solving skills to negotiate a mutually perceived fair relationship.

Behavioural therapy, with cognitive and emotion-focused goals[14]

This therapy is primarily behavioral with integration of cognitive and emotion-focused goals. It includes guided discussions of ongoing conflicts and reviewing the couple's patterns.

Cognitive Behavioural Conjoint Therapy[6]

Cognitive-behavioral conjoint therapy is a manualized intervention for PTSD designed to simultaneously reduce PTSD and associated symptoms and enhance relationship satisfaction. Therapy includes both in-and out-of session exercises including psychoeducation, couple specific goal setting, focusing on positive experiences, enhanced dyadic communication, and attention to activities that lead to behavioral and experiential avoidance and concurrently double as shared rewarding activities for the couple. The therapist guides the couple to investigate how trauma has influenced thoughts related to trust, control, emotional closeness, and physical intimacy and to challenge any appraisals that influence individual and relationship functioning.

Cognitive Existential Couples Therapy[19]

Cognitive Existential Couple Therapy was adapted from Cognitive Existential Group Therapy and aims to address key existential and functional themes including the death anxiety, fear of recurrence and living with uncertainty, coping with cancer treatments and their side effects, the impact of the diagnosis and treatment on the couple's relationship, including sexual impact, relating with medical and other professional staff, family concerns, body image and self-image concerns, and lifestyle effects and future goals.

Congruence Couples Therapy

Congruence Couples Therapy is an integrative, humanistic model developed for working with pathological gamblers and their spouses. It is based on the principle of congruence, and aims to work towards alignment of four dimensions of functioning: intrapsychic, interpersonal, intergenerational and universal-spiritual. This framework guides the intervention to increase attending, awareness, acknowledgment, and alignment with the pathological gambler and their spouse.[17]

Conjoint Intimacy Enhancing Therapy[5]

Conjoint Intimacy Enhancing Therapy focuses on improving couples' ability to comfortably share their thoughts and feelings regarding cancer, promote mutual understanding and support regarding their own and one another's cancer experience, facilitate constructive discussion of cancer concerns, and to enhance and maintain emotional intimacy. Techniques were drawn from cognitive-behavioral and behavioral marital therapy, the Prevention and Relationship Enhancement Program and from Gottman and colleagues' communication skills intervention and were adapted to the context of dealing with prostate cancer.

Couple-Based Cognitive-Behavior Therapy[9]

A staged approach is followed to teach the couple how to manage the patient's anxiety during exposure, in particular through practicing partner-assisted exposure and response prevention, including the use of emotional expressiveness techniques to enhance productive communication during exposures. The couple is guided through the development of learning strategies to facilitate decision making about reducing symptom accommodation and implementing alternative non-OCD-focused behaviors.

Couple Dialectical Behavioural Therapy[8]

Couple Dialectical Behavioural Therapy emphasizes the role of deregulated emotions in the breakdown of communication and the escalation of conflict. It focuses on creating a variety of ways to validate inherently valid things that partners express in particular by matching the form and function of communication. One of the main goals is to reduce negative patterns and develop constructive patterns of communication and interaction.

Emotionally Focused Couples Therapy

Emotionally Focused Couples Therapy is based on the assumption that relationship distress and related conflict results from insecure attachment, which leads to insecurity among one or both partners that their attachment needs will not be met. The aim is therefore to help partners understand this insecurity and develop ways to modify interaction patterns and emotional responses to promote development of a secure emotional bond.[3,22]

Hope and Forgiveness Focused Therapy[16]

Hope therapy is designed to change irrational beliefs and offer a more optimistic view of change, under the assumption that hope can ensure positive change. Hope-related therapy is a short, semi-structured form of treatment. The goals are to strengthen relationships and reduce the rate of divorce by focusing on goals, past achievements, positive and healthy coalitions through solution based and cognitive-behavioural techniques.[16]

Forgiveness therapy focuses on relieving feelings of resentment and anger. It focuses on several factors, including: awareness/discovery and unveiling of anger; decision and commitment to forgiveness, acting and compensation, and discovery and relief from emotions. It targets the cause of conflict and aims to ameliorate accumulated anger that might otherwise cause severe problems between spouses.

Problem focused therapy[14]

This therapy has a problem-focused orientation with a central emphasis on focused communication training around the identified problem. Communication training can play a central role, incorporated with guided discussions of ongoing conflicts and reviewing the couple's patterns.

Psychodynamic Psychotherapy[20]

Psychodynamic Psychotherapy is an insight oriented form of couples therapy, designed to help couples explore how difficulties have arisen in their relationship and what interferes with changing them. It promotes looking at what lies behind current difficulties and paying attention both to conscious and unconscious factors.

Psychotherapy[21]

Psychotherapy included both group and individual couples therapy. Group couples therapy was eclectic, incorporating elements from behavioral therapy, system therapy, dynamic approaches, and nonverbal disciplines including psychomotor therapy, art and activity therapy.

Traditional Behavioural Couples Therapy[10]

Traditional Behavioural Couples Therapy follows a staged approach to form new rules and boundaries in terms of the relationship, promote the practice of individual emotion regulation skills, teach couples to use appropriate emotional expressiveness skills for both speaker and listener, and inform couples about anxiety and depressive symptoms.

APPENDIX 5: Summary of Critical Appraisal of Included Studies

First Author, Publication Year	Strengths	Limitations
Randomized controlled trial		
Lee, 2014[17]	• Explicit description of objectives, research questions, eligibility, sampling, outcomes, intervention, therapist and related training, patient population and couples lost to follow up • Validated questionnaires to assess outcomes • Adequate compliance with intervention	• Pilot study, with small sample size, without justification for the number of couples included • No description of method of randomization process • No description of adverse event tracking • Blinding not possible
Navidian, 2014[16]	• Explicit description of objective, outcomes and eligibility criteria • Sample representative of people referred for pre-divorce counseling in Iran • Use of validated Interpersonal Cognitive Distortions Scale to assess outcomes	• No description of population characteristics by study group • No description or adjustment for any potential confounders • No discussion of clinical significance • No description of adverse event tracking • No description of compliance within or between groups • No power calculation nor justification for sample size provided • No description of therapist(s) providing intervention • No description of randomization process • No reporting of pre-intervention results for outcome, or within group changes pre-post intervention • Blinding not possible
Dalton, 2013[11]	• Explicit description of objectives, hypothesis, patient selection, outcomes, intervention, therapist and related training, patient population • Validated questionnaires to assess outcomes • Appropriate consideration of relevant confounders • Adequate compliance with the	• No description of randomization or allocation concealment process • No power calculation nor justification for sample size provided • No long term follow up • No description of adverse event tracking • Blinding not possible

