



AARHUS UNIVERSITY



# Coversheet

---

**This is the accepted manuscript (post-print version) of the article.**

Contentwise, the post-print version is identical to the final published version, but there may be differences in typography and layout.

**How to cite this publication (APA)**

Please cite the final published version:

Trillingsgaard, T., Fentz, H. N., Hawrilenko, M., & Cordova, J. (2016). A randomized controlled trial of the Marriage Checkup adapted for private practice. *Journal of Consulting and Clinical Psychology, 84*, 1145-1152. doi:10.1037/ccp0000141

## Publication metadata

**Title:** A randomized controlled trial of the Marriage Checkup adapted for private practice  
**Author(s):** Trillingsgaard, T., Fentz, H. N., Hawrilenko, M., & Cordova, J  
**Journal:** Journal of Consulting and Clinical Psychology  
**DOI/Link:** <http://psycnet.apa.org/doi/10.1037/ccp0000141>  
**Document version:** Accepted manuscript (post-print)

**General Rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

**A Randomized Controlled Trial of the Marriage Checkup Adapted for Private Practice**

Tea Trillingsgaard and Hanne N. Fentz

Aarhus University, Aarhus, Denmark

Matt Hawrilenko and James V. Cordova,

Clark University

POSTPRINT VERSION for published manuscript see Journal of Consulting and Clinical Psychology, no. 12, 2016

**Acknowledgments.** This research was supported by the Ole Kirk Foundation. We would like to thank Center for Familieudvikling and in particular Mattias Stølen Due and Signe Steenberger, who collaborated on the design of the intervention *Par-tjek (MC-P)*. We would also like to thank Tatiana Gray and Melinda Morrill who served as consultants on the design of this study and reviewed earlier versions of the manuscript.

## Abstract

**Objective:** This study examined the effectiveness of the Marriage Checkup (MC), adapted for private practice. **Method:** A total of 233 couples were recruited from two metropolitan areas of Denmark and randomized to the MC adapted for private practice (MC-P,  $n = 116$ ) or a waitlist condition (WL,  $n = 117$ ). Self-report measures of relationship health were obtained online at three (WL) or six (MC-P) time points across 54 weeks. MC-P couples received two checkups (week 7 and 51). WL couples received tickets to a movie night (week 10). Data were analyzed using multilevel growth models. **Results:** Following the first checkup, small intervention effects were found on three of four outcome measures. Between the checkups, the effects on two of three measures first leveled off then reappeared. Following the second checkup, intervention effects in the small to medium range were found on all four measures including the Brief Marital Satisfaction Inventory (Cohen's  $d = 0.48$ ), the Couple Satisfaction Index ( $d = 0.20$ ), the Responsiveness and Attention Scale ( $d = 0.43$ ), and the Intimate Safety Questionnaire ( $d = 0.21$ ). **Conclusions:** Couples receiving two annual checkups across 54 weeks experienced small to medium effects on relationship health when compared to controls. These are the first and preliminary results on a model for conducting regular relationship health checkups in a real world therapeutic setting. Future studies are needed to investigate the comparative and long-term effects of this approach.

**Keywords:** couples, relationship satisfaction, brief intervention, feedback, marriage checkup. **Public health significance statement:** There is a high need for disseminating preventive interventions that lower the barriers for couples who do not seek traditional forms of couple therapy. In this effectiveness study, couples who received two annual relationship health checkups experienced small to medium intervention effects on relationship health when compared to couples receiving movie tickets. These findings were obtained with a manual adapted to match constraints of private practice (MC-P). Effects were comparable in size to those found in previous efficacy studies of the Marriage Checkup.

For adults and children, marital discord and divorce are significant sources of stress. In Denmark, as in the US, nearly half of all marriages end in divorce (48%, Danish Statistics, 2015), and distress in family relationships is ranked as the most frequent reason for seeing a private practice psychologist (Carl, 2008).

Family scholars highlight that marital therapy, despite its demonstrated efficacy, is limited by couples' general reluctance to seek therapy until their problems become severe (e.g. Doss, Atkins, & Christensen, 2003). It follows that prevention of couple distress requires efforts across the continuum of universal, selective and indicated prevention. Yet barriers of access, costs and stigma are often high. During the years 2010-2015, the program PREP (Stanley, Blumberg, & Markman, 2004) was made widely available to Danish couples as universal prevention<sup>1</sup>. The evaluation report from Center for Family Development (2016) concluded that couples overall benefitted from the program. It also showed that 77 percent of the participating couples already were distressed at baseline and that couples with higher distress levels benefitted less than couples with lower levels of distress. The Danish initiative marks a significant step forward in terms of reaching couples nationwide, yet also highlights the remaining issues of reaching couples early and bridging the gap between universal prevention (i.e. PREP) and more intensive services like therapy for distressed couples.

