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Conradi, H.J.; Dingemans, P.; Noordhof, A.; Finkenauer, C.; Kamphuis, J.H.

**DOI**

[10.1111/famp.12305](https://doi.org/10.1111/famp.12305)

**Publication date**

2018

**Document Version**

Final published version

**Published in**

Family Process

**License**

Article 25fa Dutch Copyright Act

[Link to publication](#)

**Citation for published version (APA):**

Conradi, H. J., Dingemans, P., Noordhof, A., Finkenauer, C., & Kamphuis, J. H. (2018). Effectiveness of the 'Hold me Tight' Relationship Enhancement Program in a Self-referred and a Clinician-referred Sample: An Emotionally Focused Couples Therapy-Based Approach. *Family Process*, 57(3), 613-628. <https://doi.org/10.1111/famp.12305>

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# Effectiveness of the 'Hold me Tight' Relationship Enhancement Program in a Self-referred and a Clinician-referred Sample: An Emotionally Focused Couples Therapy-Based Approach

HENK JAN CONRADI\*  
PIETER DINGEMANSE†  
ARJEN NOORDHOF\*  
CATRIN FINKENAUER‡  
JAN H. KAMPHUIS\*

*While evidence-based couple therapies are available, only a minority of troubled couples seek help and they often do this too late. To reach more couples earlier, the couple relationship education (CRE) group program "Hold me Tight" (HmT) based on Emotionally Focused Couples Therapy (EFCT) was developed. This study is the first to examine the effectiveness of HmT. Using a three-wave (waiting period, treatment, and follow-up) within-subject design, HmT was delivered to 79 self-referred couples and 50 clinician-referred couples. We applied a comprehensive outcome measure battery. Our main findings were that (1) self-referred couples significantly improved during HmT on all measures, that is relationship satisfaction, security of partner-bond, forgiveness, daily coordination, maintenance behavior, and psychological complaints, with a moderate-to-large mean effect size ( $d = .63$ ), which was maintained ( $d = .57$ ) during the 3.5 month follow-up; (2) in clinician-referred couples, who were vulnerable in terms of insecure attachment status and psychopathology, the improvement during HmT was moderate ( $d = .42$ ), but this was reduced during the 3.5-month follow-up to a small effect ( $d = .22$ ); (3) emotional functioning (typical HmT target) as well as behavioral functioning (typical Behavioral Couples Therapy-based CRE target) improved during HmT; and (4) individual psychological complaints, although not specifically targeted, were reduced during HmT. These findings suggest that HmT is a promising intervention for enhancement of relationship functioning. Clinical implications are discussed.*

*Keywords: Effectiveness Research; Emotion Focused Couples Therapy; Hold Me Tight Program; Couple Relationship Education Program; Self-Referred and Clinician-Referred Couples*

*Fam Proc 57:613–628, 2018*

Relational problems and divorce are prevalent (Kennedy & Ruggles, 2014), and often have deleterious consequences (Lebow, Chambers, Christensen, & Johnson, 2012). Although evidence-based couples therapies like Traditional Behavioral Couples Therapy (TBCT; Shadish & Baldwin, 2003) and Emotionally Focused Couples Therapy (EFCT;

\*Department of Clinical Psychology, University of Amsterdam, Amsterdam, The Netherlands.

†Division of Affective Disorders, Mental Health Care Altrecht, Utrecht, The Netherlands.

‡Department of ISS: Cultural Diversity & Youth, University of Utrecht, Utrecht, The Netherlands.

Correspondence concerning this article should be addressed to Henk Jan Conradi, University of Amsterdam, Postbus 15933, 1001 NK Amsterdam, The Netherlands. E-mail: h.j.conradi@uva.nl

Johnson, Hunsley, Greenberg, & Schindler, 1999) are available, only less than one-fourth of the couples who want to divorce seek help and when they do, they tend to do this too late, that is on average 6 years after determining they have serious relationship problems (Doss, Atkins, & Christensen, 2003). This latency is problematic, because couples' dysfunctional interaction patterns tend to become more engrained and stable, and thus harder to treat (Snyder, Castellani, & Whisman, 2006). To reach more couples at an earlier stage of relational distress, couple relationship education (CRE) programs for groups of couples have been developed to provide a cheaper and less stigma-carrying alternative for regular couple therapies (Bradford, Hawkins, & Acker, 2015). CREs have mainly been based on TBCT, but more recently also on EFCT, namely the "Hold me Tight" (HmT) program (Johnson, 2008). HmT shares with CRE programs its workshop for groups of couples format, and offers relationship education as well as skill building through exercises and homework assignments. As well, it is aimed at enhancement of relationship satisfaction, or at reduction in moderate levels of distress, but it is not designed for addressing severe couple problems such as ongoing affairs or severe comorbid mental health problems (Hawkins, Blanchard, Baldwin, & Fawcett, 2008). HmT may be deployed both as a preventive or a relationship enrichment course (Johnson, 2008).

Empirical testing of HmT is currently limited to two small nonrandomized pilot studies (Fisher, Stokey, Sasaki, & Sexton, 2014; Lynch, 2015). To our knowledge, we report on the first large scale study to examine the effectiveness of HmT. As described by Chambles and Ollendick (2001), this is a crucial step toward establishing an intervention as evidence-based. Empirical support has been documented for TBCT-based CREs. A large meta-analysis on TBCT-based CREs (Hawkins et al., 2008) revealed gains in relationship satisfaction with an average effect size ( $d = .47$ ) that was maintained at follow-up (ranging mostly from 3 to 6 months) with an average effect size of  $d = .52$ . This was true for moderate dosage programs, like HmT, compared to no-treatment control groups. Effect sizes in quasi-experimental studies showed the "same pattern" (Hawkins et al., 2008, p. 728). In this study, we anticipated comparable effects of HmT in self-referred (SR) couples, that is moderate post-treatment gain in relationship satisfaction and all other outcomes included, and substantial maintenance at the 3.5-month follow-up (hypothesis 1).