First Author, Publication Year	Strengths	Limitations
	intervention	
McLean, 2013[4]	• Explicit description of objectives, hypothesis, patient selection, potential confounders, outcomes, intervention, therapist and related training, patient population and couples lost to follow up • Validated questionnaires to assess outcomes • While blinding patients and practitioners was not possible, study personnel who entered and checked data were blind to intervention assignment • Power calculation reported for primary outcome • Explicit reporting of adverse event tracking • Adequate compliance with the intervention • Analysis of clinical significance for primary outcome • Long term (3 month) follow up post-intervention	• No description of randomization process within strata or allocation concealment procedures • Randomization occurred after baseline assessment, raising potential for selection bias • Blinding not possible
Kamalabadi, 2012[8]	• Explicit description of objectives, hypothesis, eligibility, outcomes, intervention • Validated questionnaires to assess outcomes	• No description of therapist or training • No description of study sample • No description of randomization or allocation concealment procedures • Unclear how participants were selected from those who were eligible, raising the potential for selection bias • No power calculation nor justification for sample size provided • No description of analysis plan • No description of compliance within or between groups • No description of adverse event tracking • Combined results presented for the treatment and control group, making between group

First Author, Publication Year	Strengths	Limitations
		differences difficult to assess • Blinding not possible
Kroger, 2012[10]	• Explicit description of objectives, hypothesis, outcomes, intervention, therapist and related training, patient population and couples lost to follow up • Validated questionnaires to assess outcomes • Intent to treat analysis completed • Analysis of clinical significance of primary outcome	• No power calculation nor justification for sample size provided • Participants self-referred for therapy, which could limit generalizability of results • No discussion of clinical significance • Low compliance within intervention and control group • No description of randomization or allocation concealment procedures • Blinding not possible • Some evidence of selective outcome reporting • No description of adverse event tracking
Monson, 2012[6]	• Explicit description of objectives, outcomes, intervention, therapist and related training, patient population and couples lost to follow up • Validated questionnaires to assess outcomes • Power calculation provided for primary outcome • Explicit reporting of adverse event tracking • Adequate compliance with the intervention • Intent to treat analysis completed • Explicit description of randomization and allocation concealment processes • Analysis of clinical significance for primary outcome	• Blinding not possible
Manne, 2011[5]	• Explicit description of objectives, eligibility, outcomes, intervention, therapist and related training • Intent to treat analysis completed	• No description of randomization or allocation concealment procedures • Pilot study, without justification for number of couples included • Sample includes younger people

First Author, Publication Year	Strengths	Limitations
		with longer-term diagnoses, limiting external validity • Low compliance with intervention, but equal with control group • Blinding not possible
Cohort Study		
Schumm, 2009[26]	• Explicit description of objectives, hypothesis, eligibility, participants, therapists and their training, intervention, outcomes • Validated questionnaires to assess outcomes • Adequate compliance with the intervention • Adequate long-term follow up completion rates	• Non-randomized design with a demographically matched non-alcoholic comparison group • No power calculation nor justification for sample size • No description of adverse event tracking • Blinding not possible
Pre-post observational		
Dalgleish, 2014[23]	• Explicit description of objectives, hypothesis, eligibility, sampling, outcomes, intervention, therapist and related training • Validated questionnaires to assess outcomes • Includes analysis of clinical significance • Adequate compliance with the intervention	• Non-randomized design, without a control group • No description of adverse event tracking • No power calculation nor justification for sample size provided • Blinding not possible
Abramowitz, 2013;[9] Belus, 2014[7]	• Explicit description of objectives, hypothesis, eligibility, sampling, outcomes, intervention, therapist and related training • Validated questionnaires to assess outcomes • Adequate compliance with the intervention	• Non-randomized design, without a control group • Unclear if people who did not agree to participate were different than those who did participate, limiting external validity • No description of adverse event tracking • No power calculation nor justification for sample size provided • Blinding not possible
Collins, 2013[19]	• Explicit description of objectives, hypothesis, outcomes, intervention, therapist and couples lost to follow up • Validated questionnaires to assess outcomes	• Small, pilot study • Non-randomized design, without a control group • Limited description of sampling procedure, limiting representative ness of sample

First Author, Publication Year	Strengths	Limitations
	• Adequate compliance with the intervention	• Results for each outcome are reported as significant or non-significant only, without any raw or summarized data • No description of adverse event tracking • Blinding not possible
Balfour, 2012[20]	• Explicit description of objectives, hypothesis, outcomes, therapist and related training and couples lost to follow up • Validated questionnaires to assess outcomes • While blinding patients and practitioners was not possible, therapist-rated outcomes were assessed in a random and non-contiguous sequence • Analysis of clinical significance for the primary outcome • Adequate compliance with the intervention	• No power calculation provided or justification for sample size • Non-randomized design, without a control group • No indication of what potential confounders might be, or any adjustment for any potential confounders • Limited description of sampling procedure, limiting representative ness of sample • No description of adverse event tracking • Blinding not possible
Doss, 2012;[14] Rowe, 2011[15]	• Explicit description of objectives, hypothesis, outcomes, intervention, therapist and couples lost to follow up • Includes analysis of clinical significance • Validated questionnaires to assess outcomes	• Non-randomized design, without a control group • No power calculation or justification for sample size provided • Low compliance and differential compliance between the two study sites • Considerable differences in participant characteristics across sites in terms of ethnicity, religion, education and income • Differences in intervention delivery (i.e. focus, scope and treatment duration) between study sites • No description of adverse event tracking • Blinding not possible
Conradi, 2011[21]	• Explicit description of objectives, hypothesis, outcomes, intervention and therapist • Validated questionnaires to	• Non-randomized design, without a control group • No description or adjustment for any potential confounders