### **The Marriage Checkup**

The Marriage Checkup (MC; Cordova, 2014) was designed as an indicated prevention and aimed to lower the barriers for help seeking in couples. By offering brief regular contacts with a professional, like annual physical checkups, the MC increases access to relationship health care and incorporates both educational elements (e.g. knowledge about relationship health) and therapeutic

---

<sup>1</sup> This project was initiated by the Danish Ministry of Justice and funded by the special pool for the social area. PREP was offered nationwide at no cost or at a reduced cost to all Danish couples with at least one child below 18 years. The fund implementation can be downloaded at [file:///C:/Users/au129331/Downloads/Udmoentning\\_%20af\\_satspuljen\\_2010\\_socialomraadet.pdf](file:///C:/Users/au129331/Downloads/Udmoentning_%20af_satspuljen_2010_socialomraadet.pdf)

strategies (e.g. eliciting self-disclosure and compassionate partner response). The primary goal of the MC is to foster intimacy and acceptance by eliciting more adaptive narratives and activating couples in improving relationship health between sessions (Hawrilenko, Eubanks Fleming, Goldstein, & Cordova, 2015). The MC is expected to help couples repeatedly turn towards each other and attend to issues before they lead to irreversible relationship deterioration. The MC is presented to couples as an informational, brief and easily accessible intervention, not being therapy. Though brief, the individual format provides the confidentiality of a therapeutic setting, makes it possible to address each couple's unique strengths and concerns, and allows referral of couples needing more intensive interventions.

The MC has shown positive effects in a randomized controlled trial at 1- and 2-year follow-up in a variety of areas, including relationship satisfaction, intimacy, and acceptance (Cordova et al., 2014). Previous results are supportive of the efficacy of the MC, yet generalizability to established real-world therapeutic settings still needs to be demonstrated.

### **Exporting the MC manual from lab to private practice**

The authors of this study joined with the Center for Family Development, Denmark, to develop a format for the MC applicable to private practice (MC-P)<sup>2</sup>. The adaptation focused on two central demands on the private practitioner: time use and specialization demand. Private practitioners often work in a one-person organizational setting, and their time use must be paid by the hour by clients or covered by contracts with municipalities, national health services, or insurance companies. Compared to the university setting, no secretary or research assistant is available to make reminders, schedule visits, or advertise for the MC and no time is available for writing the feedback report. To adapt the MC to meet these demands, we reduced the format from

---

<sup>2</sup> Many Scandinavian couples live in highly committed but non-marital relationships thus in Danish we refer to the MC-P as *Par-tjek*, which translates to Couple Check-up.

two 2-hour sessions to two 90-minute sessions (standard duration of couple consultations in the current setting) and we developed a non-profit online platform applicable for private practitioners. This platform automatizes the advertisement of the program and sends out electronic questionnaires, reminders, and meeting times. It also automatically generates a feedback report in PDF file format to be printed and handed to couples based on their questionnaire responses. In contrast to highly specialized university clinics, the demand on private practitioners is to hold a range of therapeutic methods in their repertoire, and some practitioners may view the task of providing assessment and feedback to couples as a specialist skill. To support clinicians in structuring the MC sessions and applying the intended techniques, we developed an automatically generated therapist report, to accompany each download of the couple feedback report. The therapist report guides the MC-P by providing target information from the couple questionnaire (i.e., each partner's priority concerns to address during the session), brief instructions for linking the unique couple's score to the research literature, preprinted note sheets to fill in during the session, and preprinted handouts with images supporting the therapeutic techniques used during the feedback session (sample copies of feedback and therapist report can be obtained from the first author). In addition, two exercises on couple strengths were developed specifically for the MC-P and added to the MC manual. The full description of the MC-P is presented elsewhere ([Trillingsgaard, Due, Fentz & Steenberger, 2016](#)). The aim of the current study was to investigate the effectiveness of the MC-P.

## **Method**

### **Participants**

Participants were 233 couples from two metropolitan areas of Denmark, Copenhagen and Aarhus (see Table 1). ([Table 1 about here](#)). Couples were to be living together (not necessarily married), above 18 years old and with at least one child below the age of 18 at the same address.

These criteria correspond to criteria for receiving couple education with public aid in Denmark. To avoid confounding study results neither partner could be attending psychotherapy or using psychotropic medication. A power analysis using Cohen's (1988) recommendations showed that a minimum sample size of 100 couples per group was needed to detect an effect size (ES) of 0.4, similar to effects found in previous studies. We estimated an attrition rate of 15% across the 2-year study period and aimed at an initial sample of 115 couples per group.