Traditionally, CREs were developed for low-risk couples who want to enhance their relationship, but over the last decade CRE programs became available for "at risk" couples that display more problems including relational distress (Bradford et al., 2015). On an exploratory basis, we examined generalizability of the applicability of HmT. We therefore included two samples. First, SR couples, that is couples who signed up for HmT on their own initiative and who were presumably at relatively low risk. This was the group for whom HmT was originally designed. Second, we included clinician-referred (CR) couples, who were presumably more vulnerable. At least one of the partners of the CR couples had recently completed individual treatment in specialized mental health care for a severe DSM-IV axis I or II disorder that was in (partial) remission at the time of inclusion. These couples were referred by clinicians who deemed the maintenance of individual therapy gains at risk without relational intervention. Specifically, it was reasoned that recurrence of the individual psychopathology could be triggered by underlying insecure attachment, which would manifest itself as relational dysfunction. CR couples were therefore strongly advised to participate in a HmT group. Hence, in contrast to the SR couples, this was not a sample of couples who primarily sought treatment for relationship problems.

Research about associations between baseline insecure attachment or relational distress on the one hand, and treatment outcome on the other, is inconclusive. Insecure attachment was shown to have negative relations with outcome in a meta-analysis on individual therapy (Levy, Ellison, Scott, & Bernecker, 2011) and a study on couples therapy (Conradi, De Jonge, Neeleman, Simons, & Sytma, 2011), while others found

positive associations in couples therapy (c.f. Wiebe & Johnson, 2016). With respect to relational distress, meta-analyses suggest that more distressed couples show smaller, that is  $d = .06$  (Hawkins & Erickson, 2015), or comparable (Blanchard, Hawkins, Baldwin, & Fawcett, 2009) effect sizes after following CREs than less distressed couples (Hawkins et al., 2008), while other studies reported the opposite (cf. Bradford et al., 2014). In sum, the current body of evidence is inconclusive on the relationship between attachment vulnerability, relational distress, and treatment outcome. Our investigation of the effectiveness of HmT in CR couples compared to SR couples is therefore best considered exploratory (research question 2).

Integral to our approach was a repeated, multidimensional assessment of outcomes. CRE studies have been criticized for one-dimensional outcome measurement, typically relationship satisfaction (Hawkins et al., 2008), while relationship health is widely considered multidimensional in nature (Moore et al., 2004). Furthermore, we wanted to test whether HmT affects two conceptually distinct outcome categories, namely emotional aims typical for HmT, as well as behavioral targets typical for TBCT-based CREs. The conceptualization of relationship distress by TBCT-based CREs differs basically from HmT. TBCT-based CREs assume that couples' distress is caused by conflicts that result from dysfunctional communication and lack of problem solving skills. Therefore, enhancement of communication skills, problem solving skills, and positive partner behavior are central (Jacobson & Christensen, 1998).

In contrast, HmT, like EFCT, stresses the role of emotions (Greenberg & Johnson, 1988) and attachment (Johnson et al., 1999) in relationship functioning. Relational distress is conceptualized as caused by *insecure attachment* behavior that is driven by attachment fears of being rejected, or not measuring up to expectations of the partner. Therefore, in HmT, couples first learn to identify insecure attachment strategies that underlie dysfunctional interaction patterns in which they are trapped, namely hyperactivation and/or deactivation (Mikulincer & Shaver, 2016). Partners who fear to be rejected have learned to hyperactivate their attachment system to attract their partner's attention and urge their partners to validate, comfort, and support them over and over again. When they do not receive sufficient approval they tend to become demanding, blaming, and coercive partners. Conversely, partners who deactivate their attachment system avoid proximity and intimacy with their partner because they have learned that when they ask for validation, comfort, and support, others will not provide this, which inflicts pain. These people tend to become nondisclosing, withdrawing partners. HmT focuses on enhancement of secure attachment strategies between partners (Johnson, 2008). Therefore, in the pivotal HmT session, partners disclose and discuss their attachment fears and related attachment needs for validation, support, and comfort, while the other is accessible, responsive, and emotionally engaged (A.R.E.).

When secure attachment develops, it is assumed in HmT that the need to target behavioral issues as in TBCT-based CREs will be diminished (Johnson, 2008). To explore this claim, we measured two important emotion-related aims of HmT, namely security of the partner-bond, and forgiveness, an important repair mechanism in relationships (Fincham, Stanley, & Beach, 2007). Further, we assessed two typical behavioral aims of TBCT-based CREs, namely daily coordination, that is daily interaction and decision making, and relationship maintenance behavior, that is positivity of interactions, conflict handling, etc. We anticipated that HmT affected both categories of outcomes (hypothesis 3).

Finally, previous studies found bi-directional associations between individual psychopathology and relationship distress, suggesting the impact of these variables can cause and augment each other (Lebow et al., 2012). Based on this systemic perspective, several couple therapies were empirically tested and found to be effective in reducing more individual emotional and behavioral problems, including mood and anxiety disorders,

substance-use disorders, etc. (Snyder et al., 2006). We anticipated that enhancement of couples' functioning with HmT, while not specifically targeting individual complaints, would lead to a reduction in psychological complaints (hypothesis 4).

## METHOD

### Participants and Recruitment

Heterosexual couples suffering from relational distress and in sufficient command of the Dutch language were included. Excluded were couples who met criteria for current primary individual DSM-IV axis-I or axis-II diagnoses, as determined in unstructured clinical interviews by experienced clinicians during the screening. These couples were deemed to have different clinical needs. SR couples were alerted to the HmT course by advertising, the EFT website, and private practices in the EFT network. CR couples were recruited through the specialized mental health organization "Altrecht" in Utrecht, the Netherlands. After screening for in- and exclusion criteria, partners were provided with information on the study and asked to sign the informed consent before entering the study. The study was approved by the Ethics Review Board of the University of Amsterdam (2011-CP-1826), is registered in The Netherlands Trial Register (NTR4482), and was conducted from August 2011 to August 2015.