First Author, Publication Year	Strengths	Limitations
	assess outcomes • Long term follow up post-intervention	• Limited description of sampling procedure, limiting representative ness of sample • No discussion of compliance • No power calculation nor justification for sample size provided • No description of adverse event tracking • Blinding not possible
Klann, 2011[24]	• Explicit description of objectives, participants, therapists and their training, and outcomes • Validated questionnaires to assess outcomes • Includes analysis of clinical significance	• Non-randomized design, with no control group; although a similar group for a 1997 study used for comparison • Eligibility criteria not explicit • Limited description of sampling procedure, limiting representative ness of sample • No description or adjustment for any potential confounders • No power calculation or justification for sample size • Variety of theoretical approaches to couples therapy combined within intervention group • Low rate of compliance with intervention • No description of adverse event tracking • Blinding not possible
Greenberg, 2010[22]	• Explicit description of objectives, hypothesis, eligibility, participants, therapists and their training, intervention and outcomes • Validated questionnaires to assess outcomes • Adequate compliance with the intervention • Long term (3 month) follow up post-intervention	• Non-randomized design with participants serving as own wait-list control pre-treatment • No power calculation or justification for sample size • No description or adjustment for any potential confounders • No description of adverse event tracking • Blinding not possible
Halchuk, 2010[25]	• Explicit description of objectives, hypotheses, eligibility, participants and outcomes • Validated questionnaires used to assess outcomes	• Non-randomized design, without a control group • No power calculation or justification for sample size • No description of adverse event

First Author, Publication Year	Strengths	Limitations
	• Long term (3 year) follow up • Adequate compliance with the intervention	tracking • Blinding not possible

APPENDIX 6: Summary of Findings of Included Studies

First Author, Publication Year	Main study findings	Authors' Conclusions
Randomized Controlled Trial		
Lee, 2014[17]	<u>Relationship satisfaction</u> Dyadic Adjustment Scale, mean (SD) • Treatment, post-treatment 3.12 (0.50) • Control, post treatment 3.02 (0.84) *P* = 0.685 • Treatment, 8-week follow-up 3.14 (0.50) • Control, 8-week follow-up 3.06 (0.87) *P* = 0.753 • Improvement in relationship satisfaction from baseline to 8-week post-treatment follow up (*P* < 0.01) <u>Systemic functioning</u> Systemic Therapy Inventory of Change, mean (SD) • Treatment, post-treatment 4.12 (0.43) • Control, post treatment 3.73 (0.40) *P* = 0.023 • Treatment, 8-week follow-up 4.08 (0.41) • Control, 8-week follow-up 3.78 (0.34) *P* = 0.054 • Improvement in partner functioning from baseline to 8-week post-treatment follow up (*P* < 0.001) <u>Mental stress</u> Brief Symptom Inventory, mean (SD) • Treatment, post-treatment 0.31 (0.34) • Control, post treatment 0.88 (0.49) *P* = 0.001 • Treatment, 8-week follow-up 0.37	"The trend obtained based on three primary measures in this pilot (N = 30; 15 couples) was positive and encouraging. Results indicated the presence of significant treatment effects of CCT on gambling symptoms, mental health distress and individual–intergenerational–spousal system functioning post-treatment. Significant treatment effects were obtained on gambling and mental health symptoms at week 20 follow-up. Significant improvement in couple relationship was found within the treatment group at post-treatment and follow-up. Although improvements were found in controls in all domains, their changes were statistically non-significant."

First Author, Publication Year	Main study findings	Authors' Conclusions
	(0.36) • Control, 8-week follow-up 0.69 (0.43) *P* = 0.035 • Decrease in mental stress from baseline to 8-week post-treatment follow up (*P* < 0.001)	
Navidian, 2014[16]	<u>Interpersonal cognitive distortions</u> Interpersonal Cognitive Distortions Scale, mean difference (SD for difference) • Hope- and forgiveness-focused (combined) therapy versus control: 8.6 (6.3) *P* = 0.05 • Hope-focused therapy versus control: 8.6 (6.3) *P* = 0.85 • Forgiveness-focused therapy versus control: 8.6 (6.3) *P* = 0.74	"Hope- and forgiveness-focused (combined) intervention was more effective than non-intervention (control group) for decreasing interpersonal cognitive distortions among couples. In addition, the combined intervention was found to be more effective than the hope-only interventions in decreasing interpersonal cognitive distortions among couples. That is, hope-focused marital counselling had no significant effect compared with non-intervention or forgiveness-oriented marital counselling in reducing total interpersonal cognitive distortions of the divorce applicants…There were only significant differences between the mixed and control groups (p < 0.05), and between the mixed and hope groups (p < 0.01)." p. 662
Dalton, 2013[11]	<u>Marital functioning</u> Dyadic Adjustment Scale, mean (SD) • Intervention, pre-treatment: 95.95 (12.29) • Control, pre-treatment: 89.05 (16.82) • Intervention, post-treatment: 104.81 (15.15) • Control, post-treatment: 88.32 (25.54) • *P* < 0.04, for couples comparison • *P* < 0.05, for females only • d = 0.62, for couples • d = 1.00, for females only • Difference pre- to post-test in the proportion of participants in	"The primary aim of this study was to examine the effectiveness of EFT for couples in which the female partner was a survivor of childhood abuse. As predicted, couples who participated in 24 sessions of EFT demonstrated significant increases in their relationship satisfaction over time, whereas couples who did not participate in EFT exhibited no such change. Furthermore, after 24 sessions of EFT, the treatment group's marital distress decreased, on average, from the "distressed" range to the "average" range, which indicates a clinically significant improvement in marital functioning