### **Inclusion procedure**

Couples were recruited via newspapers, online advertisement, social media, broadcast, and flyers. The two conditions were outlined as (a) a 2-year MC-P program with a checkup immediately after sign-up and another checkup after one year, and (b) a 2-year *online* MC-P (assessment and *written* feedback, no consultations) preceded by a 1-year WL period. Couples in the WL condition were compensated for the waiting time with movie tickets. No monetary incentives were used to retain couples in the study. The flow of participants is shown in Figure 1 ([Figure 1 about here](#)). The study was conducted in compliance with standards from the regional ethical committee and approved by the Danish Data Protection Agency. Participants were randomized to either the MC-P ( $n = 116$ ) or the WL ( $n = 117$ ), using sequentially numbered, opaque, sealed envelopes. Randomization was conducted within two strata defined by the couple's address within the region of Copenhagen ( $n = 112$  couples) or Aarhus ( $n = 121$  couples). Couples assigned to different conditions were linked in pairs sequentially (one MC-P couple with one WL couple) to ensure identical time lapse between the pre- and post-measurements. In the MC group, online assessments were obtained at baseline and at week 10, 21, 34, 47, and 54 (these were couples' average response times). The first checkup was scheduled to begin in week 7 and the second in week 51. In the WL group, measures were obtained online at baseline, week 10 and 54.

### **Measures**

We measured relationship satisfaction using the *Marital Satisfaction Inventory – Brief* (10 items) (MSI; Whisman, Snyder, & Beach, 2009) and the *Couple Satisfaction Index-16* (CSI; Funk & Rogge, 2007). In the current study the CSI cut score of 51.5 was used as an indicator of distress. The *Intimate Safety Questionnaire* (ISQ; Cordova, Gee, & Warren, 2005) measured the degree of comfort with sharing emotions and being emotionally vulnerable with an intimate partner in the following referred to as intimacy. The *Responsiveness and Attention Scale* (RAS; Trillingsgaard & Fentz, 2015) measured the couples' responsiveness to each other's bids for attention in everyday situations (e.g., arriving home, initiating conversation). *Client evaluation of the MC-P* was measured by ratings of four statements of client satisfaction (from 0 = *completely disagree* to 4 = *completely agree*). *Manual adherence* was coded on 20 % of all videotaped sessions with an adherence scale developed for the current study following the same procedure as Cordova et al. (2014).

### **Intervention Procedures**

The MC-P was conducted as a two-session assessment and feedback intervention. We refer to (Trillingsgaard et al., 2016) for details on the Danish manual. The two first authors and four private practice therapists conducted the MC-Ps. To ensure therapist competence, therapists received 1 hour of small-group Skype supervision for every four MC-Ps, throughout the intervention period.

### **Data analysis**

Analyses were performed in SPSS version 23. To evaluate treatment outcomes, we built a three-level multilevel model that nested time within individuals and individuals within couples. Preliminary analyses revealed that level-2 variance (between-partners within the couple) was minimal, which caused empirical underidentification and indicated that the variability in these data was driven by differences between couples and across time, but not differences between partners.

To resolve the empirical underidentification, we omitted level-2 random effects from subsequent models. *To examine the pattern of change over time*, we tested various functional forms of the data ([available in an online supplementary document S1](#)). We chose a model that constrained a random linear slope equal across the treatment and control groups and parameterized the treatment effect as a categorical departure from the linear slope at each time point, enabling us to estimate contrasts at assessment points where the treatment group was measured but the control group was not. The combined equation for the final model is also available ([see S2](#)). *We calculated Cohen's d ESs* by dividing the treatment effect at each time point by the pooled baseline standard deviation from the raw data. *We conducted an additional analysis of clinical significance* using the Reliable Change Index (Jacobson & Truax, 1991). We calculated changes in couple averages of the CSI and MSI between baseline and 54 weeks and categorized couples as reliably improved, deteriorated, or unchanged. Scores were calculated using couple averages and only included if both couple members reported a score. Dropouts were excluded from this analysis. *To examine whether attrition* influenced estimates of the treatment effect, we used pattern mixture models (Hedeker & Gibbons, 1997). Because pattern mixture models would be empirically underidentified using the dummy coding in our final model, we used the best fitting polynomial trajectories after validating that they produced similar estimates to the final model presented here. All couples where both members dropped out before the final time point were coded as dropouts, and dropout status was interacted with intervention arm and trajectory. A significant *Treatment X Time X Dropout* interaction would indicate that attrition biased estimates of the treatment effect. *Analyses of client attraction, evaluation and feasibility* were conducted by simple count approaches. We counted the number of couples in distress by use of the definition: at least one partner scoring < 51.5 on the CSI<sup>3</sup>.

---

<sup>3</sup> This estimate should be interpreted with caution because Danish norm data are not available for

## Results

### Intervention Effects

No significant group differences were found at baseline between the two conditions or between the two sites with regard to age, education, relationship length, country of origin, or marital status. Means and standard deviations for study variables are presented in Table 2. Results for the four outcome models are presented in Table 3 and figures 2a-2d. ESs with 95 % confidence intervals are presented in Table 4 ([Tables 2-4 about here](#)). Fit statistics are presented as online supplementary material (see S1). Baseline contrasts between treatment and control groups were nonsignificant for three of the four outcome variables, validating the random assignment, but MC-P couples scored significantly higher on the CSI at baseline ( $d = 0.28$ ) than WL couples. The analytic strategy ensured that baseline differences did not bias ES estimates. ([Figures 2a-2d about here](#))

**Relationship satisfaction.** We used two variables to measure couples' relationship satisfaction. For both variables, the control group's average trajectory was flat. The two relationship satisfaction variables produced a different pattern of treatment effects. Whereas the MSI showed small and statistically significant effects across the first year that increased to a medium effect after the second check-up, the CSI showed initially small effects that eroded through three and six months but improved again at the 1 year point, prior to the second checkup, and maintained that gain immediately after the checkup. After the second checkup, the effect on the MSI was in the medium range ( $d = 0.48$ ) and the effect on the CSI was in the small range ( $d = 0.20$ ).