The total sample consisted of 129 couples, that is  $n = 79$  SR couples (158 partners) and  $n = 50$  CR couples (100 partners). Twenty-two groups with on average 5.86 couples per group (range 4–8) received the HmT intervention. Socio-demographic and clinical characteristics at the prewaiting period assessment are reported in Table 1. We did not obtain information on participants' ethnicity. The mean age in the full sample was 43.2 years old ( $SD = 9.8$ ). Compared to the SR couples the CR couples reported a significant shorter duration of the relationship (13.5 vs. 17.8 years), lower educational attainment, lower rates of being married (49% vs. 82.2%) and having children (49% vs. 86.2%), and a lower score on Daily coordination. As anticipated, CR couples reported compared to SR couples significantly more Psychological complaints and higher on attachment Avoidance and attachment Anxiety. Compared to the general population CR couples were highly insecure on attachment, that is, at the 74th and 86th percentile on Avoidance of intimacy and Anxiety about rejection, respectively. On Relationship satisfaction CR couples scored clearly below the cut-off for relational distress, but contrary to expectations not significantly different ( $p = .064$ ) from SR couples, who reported some relational distress too. On the other variables, including Motivation for HmT, no differences were detected between the groups.

### Design and Procedure

A within-subjects design with three phases was used. The average waiting period spanned 5.07 ( $SD = 2.35$ ) weeks, HmT 8.40 ( $SD = 1.48$ ) weeks, followed by two follow-up assessments. Follow-up 1 took place at 2.75 weeks ( $SD = 1.79$ ) and follow-up 2 at 14.27 weeks ( $SD = 2.96$ ) post-treatment, respectively. Couples were followed up for about half a year, that is 27.75 ( $SD = 3.58$ ) weeks. Each couple functioned as its own control during the waiting period prior to the HmT program. A randomized controlled trial (RCT) was deemed not feasible in our particular setting. The time needed to include sufficient numbers of couples to randomized (treatment vs. control) groups would have prolonged the waiting period to an unacceptable degree. Presumably this would have yielded high dropout rates. We therefore opted for a within-couples design.



TABLE 1  
*Socio-Demographic and Clinical Characteristics at Inclusion, N = 129*

	All couples N = 129			Self-referred couples N = 79			Clinician- referred couples N = 50			Difference subsamples <sup>b</sup>
	%			%			%			
Educational attainment <sup>a</sup>										
Low	9.7			3.3			19.6			$X^2 = 27.727; df = 2; p < .001$
Middle	27.1			22.0			35.1			
High	63.2			74.7			45.4			
Living status										
Living apart	7.2			3.9			12.2			$X^2 = 30.950; df = 2; p < .001$
Cohabiting	23.6			13.8			38.8			
Married	69.2			82.2			49.0			
Having children	71.6			86.2			49.0			$X^2 = 40.559; df = 2; p < .001$
	<i>M</i>	<i>SD</i>	$\alpha$	<i>M</i>	<i>SD</i>	$\alpha$	<i>M</i>	<i>SD</i>	$\alpha$	
# Children	2.15	1.41		1.48	1.10		2.47	1.44		$t = -4.867; df = 198; p < .001$
Age (years)	43.24	9.76		44.61	9.61		41.08	9.67		$t = -2.835; df = 250; p = .005$
Relationship duration (years)	16.07	9.93		17.77	9.30		13.46	10.34		$t = -3.419; df = 247; p = .001$
Relationship satisfaction (DAS)	91.71	18.42	.92	93.70	16.74	.91	89.02	20.26	.94	$t = -1.865; df = 184.7; p = .064$
Security of partner-bond (ARE)	51.38	13.87	.95	52.17	13.16	.95	50.30	14.79	.96	$t = -1.007; df = 228; p = .315$
Forgiveness (TFF)	11.38	2.83	.70	11.41	2.64	.68	11.34	3.08	.72	$t = -0.169; df = 230; p = .866$
Daily coordination (DC)	26.03	6.29	.91	26.95	6.13	.90	24.79	6.32	.91	$t = -2.614; df = 229; p = .010$
Maintenance behavior (MB)	60.95	10.55	.91	61.45	9.81	.91	60.26	11.50	.91	$t = -0.828; df = 188.7; p = .409$
Psychological complaints (GHQ)	27.40	7.31	.91	25.96	6.41	.90	29.36	8.01	.92	$t = 3.445; df = 180.7; p = .001$
Motivation Avoidance (ECR)	16.62	2.15	.75	16.56	2.21	.79	16.72	2.08	.69	$t = 0.596; df = 206.9; p = .552$
Anxiety (ECR)	55.38	16.50	.88	52.26	15.26	.87	59.63	17.24	.87	$t = -3.371; df = 193.8; p = .001$
	69.16	17.88	.87	64.39	16.36	.86	75.71	17.89	.86	$t = -4.982; df = 228; p < .001$

Note. <sup>a</sup>The highest completed level: low: primary school; middle: middle professional school or secondary school; high: higher professional school or university.

<sup>b</sup>Bold values indicate statistically significant differences between subsamples.

### Intervention

The protocol-driven intervention was based on the official, ICEEFT approved, Dutch translation of the HmT program (Eekhoudt, Aarnoudse, & Van Nuland, 2010). The program was delivered in pairs by in total nine formally licensed therapists with at least one ICEEFT certified EFCT therapist. During the eight weekly 2-hour sessions, each consisting of psycho-education, watching a video, in-session exercises, a group discussion,

homework assignments, and homework discussions, the following topics were covered: (1) psycho-education about attachment, (2) recognition of dysfunctional interaction patterns, (3) recognition of reciprocal attachment fears and attachment needs underlying dysfunctional interaction, (4) reliving a conflict while de-escalating (i.e., stopping escalation behavior, accepting responsibility for own behavior and emotions and their impact on the partner, understanding of partner emotions, and sharing own attachment fears and needs), (5) the A.R.E. conversation (i.e., disclosure of attachment fears and needs while the partner is accessible and responsive), (6) forgiving and building of trust, (7) touch and sexuality, and (8) relapse prevention. To assess whether treatment was provided as prescribed by the official HmT manual (i.e., treatment integrity check), recordings of random sessions were rated by independent raters by means of predefined, structured implementation checklists.