First Author, Publication Year	Main study findings	Authors' Conclusions
	intervention group who clinically improved (10 points on DAS) *P* <0.001 • 70% of couples within intervention group classified as recovered <u>Trauma Symptoms</u> Trauma Symptom Inventory • None of the analyses of changes of TSI subscale scores were statistically significant	that was also statistically significant" p. 217
McLean, 2013[4]	<u>Marital functioning</u> Revised Dyadic Adjustment Scale post-intervention, mean (SD) • Intervention, patient 56.27 (4.6) • Intervention, caregiver 54.32 (4.6) • Control, patient 43.44 (10.3) • Control, caregiver 42.39 (6.9) • Difference between groups (*P* < 0.0001) • Proportion of patients clinically improved 3.25:1 (*P* < 0.0001) • Proportion of caregivers clinically improved 4.54:1 (*P*=0.01) Revised Dyadic Adjustment Scale 3 months post-intervention, mean (SD) • Intervention, patient 55.39 (6.3) • Intervention, caregiver 54.72 (5.8) • Control, patient 44.17 (10.2) • Control, caregiver 44.56 (10.3) • Difference between groups (*P* = NR) <u>Caregiver burden</u> Relationship-focused Coping Scale post-intervention, mean (SD) • Intervention, patient 33.73 (5.4) • Control, patient 30.94 (9.6) • Difference between groups (*P*=0.02)	"In this trial, we found that patients with metastatic cancer and their spouses who received a modified EFT demonstrated statistically and clinically significant improvements in marital functioning compared with those couples who received standard care. The change in treatment mean scores on the RDAS (+11.34), which were maintained at 3-month follow-up exceeded the minimum change score difference of seven points that we found in our pilot work [3]. None of the INT group declined, whereas one-third of the CTL group deteriorated in marital functioning at post-treatment… Additionally, our results showed that patients in the INT group reported significant improvement in their assessment of perceived caregivers empathic behaviors when compared with the CTL group." p. 35

First Author, Publication Year	Main study findings	Authors' Conclusions
	Caregiver Burden Scale – Demand post-intervention, mean (SD) • Intervention, caregiver 2.85 (1.0) • Control, caregiver 2.6 (1.0) • Difference between groups (*P*=0.88) Caregiver Burden Scale – Difficulty post-intervention, mean (SD) • Intervention, caregiver 1.90 (0.8) • Control, caregiver 2.05 (1.0) • Difference between groups (*P*=0.09) <u>Psychological symptoms</u> Beck Depression Inventory post-intervention, mean (SD) • Intervention, patient 15.00 (6.4) • Intervention, caregiver 13.82 (8.8) • Control, patient 12.94 (7.5) • Control, caregiver 10.33 (7.7) • Difference between groups (*P*=0.46) Beck Hopelessness Scale post-intervention, mean (SD) • Intervention, patient 7.78 (3.9) • Intervention, caregiver 6.64 (5.1) • Control, patient 5.62 (5.4) • Control, caregiver 4.72 (3.9) • Difference between groups (*P*=0.24)	
Kamalabadi, 2012[8]	<u>Relationship satisfaction</u> Perceived Relationship Quality Components Inventory – OCD Patient, mean difference (SD for difference) • Satisfaction 15.7 (2.9) *P* = 0.013 • Commitment 18.4 (1.9) *P* = 0.004 • Intimacy 18.0 (2.7) *P* = 0.007 • Passion 15.1 (5.2) *P* < 0.001 • Love 17.6 (2.9) *P* < 0.007 • Trust 13.0 (3.8) *P* = 0.195	"The results showed a range of psychopathometric and interpersonal changes in male patients with borderline personality disorder at one month after the end of three-month couple dialectical behavior therapy. CDBT seems to have a sustained effect on some of the core symptoms of BPD. Participants treated with CDBT reported using skills throughout treatment significantly more than participants in the control group… Not surprisingly

First Author, Publication Year	Main study findings	Authors' Conclusions
	Perceived Relationship Quality Components Inventory – Partner, mean difference (SD for difference) • Satisfaction 16.9 (3.9) *P* = 0.009 • Commitment 19.3 (1.5) *P* = 0.013 • Intimacy 15.3 (2.9) *P* = 0.001 • Passion 17.3 (3.2) *P* < 0.001 • Love 19.0 (1.8) *P* < 0.001 • Trust 10.3 (5.3) *P* = 0.009	results of this article also demonstrated that Partner participassion [*sic*] in intervention can improve relationship quality components of patients and their partners." p. 1482-1483.
Kroger, 2012[10]	Relationship satisfaction (Partnership Questionnaire) • Difference in effect size, deceived partner: 0.25 (*P* = 0.225) • Difference in effect size, unfaithful partner: 0.64 (*P* = 0.141) • Difference in % improved or recovered, deceived partner: 12.5% • Difference in % improved or recovered, unfaithful partner: 17.4% Depression (Beck Depression Inventory) • Difference in effect size, deceived partner: 0.40 (*P* = 0.037) • Difference in effect size, unfaithful partner: 0.59 (*P* = 0.082) • Difference in % improved or recovered, deceived partner: 22.0% • Difference in % improved or recovered, unfaithful partner: 17.2% Post-traumatic anxiety (Impact of Event Scale-Revised) <u>Intrusion subscale</u> • Difference in effect size, deceived partner: 1.38 (*P* = NR) • Difference in effect size, unfaithful partner: 0.25 (*P* = NR)	"The study provides some evidence that this approach mitigates individual complaints. Analyses revealed significant improvement on the IES-R subscales Intrusion and Hyperarousal and a trend on the IES-R subscale Avoidance for the deceived partners. These findings indicate that the treatment approach addressed PTSD-like symptoms, but appeared not to be effective in regard to the depressive symptoms of the deceived partners. Furthermore, we found significant improvement on the BDI scores as well as on the IES-R subscales Avoidance and Hyperarousal for the unfaithful partner. Sensitivity analyses indicated that all these findings could be regarded as robust." p. 793

First Author, Publication Year	Main study findings	Authors' Conclusions
	Avoidance subscale • Difference in effect size, deceived partner: 0.42 (*P* = NR) • Difference in effect size, unfaithful partner: 1.06 (*P* = NR) Hyperarousal subscale • Difference in effect size, deceived partner: 1.05 (*P* = NR) • Difference in effect size, unfaithful partner: 0.78 (*P* = NR)	
Monson, 2012[6]	Relationship satisfaction Dyadic Adjustment Scale, mean difference 12 weeks post-treatment (95% CI) • Intervention, patient: 12.22 (5.72 to 18.72) • Control, patient: 3.23 (−2.35 to 8.81) • Intervention, partner: 2.79 (−3.95 to 9.53) • Control, partner: 2.95 (−2.50 to 8.40) • Intervention: 62% reported a clinically significant improvement; 100% classified as satisfied in their relationship by DAS criteria Depression Beck Depression Inventory, mean difference (95% CI) • Intervention: −12.20 (−19.10 to −5.31) • Control: −2.29 (−6.37 to 1.79) Anxiety State-Trait Anxiety, mean difference (95% CI) • Intervention: −10.60 (−19.04 to −2.16) • Control: 0.84 (−4.40 to 6.08)	"This randomized controlled trial provides evidence for the efficacy of a couple therapy for the treatment of PTSD and comorbid symptoms, as well as enhancements in intimate relationship satisfaction. These improvements occurred in a sample of couples in which the patients varied with regard to sex, type of trauma experienced, and sexual orientation." p. 705-6.