**Intimacy.** The control group's trajectory was flat. The treatment effect for intimacy was nonsignificant throughout the first year of follow-up, increased at the one-year point, and crossed the threshold to statistical significance with a small effect ( $d = 0.21$ ) after the second checkup.

---

the measure.

**Responsiveness.** MC-P couples had statistically significant improvements two weeks after the MC-P. These gains dipped below statistical significance through six months, but saw a significant boost at the one-year point, prior to the second checkup, and another boost after the checkup ending with an ES in the small to medium range ( $d = 0.43$ ).

**Reliable change.** Results are presented in Table 5. The Reliable Change Index for the CSI and MSI were 5.95 and 3.50, respectively. More couples improved and fewer declined in the treatment condition for both measures, with a statistically significant difference for the MSI and a borderline significant difference for the CSI. Overall, more couples were classified as improved on the CSI than the MSI despite the ESs being larger for the MSI. This was due to the lower reliability of the MSI thus increasing the amount of change necessary to meet the criteria.(Table 5 about here.)

**Attrition Analyses.** *Treatment X Dropout X Trajectory* interactions were nonsignificant for all outcome variables, suggesting that dropout status did not bias treatment effect estimates.

### **Moderators**

We examined four moderators of relationship satisfaction (we chose, *a priori*, to use the CSI for the moderator analyses): sex, site, baseline distress on the CSI, and previous treatment experience. To control Type I error, we first entered the main effects into the model, then included *Treatment X Moderator* interactions and used a chi-square difference test to compare change in model fit. All four moderators were nonsignificant (all  $p \geq .20$ ).

### **Client Attraction, Evaluation and Feasibility**

According to the cut-off score for the CSI-16 (Funk & Rogge, 2007), 103 couples (44 % of couples had at least one partner in the distressed range) in the current study were classified as distressed at baseline. Among participants across the two checkups, we found that 88 % - 98 % rated a 3 or 4 out of 4 (*agreeing* or *completely agreeing*) on each of the statements concerning satisfaction with the MC-P. Ninety-seven percent of MC-P couples proceeded successfully through

both questionnaires and consultations of the first checkup and of 110 couples invited to the second checkup, 93 % did the same. In sum, rates of client satisfaction and study completion indicate that the intervention was relevant, recommendable and tolerable for the vast majority of couples.

Therapist adherence was consistently high (first checkup:  $M = 4.63$ , range: 4.09–5.00; second checkup:  $M = 4.63$ , range: 3.20-5.00). Interrater reliability was also good; the two coders agreed within one level of the scale in 90.9 % of their ratings. These findings indicate that it was feasible for the therapists to adhere to the MC-P manual while working in their usual setting.

### **Discussion**

This study examined the effectiveness of the MC when adapted for use in private practice settings (the MC-P). The intervention included two checkups over the course of 54 weeks.

Following the first checkup, small effects were found on three of four outcome measures. Following the second checkup, small to medium intervention effects were found on all four measures.

Results on relationship satisfaction and responsiveness in the current study compare well with previous short and longer term effects of the MC in efficacy studies (Cordova, Scott, et al., 2005; Cordova et al., 2014) also reporting small to medium effects (in the range of  $d = 0.2$ – $0.4$ ) on satisfaction, intimacy, and acceptance. This comparison should be seen in light of the transfer of the manual from the university setting to the everyday clinical setting, and the reduced time use in intervention and preparation. Intimacy levels showed a slow rate of change and somewhat smaller ESs than expected based on results from the previous MC efficacy studies. As we did not code therapist competence, we cannot determine whether the Danish therapists were slower than those trained in the original study in grasping the therapeutic technique of building intimacy bridges between the partners (i.e. eliciting self-disclosure and compassionate partner response).

Alternatively, it could be that Danish couples were more avoidant and reached out for intimacy at a slower rate.

The increases in satisfaction (CSI) and responsiveness towards bids for attention (RAS) at week 47 for the MC-P group (prior to the second checkup) was an unexpected finding. On the one hand, this is in line with the notion that regular checkups are a type of social control that promotes behavioral activation outside the direct intervention (Hawrilenko, Gray, & Cordova, 2016). Cordova (2014) illustrated this type of anticipation effect with the analogy of a dental checkup, in which the patient is encouraged to brush and floss every day, yet the most intensive flossing will occur in anticipation of and right after the checkup. On the other hand, it is a limitation of the current data that we are not able to disentangle the effect of social control or desirability (the wish to display health at the checkup) from genuine improvements, both of which may add to the finding. This effect of social control is a key out-of-session mechanism in checkup models that may have legitimately beneficial health effects, yet the current findings call for replication.