## Outcome Measures

All outcome measures were administered at least five times, that is (1) prior to the waiting period (directly after the screening), labeled henceforth as “pre-waiting period,” (2) pre-HmT (directly prior to session 1) labeled “pre-treatment,” (3) post-HmT (directly after session 8) “post-treatment,” (4) 2–3 weeks after finishing HmT “follow-up-1,” and (5) 14 weeks after finishing HmT “follow-up-2.” Extra measurements were added for questionnaires measuring security of partner-bond (prior to the A.R.E. conversation in session 5), forgiveness (sessions 2, 5, and 7), daily coordination (session 4), maintenance behavior (sessions 2, 4, and 6), and psychological complaints (sessions 3, 5, and 7). Partners completed the pre-waiting period and during treatment questionnaires separately in the room in which the screening and the course took place with the course providers present. The two follow-up questionnaires were sent by regular mail in separate envelopes including return envelopes with the instruction to complete them independently. Cronbach’s alphas in this study (Table 1), indicate satisfactory to strong internal consistencies of all used (sub-)scales in the total sample and both subsamples. Below Cronbach’s alphas are provided by gender per subsample.

### *Relationship satisfaction*

Relationship satisfaction was measured by the Dyadic Adjustment Scale (DAS; Spanier, 1976), one of the most widely used outcome measures in couples’ treatment. The DAS is a self-report questionnaire composed of 32 items measuring consensus, satisfaction with the relationship, cohesion, and affective expression. The total score was used. Cronbach’s  $\alpha$  for SR men was .90, SR women .91, CR men .92, and CR women .95.

### *Emotion-related outcomes*

Security of the attachment bond with the partner, the main target of HmT (enhanced by developing accessibility, responsiveness, and engagement between partners), was measured with the Accessibility, Responsiveness, Emotional Engagement questionnaire (ARE; Johnson, 2008). Items such as “I feel very comfortable being close to, trusting my partner,” are scored on a 5-point scale ranging from “disagree” to “agree.” We used the total score. Cronbach’s  $\alpha$  for SR men was .94, SR women .95, CR men .95, and CR women .96.

Forgiveness was assessed by the four-item Tendency to Forgive scale (TTF), which measures “the tendency either to let go of one’s offense experiences or hold on to them” (Brown, 2003). Items like “I am quick to forgive my partner” are scored on a 5-point scale ranging from “entirely untrue” to “entirely true.” Cronbach’s  $\alpha$  for SR men was .66, SR women .63, CR men .63, and CR women .70, indicating borderline adequacy.

### *Behavior-related outcomes*

Daily coordination, or the degree to which partners experience their daily interactions as smooth or difficult, was measured by the Daily Coordination scale (DC; Finkenauer, Wijngaards-de Meij, Reis, & Rusbult, 2010) and consists of 10 items. An example item is "When my partner and I have to make a decision, it is always effortful and difficult." Items are scored by a 5-point scale ranging from "entirely untrue" to "entirely true." Cronbach's  $\alpha$  for SR men was .89, SR women .90, CR men .90, and CR women .92.

Relational maintenance behavior was assessed with the 25-item Maintenance Behavior scale (MB; Finkenauer et al., 2010), measuring frequency of positive relational behavior, commitment, self-disclosure, conflict handling, helping equally with shared tasks, and use of family and friends to maintain the relationship. Items such as "I cooperate in how I handle disagreements" are scored on a 4-point scale ranging from "not" to "almost every day." Cronbach's  $\alpha$  for SR men was .91, SR women .92, CR men .92, and CR women .90.

### *Psychological complaints*

Psychological complaints, that is depression and anxiety related complaints, were measured by the General Health Questionnaire (GHQ; Koeter & Ormel, 1991). The 12 items, like for example "I lost much sleep over worry," are scored on a 4-point scale with values depending on the actual item, for example from "not at all" to "much more than usually." Cronbach's  $\alpha$  for SR men was .89, SR women .90, CR men .91, and CR women .92.

### *Attachment and motivation*

Attachment vulnerability, or degree of insecure attachment, was assessed pre-waiting period with the Experiences in Close Relationships questionnaire (ECR; Conradi, Gerlsma, Van Duijn, & De Jonge, 2006). The ECR measures adult attachment in romantic relationships in the past and the present and contains 36 items and two subscales, that is Anxiety about rejection and abandonment, example item "I worry about being abandoned," and Avoidance of intimacy, example item "I try to avoid getting too close to my partner." A 7-point Likert scale ranging from "disagree strongly" to "agree strongly" and a middle position "neutral/mixed" is used to score the items. Cronbach's  $\alpha$  for Avoidance was .88 for SR men, .87 for SR women, .86 for CR men, and .84 for CR women. Cronbach's  $\alpha$  for Anxiety was .88 for SR men, .85 for SR women, .87 for CR men, and .84 for CR women.

Motivation for treatment was assessed pre-waiting period by four items formulated for this study. Items such as "I look forward to the start of the training" are scored on a 5-point scale ranging from "totally disagree" to "totally agree." Cronbach's  $\alpha$  for SR men was .74, SR women .82, CR men .73, and CR women .63.

## **Power Analysis**

To fully evaluate the power of the complex mixed models used in this study extensive Monte Carlo simulations would be the ideal but quite complicated option (cf. Maas & Hox, 2005). We opted for a more straightforward and conservative analysis (i.e., probably underestimating the actual power of the mixed models), based on repeated measures ANOVA under the assumption that we could use only one respondent from each couple (i.e., calculating the number of couples needed to detect an effect). Using G\*Power 3.1.2 (Faul, Erdfelder, Lang, & Buchner, 2007), it was calculated that  $n = 44$  couples were needed to detect a moderate change during treatment (Cohen's  $d = .50$ ), given a power of .8 and alpha of .05 and with a conservative correction for sphericity ( $\epsilon = .5$ ). Hence, both our samples were sufficiently large to detect effect sizes of the magnitude that have been reported previously for the abovementioned TBCT-based CRE programs.