First Author, Publication Year	Main study findings	Authors' Conclusions
	<u>Anger</u> State-Trait Anger Expression Trait subscale, mean difference (95% CI) • Intervention: −4.33 (−8.04 to −0.63) • Control: −0.46 (−3.12 to 2.20) Anger expression subscale, mean difference (95% CI) • Intervention: −8.02 (−12.63 to −3.42) • Control: −1.16 (−4.55 to 2.23)	
Manne, 2011[5]	<u>Relationship Satisfaction</u> Dyadic Adjustment Scale • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS <u>Relationship Intimacy</u> Personal Assessment of Intimacy in Relationships • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS <u>Self-disclosure</u> (3-item measure) • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS <u>Perceived partner disclosure</u> (3-item measure) • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS	"The goal of this pilot study was to evaluate a newly developed couple-focused intervention designed to improve psychological and relationship functioning among men diagnosed with early stage prostate cancer and their partners. The key finding was that, other than a marginal effect upon survivors' well-being (defined as the level of satisfaction with life, a sense of hopefulness about the future, and feelings of calmness), IET did not have an effect upon psychological, relationship, or communication outcomes for all survivors or partners. Rather, the treatment's effects were moderated by both individual distress and by relationship characteristics that the individual and couple brought to the first IET session. IET couples who began with fewer personal or relationship resources showed significant improvements in that outcome. Among survivors and partners with higher individual or relational functioning, IET had either no effect or a detrimental effect." p. 9

First Author, Publication Year	Main study findings	Authors' Conclusions
	<u>Perceived partner responsiveness</u> (4-item measure) • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS <u>Mutual constructive communication</u> Mutual Constructive Communication subscale of Communications Pattern Questionnaire) • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS <u>Demand-withdraw communication</u> Demand-Withdraw subscale of Communications Pattern Questionnaire • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS <u>Psychological distress and psychological well-being</u> Mental Health Inventory • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS <u>Event-related distress</u> Impact of Events Scale • Survivors, difference between treatment and control: *P* = NS • Partners, difference between treatment and control: *P* = NS	

First Author, Publication Year	Main study findings	Authors' Conclusions
Cohort Study		
Schumm, 2009[26]	<u>Verbal aggression</u> Verbal Aggression subscale of Conflict Tactics Scale • Female-to-male *P* < 0.001 • Male-to-female *P* < 0.001 <u>Overall violence</u> Violence subscale of Conflict Tactics Scale • Female-to-male *P* < 0.001 • Male-to-female *P* < 0.001 <u>Severe violence</u> Violence subscale of Conflict Tactics Scale • Female-to-male *P* < 0.001 • Male-to-female *P* = 0.01	"Results supported predictions that partner aggression and violence would decrease after BCT, and that clinically significant violence reductions to the level of a non-alcoholic comparison sample would occur for patients whose alcoholism was remitted after BCT… Female-perpetrated aggression in the first and second year after BCT decreased significantly from pre-treatment levels. Further, women who were remitted after BCT had aggression levels similar to the comparison sample, suggesting that these violence reductions were clinically significant. These predicted reductions in women's aggression occurred for all measures studied. Male-perpetrated aggression followed the same pattern of predicted results with a few exceptions. Male aggression was significantly reduced in the first and second year after BCT except for year-1 prevalence and frequency of severe violence. Male aggression also returned to the level of matched controls when the female partner was remitted except for year-1 prevalence and frequency of verbal aggression. These minor differences in results for female versus male aggression were not predicted, but it seems reasonable that reductions in the woman's drinking may reduce the woman's aggression somewhat more than the man's aggression… Results for the second year after BCT were similar to the first year. In addition, the year-2 results showed that post treatment reductions in violence were stable rather than transitory. Year-2 partner aggression

First Author, Publication Year	Main study findings	Authors' Conclusions
		remained significantly reduced from baseline levels and aggression did not increase from the first to the second year after BCT." p. 10-11
Pre-post observational		
Dalgleish, 2014[23]	<u>Relationship Satisfaction</u> Dyadic Adjustment Scale • Positive linear growth observed across therapy of 0.39 points per session ($P < 0.001$) • 20 of 31 couples showed improvement or recovery, 9 experienced no change and 2 deteriorated • d = 0.81 <u>Attachment anxiety</u> Experiences in Close Relationships-Relationship Specific • Significant predictor of improvement relationship satisfaction ($P = 0.027$) • Significant predictor of rate of change of relationship satisfaction ($P < 0.001$) <u>Attachment avoidance</u> Experiences in Close Relationships-Relationship Specific • Non-significant predictor of relationship satisfaction (P=NS) • Non-significant predictor of rate of change of relationship satisfaction ($P = 0.43$) <u>Emotional control</u> Courtauld Emotional Control Scale-Revised • Non-significant predictor of relationship satisfaction (P=NS) • Significant predictor of rate of change of relationship satisfaction	"Results of this study indicated that couples' marital satisfaction continued to increase over the course of EFT. The majority of couples made clinically significant improvements in marital satisfaction from pre- to posttherapy. Although not part of the hypotheses for this study, we found that demographic characteristics were not significant predictors of change for couples. We also found that couples with higher levels of attachment anxiety at intake started EFT with greater levels of distress. Results suggested that individuals with higher levels of attachment anxiety and emotional control at the start of therapy were more likely to experience greater changes in marital satisfaction over the course of EFT. However, attachment avoidance and relationship trust did not predict change in marital satisfaction over the course of therapy." p. 10 "The present study provides further empirical evidence for EFT creating positive changes in marital satisfaction." p. 10

First Author, Publication Year	Main study findings	Authors' Conclusions
	(*P* = NR) <u>Trust</u> Relationship Trust Scale • Non-significant predictor of relationship satisfaction (*P*=NS) • Non-significant predictor of rate of change of relationship satisfaction (*P* = 0.10)	

Abramowitz, 2013;[9] Belus, 2014[7]	<u>Relationship Satisfaction (OCD patient perspective)</u>
	