The current study relies upon a waitlist control condition and no follow up beyond one year, leaving important questions unanswered. First, receiving the MC-P was beneficial over and above receiving tickets to a movie night and filling in questionnaires, but we cannot conclude that the MC-P in particular, rather than therapeutic contact in general, drove the effect. Second, receiving the second checkup appeared to add to the effect of receiving the first in the current study, yet the cumulative effect and the potential need of booster checkups to maintain effects across several years ought to be examined through randomization. Third, we recruited from two university cities and attracted relatively well-educated couples. It will remain important to monitor the feasibility and effectiveness within future real-world contexts and populations, such as primary care, and with less educated or more disadvantaged couples.

This research was instigated by a real-world challenge of lowering barriers for Danish couples' early help-seeking. The adapted MC-P manual has the advantage of being matched to the demands of the private practitioner, and these first and preliminary results lend optimism with

regard to implementing a relationship health checkup model in this real-world setting. Future studies are needed to investigate the comparative and long-term effects of the approach.

### References

- Carl, J. (2008). Et "hvorfors" med nuance [Eng: A "Why" with nuances]. *Psykolog Nyt*, 10, p. 23.
- Center for Family Development (2016). Help of use to couples. An evaluation of the Couple Counseling Project funded by the special pool for the social area 2010-2015 (downloaded June 6, 2016, from [www.familieudvikling.dk](http://www.familieudvikling.dk))
- Cordova, J. V. (2014). *The marriage checkup practitioner's guide: Promoting lifelong relationship health*. American Psychological Association, Washington, DC. doi: /10.1037/14321-000
- Cordova, J. V., Fleming, C. J. E., Morrill, M. I., Hawrilenko, M., Sollenberger, J. W., Harp, A. G., . . . Wachs, K. (2014). The marriage checkup: A randomized controlled trial of annual relationship health checkups. *Journal of Consulting and Clinical Psychology*, 82, 592-604.  
doi:10.1037/a0037097
- Cordova, J. V., Gee, C. G., & Warren, L. Z. (2005). Emotional Skillfulness in Marriage: Intimacy as a Mediator of the Relationship Between Emotional Skillfulness and Marital Satisfaction. *Journal of Social and Clinical Psychology*, 24, 218-235. doi: 10.1521/jscp.24.2.218.62270
- Cordova, J. V., Scott, R. L., Dorian, M., Mirgain, S., Yaeger, D., & Groot, A. (2005). The marriage checkup: An indicated preventive intervention for treatment-avoidant couples at risk for marital deterioration. *Behavior Therapy*, 36, 301-309. doi: 10.1016/S0005-7894(05)80112-1
- Danish Statistics (2015). Skilsmissetavlen (downloaded June 6<sup>th</sup> 2015 from [statistikbanken.dk/sk15](http://statistikbanken.dk/sk15)).
- Doss, B. D., Atkins, D. C., & Christensen, A. (2003). Who's dragging their feet? husbands and wives seeking marital therapy. *Journal of Marital and Family Therapy*, 29, 165-177. doi: 10.1111/j.1752-0606.2003.tb01198.x
- Funk, J.L., & Rogge, R.D. (2007). Testing the ruler with Item Response Theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, 21, 572 - 583.
- Hawrilenko, M., Eubanks Fleming, C. J., Goldstein, A. S., & Cordova, J. V. (2015). Motivating action and maintaining change: The time-varying role of homework following a brief couples' intervention. *Journal of Marital and Family Therapy*. doi: 10.1111/jmft.12142

- Hawrilenko, M., Gray, T. D., & Cordova, J. V. (2016). The heart of change: Acceptance and intimacy mediate treatment response in a brief couple's intervention. *Journal of Family Psychology*, Vol 30(1), Feb 2016, 93-103. doi:10.1037/fam0000160
- Hedeker, D., & Gibbons, R. D. (1997). Application of random-effects pattern-mixture models for missing data in longitudinal studies. *Psychological Methods*, 2, 64-78. doi:10.1037/1082-989X.2.1.64
- Jacobson, N.S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology*, 49, 12-19. Doi: 10.1037/0022-006X.59.1.12
- Stanley, S. M., Blumberg, S. L., & Markman, H. J. (1999). Helping couples fight for their marriages: The PREP approach. *Preventive approaches in couples therapy*. (pp. 279-303) Brunner/Mazel, Philadelphia, PA.
- Trillingsgaard, T., Due, M. S., Fentz, H., & Steenberger, S. (2016). *Par-tjek Manualen*. Center for Familieudvikling.
- Trillingsgaard, T. & Fentz, H. N. (2015). Responsiveness and Attention Scale. Unpublished manuscript.
- Whisman, M. A., Snyder, D. K., & Beach, S. R. H. (2009). Screening for marital and relationship discord. *Journal of Family Psychology*, 23, 247-254. doi: 10.1037/a0014476