## Statistical Analyses

Analyses were conducted on the intention to treat sample. Dropout status was evaluated with pattern-mixture models for each of the dependent variables (Gallop & Tasca, 2009) to control for selective loss to follow-up (see Results). As observations within couples cannot be regarded as independent, data were analyzed using couples as the unit of analysis (level 3), individuals as repeated measures within each couple (level 2), and outcomes over time as repeated measures within each individual (level 1). Therefore, multilevel modeling in Linear Mixed Models (LMM) in SPSS (Armonk, NY: IBM Corp.) was used to evaluate differential change over time of the repeated measurements for all outcomes. This analysis allows evaluation of effects over time, while making optimal use of the available data at the repeated assessments, and taking into account the clustering of the repeated assessments within subjects and couples (Bryk & Raudenbush, 1987). Of note, incorporating the groups of couples as level 4 was not viable, because in that case 50 groups per subsample would be needed (Maas & Hox, 2005). Main effects of time, sex, and subsample, and their interactions were examined. These were all specified as fixed effects and time was not centered as this was unnecessary for interpretation of the results. As such, the model is comparable to a repeated measures ANOVA, but allows for (1) inclusion of within-couple interdependency and (2) using cases with partial missing data. Significance levels were set at  $p < .05$  (two tailed). No covariates were used. We examined the results of the LMM post-hoc comparisons of pre-treatment versus pre-waiting period assessment (change during the waiting period), post-treatment versus pre-treatment (change during HmT), follow-up 2 versus post-treatment (maintenance), and follow-up 2 versus pre-waiting period (change during the whole study period). Finally, effect sizes (Cohen's *ds*) were computed, using per comparison the estimated marginal means and the *SDs* of the corresponding raw means (Feingold, 2009). Effect sizes were interpreted as small when .35 or below, moderate when .36–.65, and large when .66 or higher (Cohen, 1977).

## RESULTS

### Treatment Integrity Check

A sample of 15 (of 176) sessions was viewed on videotape and independently scored on the basis of a treatment integrity checklist by two trained master students. Interrater agreement was 96.1%. Of the prescribed steps of the treatment protocol, 88.8% was performed by the therapists. The 11.2% deviations of the protocol were due to not summarizing the previous session (41.2%), not discussing the video (17.7%), not providing clear instructions for the exercise (8.8%), and/or not summarizing the current session (29.1%). Adherence to the core of the protocol, that is psycho-education, showing the video, doing in-session exercises with feedback, and extensive group discussion regarding the exercises, was excellent.

### Missing Data: Treatment Attendance and Response to Measurements

Treatment nonattendance at the 8 weekly sessions was as follows. The first session was not attended by 3.1% of the participants, and sessions 2–8 by 8.1%, 10.9%, 8.9%, 11.2%, 10.5%, 14.3%, and 13.2%, respectively. Nonresponse for the pre-waiting period measurement was 18.9%. Nonresponse for the assessments during the HmT course meetings (i.e., pre-treatment, sessions 2–7, and post-treatment) followed the respective nonattendance rates. Nonresponse rates at the follow-up assessments 1 and 2 were 17.8% and 19.4%, respectively.

To evaluate missingness at random, we applied pattern-mixture models for each of the dependent variables (Gallop & Tasca, 2009). Specifically, we added to the regular mixed model described above the main effect of dropout status at follow-up 2, the two-way interactions of dropout status with time and subsample, and the three-way interaction of dropout status, time, and subsample. None of the pattern-mixture models resulted in a better fit compared to the regular model as reflected by the BIC values. Main effect of dropout status was significant for Security of partner-bond ( $F = 6.739$ ;  $p = .010$ ,  $\Delta M = 5.27$ ,  $SE = 1.92$ ), Forgiveness ( $F = 4.219$ ;  $p = .041$ ,  $\Delta M = 0.79$ ,  $SE = 0.35$ ), Daily coordination ( $F = 4.865$ ;  $p = .028$ ,  $\Delta M = 2.36$ ,  $SE = 0.91$ ), and Psychological complaints ( $F = 4.301$ ;  $p = .039$ ,  $\Delta M = 1.65$ ,  $SE = 0.76$ ), and was as expected in favor of completers. However, since a main effect of dropout status only affects the intercept but not the effect size, we were interested in significant interactions with dropout status, that is, different course patterns. This was observed only for Security of partner-bond. Reported results regarding this outcome are therefore based on the pattern-mixture model, while the other outcomes are based on the regular mixed models. Below we focus on main and interaction effects of time.

### Course of Relationship Satisfaction

Linear Mixed Models on *Relationship satisfaction* (DAS) resulted in main effects of time, sex, and subsample (Table S1). Men scored higher than women ( $\Delta M = 5.70$ ,  $SE = 1.40$ ), while the SR group scored higher than the CR group ( $\Delta M = 6.42$ ,  $SE = 2.30$ ). Pairwise comparisons revealed that groups showed different courses (Table 2, Figure 1). Over the full study period of 27 weeks, that is from pre-waiting period to follow-up 2 assessment, SR couples showed large ( $d = .74$ ) and CR couples small-to-moderate improvement ( $d = .34$ ). SR couples reported a small but significant improvement during the waiting period ( $d = .27$ ), a moderate-to-large improvement during HmT from pre- to post-treatment ( $d = .62$ ), while 3.5 months later at follow-up 2 they retained moderate gain ( $d = .47$ ) compared to pre-treatment. CR couples showed a significant small increase during the waiting period ( $d = .30$ ), again small improvement during HmT ( $d = .30$ ), however at follow-up 2 they fell back to a non-significant effect ( $d = .07$ ) compared to pre-treatment.

### Course of Emotion-Related Outcomes

The pattern-mixture model for *Security of partner-bond* (ARE) showed main effects for time and sex (Table S1). Men on average reported a higher score on the ARE than women ( $\Delta M = 5.82$ ,  $SE = 1.11$ ). Since the interaction term of dropout status and time was significant, we display means for the two subsamples divided according to dropout status (Table 2; Figure S1). We first present the results for the subgroups *with* follow-up 2 assessment. Over the full study period of 27 weeks SR couples reported large ( $d = .67$ ) and CR couples small-to-moderate improvement ( $d = .33$ ). SR couples showed a small but significant improvement during the waiting period ( $d = .20$ ), moderate-to-large improvement during HmT ( $d = .61$ ), while 3.5 months later at follow-up 2 they maintained a significant moderate improvement ( $d = .45$ ) compared to pre-treatment. CR couples showed a small significant increase during the waiting period ( $d = .26$ ), moderate improvement during HmT ( $d = .40$ ), however at follow-up 2, they fell back to a non-significant effect ( $d = .08$ ) compared to pre-treatment. Figure S1 further illustrates that the major increase for the subsamples was after session 5 in which the "A.R.E.-conversation" was practiced. The results for the subgroups *without* follow-up 2 assessment were different. During the waiting period SR couples showed a significant