	Dyadic Adjustment Scale, mean (SD)
	• Pre-treatment: 108.75 (17.44)
	• Post-treatment: 115.33 (16.33)
	• 6 months: 114.75 (16.00)
	• 12 months: 112.23 (21.21)
	• Difference pre-treatment to:
	  o Post-treatment: *P* < 0.01
	  o 6 months: *P* < 0.01
	  o 12 months: *P* = 0.053
	
	<u>Relationship Satisfaction (Partner perspective)</u>
	
	Dyadic Adjustment Scale
	• Post-treatment: *P* < 0.05
	• 6 months: *P* = NS
	• 12 months: *P* = NS
	
	<u>Depression</u>
	
	Beck Depression Inventory (mean (SD)
	• Pre-treatment: 15.06 (7.33)
	• Post-treatment: 6.73 (5.30)
	• 6 months: 8.50 (7.47)
	• 12 months: 7.23 (6.71)
	• *P* for pre-test compared to mean of all postintervention scores < 0.001
	• *P* for difference between post-intervention time points = 0.51
		"The aim of the present study was to evaluate in an open trial the effectiveness of a couple-based CBT program for OCD that addressed interpersonal functioning along with OCD symptoms. Our hypotheses regarding improvement in OCD, other psychological symptoms, and relationship functioning were generally supported… We also found substantial improvement in depressive symptoms at posttest, although the results were more equivocal with regard to follow-up given inconsistent findings across our two indices of depression. Likewise, with regard to changes in relationship functioning, findings were somewhat mixed. Although all measures of relationship functioning improved at posttest, some indicated maintenance of therapeutic gains at follow-up, whereas others did not." p. 403-404[9]
		
		"This study was the first to examine the effect of a couple-based intervention for OCD on the psychological and relational functioning of intimate partners, who although involved in treatment, were not the targets of the intervention per se. Partners showed short-term (i.e., pre-post) changes in all domains in the expected direction (i.e., desired outcomes), with the majority of

First Author, Publication Year	Main study findings	Authors' Conclusions
	Hamilton Rating Scale for Depression, mean (SD) • Pre-treatment: 7.75 (3.87) • Post-treatment: 4.63 (2.92) • 6 months: 5.75 (4.55) • 12 months: 5.53 (4.60) • *P* for pre-test compared to mean of all postintervention scores = 0.02 • *P* for difference between post intervention time points = 0.64 <u>Communication</u> Communication Patterns Questionnaire Constructive Communication Subscale, patients, mean (SD) • Pre-treatment: 5.79 (13.51) • Post-treatment: 10.07 (10.81) • 6 months: 8.00 (12.58) • 12 months: 9.31 (10.31) • Difference pre-treatment to: o Post-treatment: *P* < 0.05 o 6 months: *P* = NS o 12 months: *P* = NS Communication Patterns Questionnaire Demand/Withdrawal Subscale, patients, mean (SD) • Pre-treatment: 25.67 (6.95) • Post-treatment: 21.50 (10.04) • 6 months: 22.25 (10.52) • 12 months: 20.31 (6.69) • Difference pre-treatment to: o Post-treatment: *P* < 0.05 o 6 months: *P* < 0.05 o 12 months: *P* < 0.01 Communication Patterns Questionnaire Avoidance/Withholding Subscale, patients, mean (SD) • Pre-treatment: 7.63 (2.60) • Post-treatment: 6.73 (4.17) • 6 months: 6.88 (3.34)	changes in the medium effect size range. Longer term gains were also evidenced in the area of communication, with medium effect sizes maintained." p. 486[7]

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	• 12 months: 8.31 (3.54)
	• Difference pre-treatment to:
	  o Post-treatment: *P* = NS
	  o 6 months: *P* = NS
	  o 12 months: *P* = NS
	
	Communication Patterns Questionnaire-Constructive Communication Subscale, partners
	• Post-treatment: *P* < 0.001
	• 6 months: *P* < 0.001
	• 12 months: *P* < 0.01
	
	Communication Patterns Questionnaire-Demand/Withdrawal Communication, partners
	• Post-treatment: *P* < 0.10
	• 6 months: *P* = NS
	• 12 months: *P* = NS
	
	Communication Patterns Questionnaire-Avoidant Communication, partners
	• Post-treatment: *P* < 0.05
	• 6 months: *P* < 0.05
	• 12 months: *P* = NS
	
	<u>Partner's depressive symptoms</u>
	
	Beck Depression Inventory, difference baseline to
	• Post-treatment: *P* < 0.10
	• 6 months: *P* = NS
	• 12 months: *P* = NS	

Collins, 2013[19]	Pre-post difference as measured by:
	• Mental Health Inventory (*P*=NS)
	• Impact of Event Scale-Revised (*P* = 0.013)
	  o Intrusion (*P* = NS)
	  o Avoidance (*P* = 0.021)
	  o Hyperarousal (*P* = 0.019)
	• Family Relationship Index (*P* = NS)
	• Brief Cope (*P* = NS)
	• Benefit Finding Scale (*P* = NS)
		"Our pilot study suggests that CECT can effectively address the key issue of patient and partner distress and patient-favoured avoidance coping identified in pre-vious research [6], albeit with a greater initial benefit for partners than for patients. We are encouraged that despite the small sample, significant effects were found on patients' and partners' psychological responses of avoidance and hyperarousal to the

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		threatening events and that the overall negative impact of the PCa diagnosis was lessened for couples following CECT."p. 468
Balfour, 2012[20]	<u>Relatedness</u> Personal Relatedness Profile – Depressive, mean (SD) • Observer, baseline 2.18 (0.62) • Observer, end of therapy 2.87 (0.87) (*P* < 0.001) • Therapist, baseline 1.94 (0.52) • Therapist, end of therapy 3.07 (0.78) (*P* < 0.001) Personal Relatedness Profile – Paranoid Schizoid, mean (SD) • Observer, baseline 2.16 (0.63) • Observer, end of therapy 2.83 (0.86) (*P* < 0.001) • Therapist, baseline 2.15 (0.60) • Therapist, end of therapy 3.36 (0.99) (*P* < 0.001) <u>Psychological state</u> Clinical Outcomes in Routine Evaluation • % decrease in clinical population pre-post treatment, males 8.5% (*P*=0.066) • % decrease in clinical population pre-post treatment, females 26.8% (*P*=0.103) <u>Couple functioning</u> Golombok Rust Inventory of Marital State, mean (D) • Baseline, males: 41.56 (13.57) • End of therapy, males: 40.50 (15.63)	"Our analyses indicated that results from two out of three of our outcome measures, (PRP and CORE) were significantly improved at the end of the therapy, whilst the results from the third measure (GRIMS) did not show significant improvement. In other words, as we predicted, couples showed improvements in patterns of interpersonal relating as assessed by independent observer and by therapists at the end of treatment (PRP). Participants also showed self-reported improvements in psychological state as measured on CORE at both the 20-session and the end points. But they did not show the predicted significant differences in pre–post treatment scores in their self-rated relationship satisfaction (GRIMS)." p. 303