*Table 1. Characteristics of the sample*

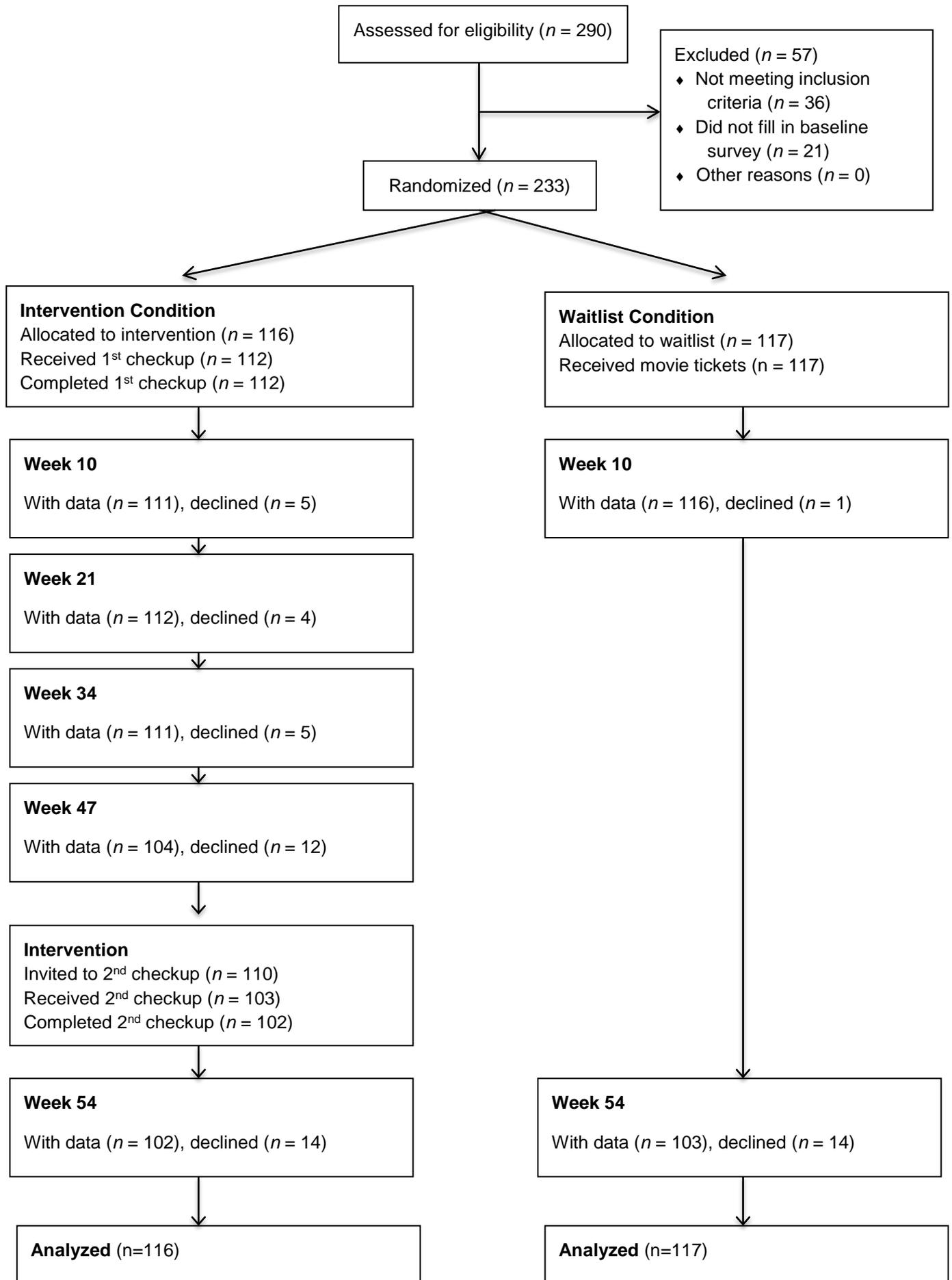
---

Age	
Women	37.4 (6.4)
Men	39.1 (6.5)
Education, bachelor degree or above	
Women (%)	88
Men (%)	84
Married (%)	80.3
Length of relationship	12.1 (5.7)
Dual employment (%)	71.7
Parents of	
Biological children (%)	100
Children, previous marriage (%)	13.3
Born in Denmark (%)	95.5
Study site	
Copenhagen (n)	112
Aarhus (n)	121

---

*Note.* SDs are in parentheses.