TABLE 2

*Pairwise Comparisons of Estimated Marginal Means, and Effect Sizes for Subsamples for Relationship Satisfaction, Security of Partner-Bond, Forgiveness, Daily Coordination, Maintenance Behavior and Psychological Complaints*

	Pre-waiting period Mean (SE)	Pre-treatment Mean (SE)	Pre-treatment versus pre-waiting period ES; <i>p</i>	Post-treatment Mean (SE)	Post-treatment versus pre-treatment ES; <i>p</i>	Follow-up 2 post-treatment ES; <i>p</i>	Follow-up 2 versus pre-waiting period ES; <i>p</i>
<b>Relationship satisfaction (DAS)</b>							
Self-referred (SR) couples	93.61 (1.71)	97.86 (1.59)	<b>.27; &lt;.001</b>	106.54 (1.37)	<b>.62; &lt;.001</b>	-.08; .329	<b>.47; &lt;.001</b>
Clinician-referred (CR) couples	88.30 (2.07)	94.31 (2.02)	<b>.30; &lt;.001</b>	100.00 (1.75)	<b>.30; &lt;.001</b>	-.20; .048	<b>.34; .003</b>
<b>Security of partner-bond (ARE)</b>							
SR couples fu2	52.00 (1.33)	54.57 (1.34)	<b>.20; .004</b>	61.70 (1.02)	<b>.61; &lt;.001</b>	-.11; .204	<b>.67; &lt;.001</b>
SR couples no fu2	51.72 (3.47)	55.76 (3.35)	<b>.26; .048</b>	53.55 (3.60)	-.14; .137	-	-
CR couples fu2	51.69 (1.76)	55.39 (1.83)	<b>.26; .008</b>	61.04 (1.41)	<b>.40; &lt;.001</b>	-.29; .008	<b>.33; .011</b>
CR couples no fu2	46.77 (2.56)	49.27 (2.76)	1.5; .112	50.68 (2.36)	.09; .696	-	-
<b>Forgiveness (TTF)</b>							
SR couples	11.31 (0.26)	11.94 (0.21)	<b>.24; .002</b>	13.18 (0.22)	<b>.46; &lt;.001</b>	<b>.19; .030</b>	<b>.69; &lt;.001</b>
CR couples	11.30 (0.31)	11.69 (0.27)	1.3; .104	12.54 (0.28)	<b>.27; .010</b>	-.07; .445	<b>.22; .087</b>
<b>Daily Coordination (DC)</b>							
SR couples	26.92 (0.58)	28.52 (0.55)	<b>.26; &lt;.001</b>	32.61 (0.49)	<b>.71; &lt;.001</b>	.07; .412	<b>.70; &lt;.001</b>
CR couples	24.59 (0.69)	26.54 (0.71)	<b>.30; &lt;.001</b>	30.35 (0.63)	<b>.57; &lt;.001</b>	-.11; .268	<b>.42; .001</b>
<b>Maintenance Behavior (MB)</b>							
SR couples	61.87 (0.99)	61.11 (0.91)	-.07; .224	69.72 (0.91)	<b>.81; &lt;.001</b>	-.15; .055	<b>.56; &lt;.001</b>
CR couples	60.33 (1.19)	60.92 (1.15)	.05; .483	68.33 (1.16)	<b>.67; &lt;.001</b>	-.34; .007	<b>.38; .003</b>
<b>Psychological complaints (GHQ)</b>							
SR couples	25.91 (0.65)	26.00 (0.56)	.01; .878	22.37 (0.47)	-.62; <.001	.10; .336	-.47; <.001
CR couples	29.51 (0.74)	27.40 (0.71)	-.27; .007	24.74 (0.60)	-.36; .007	.18; .157	-.45; .001
<b>Mean all measures</b>							
SR couples			.15		.63	-.01	.57
CR couples			.21		.42	-.20	.22

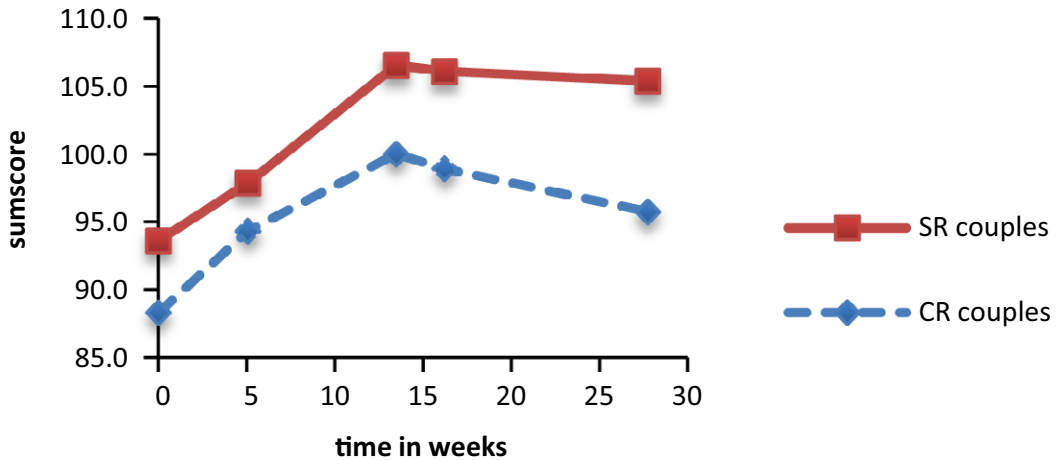


FIGURE 1. Course of Relationship Satisfaction (DAS).

small improvement ( $d = .26$ ) while the CR couples did not significantly change ( $d = .15$ ). During HmT *both* groups did not improve.