First Author, Publication Year	Main study findings	Authors' Conclusions
	P = NS • Baseline, females: 43.83 (9.07) • End of therapy, females: 38.56 (16.57) *P* = NS	
Doss, 2012;[14] Rowe, 2011[15]	<u>Relationship Satisfaction</u> Overall pre-post change in Quality of Marriage Index, mean, effect size (SD) • Increase in relationship satisfaction, males: 3.40, 0.44 (0.60) *P* < 0.001 • Increase in relationship satisfaction, females: 4.01, 0.47 (0.68) *P* < 0.001 Due to significant interaction by level of relationship satisfaction pre-counselling (men *P* < 0.001; women *P* < 0.01) results are also presented by distressed and non-distressed couples Change pre-post treatment for those who were distressed pre-counselling, effect size • Increase in relationship satisfaction, males: 0.61 • Increase in relationship satisfaction, females: 0.58 • 3% deteriorated clinically, 54% remained unchanged, 26% improved clinically and 17% recovered clinically Change pre-post treatment for those who were not distressed pre-counselling, effect size • Increase in relationship satisfaction, males: 0.19 • Increase in relationship satisfaction, females: 0.22 • 5% deteriorated clinically, 75%	"As hypothesized, both men and women significantly benefited from receiving couple therapy in VA hospitals and these gains were significantly greater than what would be expected from natural remission… Finally, of those couples who entered therapy in the distressed range, only 3% evidenced significant deterioration in relationship satisfaction during treatment, whereas 43%showed gains significantly greater than what would be expected by chance. Therefore, when compared to no intervention, therapy gains in the present study are encouraging." p. 223-4.[14] "The results concerning symptoms of psychopathology confirmed our expectations that couples with coexisting depression or anxiety would be likely to suffer from greater relationship distress and were consistent with evidence that symptoms of depression may have more far-reaching effects on satisfaction than symptoms of anxiety. However, although greater initial relationship distress was predictive of greater change (probably because more distressed couples had more room for improvement) no such effect was observed for initial levels of psychopathology. Thus, our data indicate that although coexisting psychopathology may not interfere with couple therapy outcomes—that is, couples with such difficulties

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	remained unchanged, and 20% improved clinically <u>Predictors of Positive Change in Quality of Marriage Index</u> • Greater relationship satisfaction was associated with smaller treatment effects • Levels of initial depression and anxiety were not associated with treatment outcomes • Initial IPV for male partner positively associated with improvements for both males (*P* = 0.006) and females (*P* = 0.004) • Initial IPV for female partner not associated with improvements for males (*P*=0.51) and negatively associated with improvements for females (n=0.05)	appear to experience equivalent amounts of change compared with those without—such couples may still end therapy at lower levels of satisfaction, because they began therapy more distressed. As a result, it may be that couples in which a partner has symptoms of depression and anxiety are more difficult to treat, not because they benefit less from treatment, but because they begin treatment in greater distress and have to achieve greater improvement to become nondistressed." p. 457-458[15]
Conradi, 2011[21]	<u>Problem Solving Capacity</u> Interactional Problem Solving Questionnaire, mean (SD) • During treatment o Functional model of others 53.3 (1.2) o Dysfunctional model of others 50.6 (1.3) *P* = 0.14 • Post treatment o Functional model of others 55.2 (0.8) o Dysfunctional model of others 52.0 (0.8) *P* = 0.01 <u>Total psychopathology</u> Symptom Check List, mean (SD) • During treatment o Functional model of others 139.1 (5.9) o Dysfunctional model of others 146.2 (4.8) *P* = 0.38	"In this study, we found that insecure partner attachment, in terms of dysfunctional models of others and self, had a negative effect on treatment gain in the 18 months after discharge from couples therapy." p. 293

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	• Post treatment o Functional model of others 130.5 (4.5) o Dysfunctional model of others 143.2 (3.7) *P* = 0.04	
Klann, 2011[24]	<u>Relationship Satisfaction</u> Marital Satisfaction Inventory, mean difference by subscale: • Global distress: 6.2 (*P* < 0.001) • Affective communication: 4.0 (*P* < 0.001) • Problem-solving communication: 6.7 (*P* < 0.001) • Time together: 3.7 (*P* < 0.001) • Disagreement about finances: 1.0 (*P* = NS) • Sexual dissatisfaction: 2.4 (*P* = NS) • Role orientation: -1.1 (*P* = NS) • Family history of distress: -0.6 (*P* = NS) • Dissatisfaction with children: 1.3 (*P* = NS) • Conflict over child rearing: 1.4 (*P* = NS) • These results replicate those reported within a study published in 1997, with the exception of the disagreement about finances subscale, which was significant (*P* < 0.005) in that study but not this study • 33% of couples moved from a distressed to non-distressed state, compared with 24% in the 1997 study (*P* = NS for the difference between studies) <u>Depressive Symptoms</u> Center for Epidemiological Studies Depression Scale, mean difference • 7.0 (*P* < 0.001) • 28.3% of couples moved from a	"The goal of the present investigation was to attempt a replication of the Hahlweg and Klann (1997) findings using the same methodology across the same settings in Germany and Austria. Whereas the findings must be viewed cautiously given the lack of a control group, the large dropout rate, and reliance upon therapists' report of their theoretical orientation without actually observing their behaviors during treatment, the results are noteworthy. More particularly, we explored three areas: (a) marital satisfaction, AFC, and problem solving, areas commonly assessed in couple therapy research; (b) other domains of marital and family life that have been neglected in the past, e.g., sexual satisfaction and conflict with children; and (c) individual distress, as assessed by depression. What is striking is that the findings are remarkably consistent across the two effectiveness investigations when considering all three areas." p. 205