Figure 1. Consort Diagram



RUNNING HEAD: EFFECTIVENESS OF THE MARRIAGE CHECKUP FOR PRIVATE PRACTICE

Table 2. Descriptive statistics for outcome variables

	Baseline	Week 10	Week 21	Week 34	Week 47	Week 54
Marital Satisfaction Inventory -B						
Treatment	5.36 (2.22)	6.00 (2.40)	5.92 (2.58)	6.00 (2.50)	6.24 (2.23)	6.67 (2.38)
Control	5.04 (2.31)	5.27 (2.53)	---	---	---	5.40 (2.53)
Couples Satisfaction Index						
Treatment	58.11 (13.31)	59.83 (13.46)	56.98 (15.47)	57.39 (15.39)	60.98 (12.40)	61.56 (13.48)
Control	54.46 (15.59)	53.84 (15.62)	---	---	---	55.50 (16.38)
Responsiveness and Attention Scale						
Treatment	78.14 (13.73)	80.03 (13.00)	79.44 (14.40)	79.58 (15.52)	83.08 (13.68)	84.74 (13.84)
Control	77.29 (14.53)	76.39 (14.68)	---	---	---	77.21 (15.68)
Intimate Safety Questionnaire						
Treatment	3.17 (0.41)	3.18 (0.42)	3.14 (0.50)	3.16 (0.51)	3.24 (0.42)	3.27 (0.45)
Control	3.11 (0.50)	3.10 (0.53)	---	---	---	3.12 (0.52)
N						
Treatment	232	223	218	218	207	197
Control	234	228	---	---	---	203

Note. SDs are in parentheses.

Table 3. Multilevel estimates of treatment effects

Variable	Estimate	SE	p
<i>Marital Satisfaction Inventory-Brief</i>			
Intercept	5.11	0.19	< .001
Weeks	0.00	0.00	.426
Tx	0.25	0.28	.363
Tx --> 10 weeks	0.62	0.14	< .001
Tx --> 21 weeks	0.52	0.16	.001
Tx --> 34 weeks	0.58	0.18	.001
Tx --> 47 weeks	0.70	0.21	.001
Tx --> 54 weeks	1.09	0.23	< .001
<i>Couples Satisfaction Index-16</i>			
Intercept	54.09	1.20	< .001
Weeks	0.00	0.02	.869
Tx	4.02	1.73	.021
Tx --> 10 weeks	1.83	0.81	.024
Tx --> 21 weeks	-0.89	0.88	.314
Tx --> 34 weeks	-0.56	1.01	.581
Tx --> 47 weeks	2.35	1.18	.047
Tx --> 54 weeks	2.89	1.28	.025
<i>Responsiveness and Attention Scale</i>			
Intercept	76.83	1.09	< .001
Weeks	-0.01	0.02	.757
Tx	1.32	1.60	.412
Tx --> 10 weeks	1.98	0.96	.039
Tx --> 21 weeks	1.54	1.02	.130
Tx --> 34 weeks	1.52	1.12	.173
Tx --> 47 weeks	4.65	1.26	< .001
Tx --> 54 weeks	6.07	1.35	< .001
<i>Intimate Safety Questionnaire</i>			
Intercept	3.10	0.04	< .001
Weeks	0.00	0.00	.612
Tx	0.07	0.05	.182
Tx --> 10 weeks	0.02	0.03	.630
Tx --> 21 weeks	-0.02	0.03	.589
Tx --> 34 weeks	0.00	0.04	.917
Tx --> 47 weeks	0.06	0.04	.147
Tx --> 54 weeks	0.10	0.04	.027

Note. Tx = treatment.

RUNNING HEAD: EFFECTIVENESS OF THE MARRIAGE CHECKUP FOR PRIVATE PRACTICE

Table 4. Effect sizes and 95% confidence intervals for study variables

	10 weeks	21 weeks	34 weeks	47 weeks	54 weeks
Marital Satisfaction Inventory-Brief	0.27 [0.15, 0.40]	0.23 [0.10, 0.37]	0.26 [0.10, 0.41]	0.31 [0.13, 0.49]	0.48 [0.29, 0.60]
Couples Satisfaction Inventory-16	0.13 [0.02, 0.23]	-0.06 [-0.18, 0.06]	-0.04 [-0.17, 0.10]	0.16 [0.00, 0.32]	0.20 [0.02, 0.37]
Responsiveness and Attention Scale	0.14 [0.01, 0.27]	0.11 [-0.03, 0.25]	0.11 [-0.05, 0.26]	0.33 [0.15, 0.50]	0.43 [0.24, 0.62]
Intimate Safety Questionnaire	0.03 [-0.10, 0.17]	-0.04 [-0.18, 0.10]	0.01 [-0.15, 0.16]	0.13 [-0.05, 0.31]	0.21 [0.02, 0.40]