Linear Mixed Models with *Forgiveness* as dependent variable revealed main effects of time, sex, and subsample (Table S1). Men scored higher than women ( $\Delta M = 1.82$ ,  $SE = 0.20$ ), as did the SR group compared to the CR group ( $\Delta M = 0.55$ ,  $SE = 0.25$ ). Groups had different courses (Table 2, Figure S2). Over the full study period of 27 weeks SR couples reported large ( $d = .95$ ) and CR couples small-to-moderate improvement ( $d = .35$ ). SR couples showed a small but significant improvement during the waiting period ( $d = .24$ ), moderate improvement during HmT ( $d = .46$ ), and further small but significant improvement ( $d = .19$ ) during the 3.5 month follow-up resulting in large ( $d = .69$ ) improvement from pre-treatment to follow-up 2. CR couples did not significantly improve during the waiting period ( $d = .13$ ), showed small but significant improvement during HmT ( $d = .27$ ), whereas at follow-up 2 a nonsignificant small gain was revealed ( $d = .22$ ) compared to pre-treatment.

### Course of Behavior-Related Outcomes

On *Daily coordination* main effects of time, sex, and subsample were found (Table S1). Men scored higher than women ( $\Delta M = 2.45$ ,  $SE = 0.52$ ), while the SR group scored higher than the CR group ( $\Delta M = 2.64$ ,  $SE = 0.72$ ). Over the full study period of 27 weeks SR and CR couples reported large improvements ( $d = .94$  and  $d = .70$ , respectively). Pairwise comparisons (Table 2, Figure S3) revealed in the SR group a significant small improvement during the waiting period ( $d = .26$ ), large improvement during HmT ( $d = .71$ ), and 3.5 months later at follow-up 2, compared to pre-treatment a large gain ( $d = .70$ ) was retained. CR couples also showed a significant, small improvement during the waiting period ( $d = .30$ ), a moderate improvement during HmT ( $d = .57$ ), while at follow-up 2 a moderate gain ( $d = .42$ ) was maintained compared to pre-treatment.

Linear Mixed Models on *Maintenance behavior* revealed a main effect of time (Table S1). Over the full study period of 27 weeks, SR and CR couples reported moderate improvement ( $d = .56$  and  $d = .38$ , respectively). The SR group showed (Table 2, Figure S4) stability during the waiting period ( $d = -.07$ , n.s.), large improvement during HmT ( $d = .81$ ), and 3.5 months later at follow-up 2 compared to pre-treatment shrinkage

of the improvement to a moderate-to-large effect size ( $d = .63$ ). CR couples also showed stability during the waiting period ( $d = .05$ , n.s.), large improvement during HmT ( $d = .67$ ), and at follow-up 2 a small-to-moderate effect compared to pre-treatment ( $d = .33$ ).

### Course of Psychological Complaints

Main effects for *Psychological complaints* (GHQ) were found for time, sex, and subsample (Table S1). Men scored lower than women ( $\Delta M = 2.53$ ,  $SE = 0.46$ ), whereas CR couples scored higher than SR couples ( $\Delta M = 2.50$ ,  $SE = 0.52$ ). Over the full period of 27 weeks, SR and CR couples reported moderate improvements ( $d = -.47$  and  $d = -.45$ , respectively). Pairwise comparisons (Table 2, Figure S5) revealed that SR couples did not improve during the waiting period ( $d = .01$ ), during HmT they showed significant moderate-to-large improvement ( $d = -.62$ ), which they largely maintained 3.5 months later at follow-up 2 ( $d = -.49$ ). CR couples showed during the waiting period small improvement ( $d = -.27$ ), during HmT moderate improvement ( $d = -.36$ ), but 3.5 months later comparison with pre-treatment revealed a non-significant improvement ( $d = -.18$ ).

### Course of All Outcomes

Mean effect sizes, that is the mean of the effect sizes of the six outcomes (Table 2), show for SR and CR couples during the waiting period small gains ( $d = .15$  and  $d = .21$ , respectively), during HmT moderate-to-large ( $d = .63$ ) and moderate improvement ( $d = .42$ ) respectively, and while SR couples retained gain during the 3.5 month follow-up ( $d = .57$ ), CR couples fell back to a small effect ( $d = .22$ ).

## DISCUSSION

To our knowledge, this study describes the first substantial empirical test of the HmT program for couples. We measured a broad array of outcomes regarding couples' functioning in both SR and CR couples. Our main findings lend support to our hypotheses, specifically: (1) in SR couples, relationship functioning improved significantly on all outcomes during HmT, and these gains were maintained during the 3.5 month follow-up, (2) in CR couples, improvement during HmT was less pronounced and the observed gains were not fully or not at all maintained during the 3.5 month follow-up, (3) both emotional and behavioral targets were positively affected by HmT, and (4) individual psychological complaints were reduced during HmT. Below, we discuss these results more extensively.

### Effectiveness and Applicability of HmT

In both samples relationship functioning improved during HmT. To what extent can this improvement be attributed to causal effects of HmT? The current (non-RCT) design cannot fully disentangle the effects of time versus treatment. Within-couple designs do allow for a comparison between change during the waiting period and improvement during treatment. For the SR couples, we observed moderate-to-large improvements over the treatment period that clearly exceeded the small effects observed during the waiting period ( $d = .63$  vs.  $d = .15$ ). That said, gains during the waiting period (e.g., because of positive expectations with regard to the subsequent treatment, or the effect on a couple of making the decision to start treatment) may continue and even build beyond the waiting period. To the extent this would materialize, the actual treatment effects would be smaller than the currently observed moderate-to-large changes over the treatment period. An RCT-design is recommended to directly test these conjectures. It should be noted,



however, that the gains reported by SR couples had persisted at the 3.5-month follow-up assessment. While it cannot be ruled out that nontreatments effects would have such persistent influence, we deem it not very likely given the general finding that relationship satisfaction does not show large improvement in control groups (Baucom, Hahlweg, & Kuschel, 2003). Taken together, we believe these observations provide suggestive evidence that the HmT program is associated with substantial changes in relationship functioning that lasted over the 3.5-month follow-up in SR couples. These results seem comparable to those found in the mentioned meta-analysis of CREs (Hawkins et al., 2008).