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	depressed to non-depressed state, compared with 26.5% in the 1997 study (*P* = NS for the difference between studies)	
Greenberg, 2010[22]	<u>Relationship Satisfaction</u> Dyadic Adjustment Scale, mean difference post-treatment • Injured: 12.4 (*P* < 0.001) • Injurer: 10.9 (*P* < 0.001) Dyadic Adjustment Scale, mean difference 3-month follow up • Injured: -2.5 (*P* = NS) • Injurer: 3.0 (*P* = NS) <u>Forgiveness</u> Enright Forgiveness Inventory, mean difference post treatment • Injured: 41.6 (*P* < 0.001) • Injurer: 8.5 (*P* = NS) Enright Forgiveness Inventory, mean difference 3-month follow up • Injured: -6.7 (*P* = NR) • Injurer: 6.6 (*P* = NR) <u>Forgiveness Measure</u> Trust, mean difference post treatment • Injured: 13.7 (*P* < 0.05) • Injurer: 3.0 (*P* = NS) Trust, mean difference 3-month follow up • Injured: -4.7 (*P* = NR) • Injurer: 0 (*P* = NR) <u>Resolution of unfinished business</u> Unfinished Business Empathy and Acceptance Scale, mean difference post-treatment • Injured: 7.1 (*P* < 0.001) • Injurer: 4.46 (*P* < 0.05)	"The results of this study indicate that in couples in which both partners expressed sufficient desire to stay together to enter treatment, injured partners showed significantly more improvement during the EFT-C treatment than in the waitlist period, on all measures of change. These partners reported being significantly more forgiving and trusting after treatment, and also reported positive changes and reductions in distress on key TC. In addition, injured partners reported significantly improved marital satisfaction after treatment. Moreover, improvement was reported on the GST if te SCL-90-R. Taken as a whole, this study provides support for the effectiveness of and EFT-C approach for treating the injured partner's marital distress related to past emotional injuries. More specifically, it shows its effectiveness in promoting forgiveness in the injured partner. A similar pattern of findings was found for injurers except that they did not improve in symptoms, forgiveness, and trust, but this is understandable given they were not the injured party and they entered with higher levels on these variables" p. 38-39. "In addition to the immediate effects of treatment, improvement was primarily maintained at 3-month follow-up for both partners. It is important to note that although there was deterioration in trust in injured partners over the 3-month follow-up period, all other outcomes were still

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	• Other-rated Injured: 5.1 (*P* < 0.001) • Other-rated Injurer: 4.2 (*P* < 0.01) Unfinished Business Feelings and Needs Scale, mean difference post-treatment • Self-rated Injured: 6.6 (*P* < 0.001) • Self-rated Injurer: 3.0 (*P* < 0.05) • Other-rated Injured: 5.3 (*P* < 0.001) • Other-rated Injurer: 5.2 (*P* < 0.001) <u>Couple specific problems</u> Target Complaints – Discomfort, mean difference post treatment • Injured: -4.0 (*P* < 0.001) • Injurer: -3.5 (*P* < 0.001) Target Complaints -Change Scale, mean difference post treatment • Injured: -3.1 (*P* < 0.001) • Injurer: -2.7 (*P* < 0.001) <u>Symptom distress</u> Global Symptom Index, mean difference post treatment • Injured: -0.26 (*P* < 0.001) • Injurer: -0.035 (*P* = NS) Global Symptom Index, mean difference 3-month follow up • Injured: 0.07 (*P* = NR) • Injurer: -0.02 (*P* = NR)	significantly improved at follow-up in comparison with pre-treatment scores. The injured partner also improved significantly more from pretreatment to follow-up than over the waitlist period on all measures of change, except trust, so treatment had an enduring positive effect." p. 39
Halchuk, 2010[25]	<u>Relationship satisfaction</u> Dyadic Adjustment Scale, mean difference (3-year follow up) • *P* < 0.005	"The purpose of this research was to investigate the long term effects of EFT at three year follow-up, and to explore whether resolved and nonresolved couples having undergone EFT for an attachment injury are discriminated by distal outcome measures… The hypothesis that couples previously

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	<u>Trust</u> Relationship Trust Scale • Two way interaction between resolved and unresolved couples ($P < 0.05$) • Main effect between injured and offending partners ($P = 0.001$), with injured partners' level of trust lower than offending partners <u>Relationship Experience</u> Experiences in Close Relationships—Avoidant Attachment • 3-way interaction between injured and offending partners, by time and by resolved and unresolved couples ($P < 0.05$) suggesting differences over time between partner types and groups. Non-resolved injured partners reported higher levels of avoidant attachment at follow up. Experiences in Close Relationships—Anxious Attachment • No difference between groups (P = NS) <u>Forgiveness</u> Interpersonal Relationship Resolution Scale • Resolved partners reported more forgiveness than non-resolved partners ($P < 0.05$) • Resolved partners reported less emotional pain than non-resolved partners ($P < 0.01$) <u>Attachment Injury</u> Attachment Injury Measure • Two-way interaction between injured and offending partners (P	identified as having resolved their attachment injury would show stability in their gains in dyadic adjustment from post-treatment to follow-up was supported… Stability in post-treatment results at follow-up was also found among resolved and nonresolved couples on the level of relationship trust… The hypothesis that resolved couples would show significant decreases in anxious and avoidant attachment at follow-up compared to nonresolved couples was not supported by the data… With respect to forgiveness, the hypothesis that resolved injured partners would show stability with respect to increased forgiveness levels at post-treatment was supported, as there were no changes with respect to time… The hypothesis that there would be a decrease in pain levels over time was not supported… The prediction that couples identified as having resolved the attachment injury at post-treatment would show stability in their gains of attachment injury resolution from post-treatment to follow-up was supported… In general, then, hypotheses were supported except for insignificant group differences found for the anxious and avoidant attachment dimensions and reported pain levels. Significant differences were detected between couples on measures of dyadic attachment, trust, forgiveness, and attachment injury severity." p. 40-44

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	< 0.05) • Resolved partners reported less attachment injury that non-resolved partners (*P* = 0.001)	