RUNNING HEAD: EFFECTIVENESS OF THE MARRIAGE CHECKUP FOR PRIVATE PRACTICE

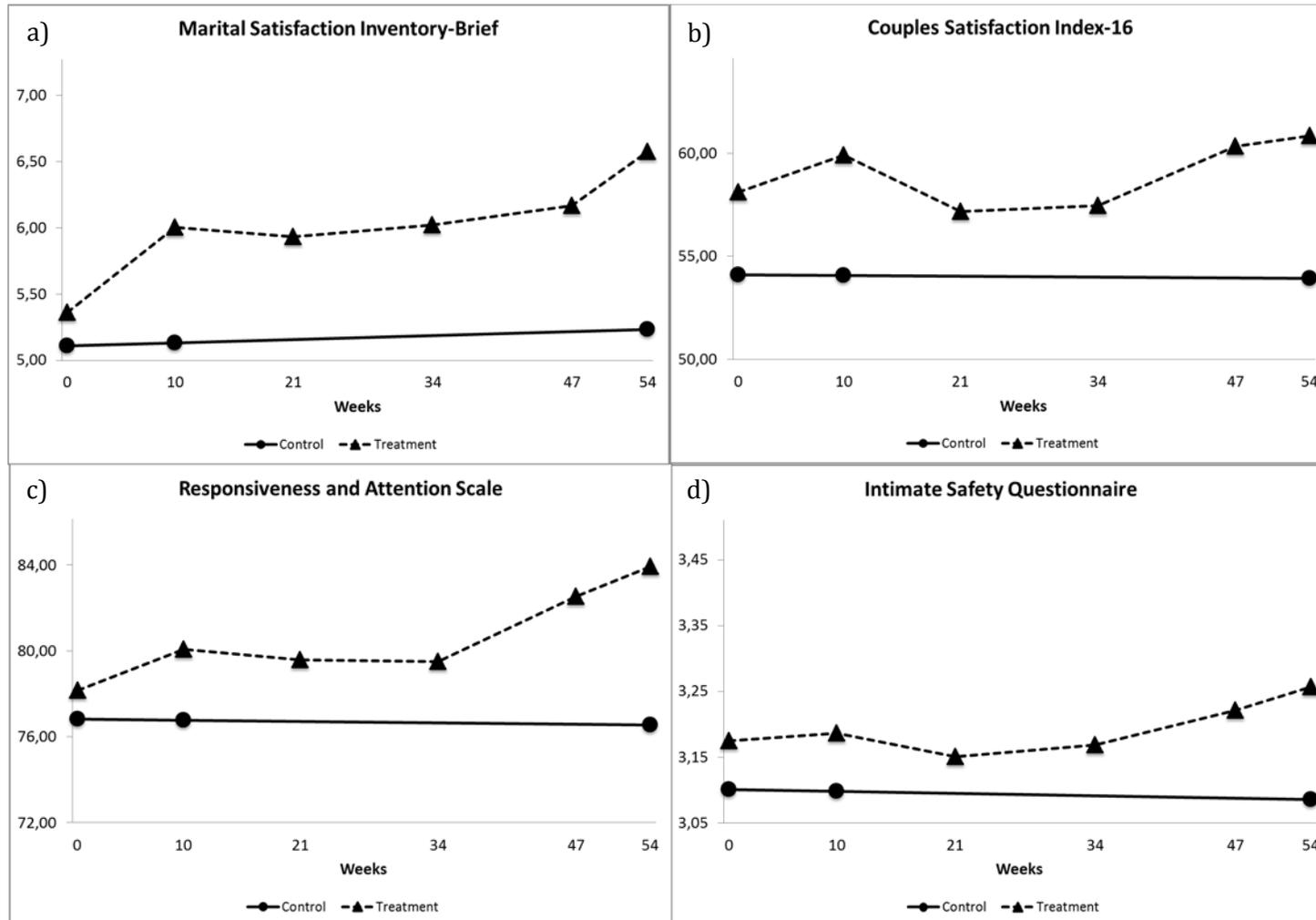
Table 5. Number (%) of Couples Classified as Improved, Unchanged, or Deteriorated at 54 Weeks

Scale	<u>Intervention</u>			<u>Control</u>			$\chi^2 (1)$	<i>p</i>
	Deteriorated	Unchanged	Improved	Deteriorated	Unchanged	Improved		
CSI	12 (11.8)	56 (54.9)	34 (33.3)	21 (20.4)	60 (58.3)	22 (21.4)	3.70	.054
MSI-B	0 (0.0)	80 (79.2)	21 (20.8)	3 (2.9)	96 (94.1)	3 (2.9)	15.51	< .001

*Note.* CSI = Couples Satisfaction Index. MSI-B = Marital Satisfaction Inventory - Brief. Chi-square tests compare the number of improved versus deteriorated/unchanged couples between intervention arms. The N for the MSI-B is lower by one couple in both groups because at the final time point, each group had one couple excluded for the MSI because it was completed by only one member of the couple.

RUNNING HEAD: EFFECTIVENESS OF THE MARRIAGE CHECKUP FOR PRIVATE PRACTICE

Figures 2a-2d. Trajectories for outcome variables over 1-year 2-weeks of follow-up



Note. Each of the y-axes are sized to 1 standard deviation. The x-axes are scaled with real amount of time from baseline.