A different pattern of outcome was observed within the CR couples. Treatment gains during HmT were generally smaller ( $d = .42$ ) and their difference with waiting period improvement was less pronounced ( $d = .21$ ). Furthermore, at the 3.5-month follow-up assessment, the mean effect size of all outcomes was roughly cut in half and the gains in terms of relationship satisfaction and emotional targets were no longer evident. Altogether, we believe these results suggest that HmT may cause improvement in CR couples, especially on behavioral outcomes, but that these gains are much less enduring than in SR couples. Although prediction of response to treatment analyses are beyond the scope of this study, it bears mentioning that at the pre-waiting period assessment CR couples did not differ from SR couples in terms of motivation for HmT, forgiveness, maintenance behavior, or relational distress ( $p = .064$ ). However, they did report significantly more insecure attachment and psychological complaints.

With regard to insecure attachment in CR couples, our results are in line with Conradi et al. (2011) and Levy et al. (2011), who found insecure attachment to be negatively related with outcome, but contradicts with findings reported by Wiebe and Johnson (2016). We conjecture that these contradictory findings may be explained by a severity effect. Up to a certain level of insecure attachment in couples, moderate dosage CREs like HmT may be associated with higher effect sizes as there is more room for improvement (cf. the SR couples), but beyond a critical threshold treatment power of HmT may fall short (cf. the CR couples). The highly insecurely attached CR couples may need more intensive or individualized treatment than can be offered by a uniform and short group training. Perhaps only then maintenance of the gains made during HmT can be achieved in the long run. Regular EFCT, characterized by more in-depth experiencing of attachment fears and needs (Johnson & Greenberg, 1988), may be a better option for these couples. An alternative explanation for our findings may be that the emotion-focused model is emotionally too confrontational for this population.

### **Emotional and Behavioral Targets of Treatment**

The support for the effectiveness of HmT found in this study is promising, as is the result that the emotion-related outcomes, such as security of partner-bond and forgiveness (specific targets of HmT), changed during the program. However, it was somewhat surprising that the behavioral targets typical for TBCT-based CREs, such as daily coordination and maintenance behavior, showed larger effect sizes than the emotional targets. This does not call into question the potential of HmT for targeting emotional outcomes. In contrast, it might be the case that although behavioral targets are more quickly and strongly affected, improvement on emotional targets is essential in maintaining gains in behavioral aspects of relationship functioning and relationship satisfaction over time. This is consistent with the observation in CR couples that while effects on emotional targets disappeared, gains in behavioral outcomes were reduced, and relationship satisfaction no longer differed from baseline. In SR couples, gains in emotional outcomes were largely maintained, and retention of behavioral outcomes and eventually relationship satisfaction more complete.

## Psychological Complaints

Finally, we tested whether psychological complaints, although not specifically targeted by HmT, were reduced. CR couples, who reported a clearly higher level of psychological complaints than SR couples at inclusion, moderately improved during HmT, but did not fully maintain this gain during the 3.5-month follow-up. This recurrence of psychological complaints might be another reason why these couples could not sustain their gains in relationship functioning. Therefore, adding interventions specifically targeting individual psychological complaints may enhance relationship functioning in CR couples. Surprisingly, the SR couples, who suffered less from psychological complaints, reported moderate-to-large improvement during HmT which they largely maintained during the 3.5-month follow-up. A possible explanation may be that the reduction in psychological complaints during HmT is the spin-off of better dyadic functioning. This corroborates earlier findings (Lebow et al., 2012).

## Limitations and Strengths

Some limitations should be taken into account when interpreting the findings. Most important is the omission of a randomized no-treatment control group. We recommend that future studies follow an RCT design to more conclusively document the extent to which HmT causes improvements in relationship functioning. Second, because respondents from both Dutch samples attained higher educational status compared to the general population, and because almost all couples were married/cohabiting and most had children, our findings will not automatically generalize to non-Dutch, lower educated, and/or dating couples without children. A third limitation of the study was the restricted duration of the follow-up. Although 3.5 months after post-treatment suffices to estimate whether the initial effects hold, it is important to examine durability of treatment effects over longer periods of time.

Strengths of this study were the inclusion of two samples to explore generalizability of applicability of HmT, the multidimensional assessment, the more than adequate power with two substantial subsamples (enhanced by repeated measurements), the high adherence to the treatment protocol increasing trust in the internal validity, the good external validity by offering HmT in nonacademic settings, and the satisfactory to excellent treatment attendance and questionnaire response rates with random nonresponse except for security of partner-bond.

## CONCLUSION AND IMPLICATIONS FOR CLINICAL PRACTICE

Taken together, our findings suggest that HmT is a promising intervention among SR couples in enhancing multiple aspects of their relationship functioning, and as such can be seen as an alternative for TBCT-based CREs, and a low cost alternative for regular couple therapy. For more vulnerable couples, moderate gains appeared immediately after HmT, but these were only partially maintained during the 3.5-month follow-up. Vulnerable couples may need more intensive treatment to maintain their gains. For them, HmT may instill hope, remoralize, and result in some behavioral change, but may need to be intensified by, for example, adding extra group sessions, more in-session exercises focused on in-depth emotional experiencing of attachment fears and needs, booster sessions, or, when needed, adding a module on handling individual psychological complaints. An alternative, from a stepped care perspective, is to follow HmT up with shortened regular EFCT. In this way relapse in deeply ingrained dysfunctional patterns based on insecure attachment between partners may be reduced.

### CONFLICT OF INTEREST

PD is a board member of the Dutch Foundation of Emotionally Focused Therapy and occasionally delivers HmT, earning a regular training fee. The other authors do not have any potential conflict of interest to disclose.

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## SUPPORTING INFORMATION

Additional Supporting Information may be found in the online version of this article:

**Figure S1.** Course of security of partner-bond (ARE).

**Figure S2.** Course of forgiveness (TTF).

**Figure S3.** Course of daily coordination (DC).

**Figure S4.** Course of maintenance behavior (MB).

**Figure S5.** Course of psychological complaints (GHQ).

**Table S1.** Main and interaction effects of time, sex, and subsample for relationship satisfaction, security of partner-bond, forgiveness, daily coordination, maintenance behavior, and psychological complaints.