



Effects of relationship education on maintenance of couple relationship satisfaction [☆]



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HIGHLIGHTS

- ▶ Education enhances the relationships of couples with low satisfaction.
- ▶ Education helps some high risk couples maintain relationship satisfaction.
- ▶ The mediators of education effects are likely moderated by couple risk profiles.
- ▶ A stepped model of varying intensity education is recommended.

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ABSTRACT

Couple relationship education (RE) is the provision of structured education intended to promote healthy couple relationships, and prevent future relationship distress. There is a well-replicated finding that 9–20 hours of curriculum-based RE produces short-term improvements in couple communication and relationship satisfaction, but that established finding does not test whether RE helps couples maintain high relationship satisfaction. The current paper summarizes 17 published studies evaluating RE that have follow up assessments of at least 1 year, of which 14 studies found RE helped maintenance of relationship satisfaction. Couples with elevations of modifiable risk factors benefit substantially from RE, while benefits for couples with low risk have not yet been reliably demonstrated. Couples with elevations on risk factors not readily modified by current forms of RE are likely to show little or no benefit. Future research needs to clarify the mediators of RE effects, and how those mediators are moderated by couple risk profiles.

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Contents

1. Introduction	513
2. Nature of relationship education and implications for evaluation of effects	513
3. Approaches to relationship education	513
4. Established short term effects of relationship education	513
5. Challenges in assessing effects on relationship satisfaction maintenance	514
6. Studies evaluating maintenance of relationship satisfaction	517
6.1. Description of studies	517
6.2. Effects on maintenance of relationship satisfaction	517
7. Moderators of relationship education effects	519
8. Mediators of relationship education effects	520
9. Moderated mediation of relationship education effects	521

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10. Implications for practice of relationship education	521
11. Conclusions and recommendations	523
References	523

1. Introduction

Couple Relationship Education (RE) seeks to enrich couples' relationships and help couples to sustain healthy, mutually satisfying and stable relationships. Evidence-based RE draws upon the substantial research on what influences couple relationship satisfaction and stability, and uses an approach to RE that has been evaluated in well-designed research trials (Halford, Markman, & Stanley, 2008). Evidence-based RE usually is brief, typically consisting of 12 to 18 hours curriculum that introduces key relationship knowledge (e.g., the importance of commitment, developing shared and realistic relationship expectations) and skills (e.g., couple communication, problem-solving, coping). The current article critically evaluates the evidence on the efficacy of RE in achieving its stated objective of helping couples maintain a mutually satisfying relationship.

2. Nature of relationship education and implications for evaluation of effects

RE usually works with couples who are currently satisfied in their relationship, and are committed to that relationship. Here RE builds upon the high level of positive emotion typical of currently satisfied couples, and has a strong emphasis on building the positive foundations for a great life together. RE is somewhat distinct from couple therapy, which is usually addressed to couples who are distressed in their relationship. Couple therapy often has to manage the high levels of negative effect in the relationship, and address the ambivalence many distressed couples feel about whether they wish the relationship to continue (Halford & Snyder, 2012). Evidence based couple therapy is often extensive in duration, with evidence-based approaches often involving 20 or more sessions of therapy (Halford & Snyder, 2012).

RE attracts couples who vary widely in the extent to which they are at risk for future relationship problems. We say more on the nature of these risk factors later in the current article. Applying Mazrek and Haggerty's (1994) classification of prevention programs, RE can be universal by being offered to all couples without regard to the risk factors those couples bring to RE. RE also can be selective by being offered to couples at high risk of future relationship problems. Finally, RE can be indicated by being offered to couples showing early signs of relationship problems, most notably those who show low although not necessarily clinically distressed, levels of relationship satisfaction.

Although RE is conceptually distinct from couple therapy, there is a substantial proportion of couples presenting for CRE who have at least mild relationship distress (De Maria, 2005). For these distressed couples RE might have similar benefits as for couple therapy in producing an increase in relationship satisfaction immediately after RE. However, universal and selective offerings of RE typically attract a majority of couples who are currently highly satisfied, and there might be little immediate scope for increases in satisfaction. In universal and selective offerings of RE the potential benefit of RE are in helping couples to sustain such high satisfaction. We return to these distinctions when evaluating the research on RE outcome.

3. Approaches to relationship education

Curriculum-based RE has a focus on active training of key relationship skills, although curriculum-based approaches usually also

include significant emphasis on building awareness and cognitive change (Halford et al., 2008). There are three curriculum-based RE programs that have been evaluated in two or more randomized controlled trials that included follow-up of more than 12 months: the *Prevention and Relationship Enhancement Program*, which sometimes has been referred to as the *Prevention and Relationship Education Program* (PREP; Markman, Stanley, & Blumberg, 2010), *Couple Commitment And Relationship Enhancement* (Couple CARE; Halford et al., 2006), and *Couples Coping Enhancement Training* (CCET; Bodenmann & Shantinath, 2004). These programs have a number of content areas in common. For example, skills training in positive communication, and conflict management are included in PREP, Couple CARE, and CCET. There also are significant variations in content across time within programs and between programs. For example, in PREP there are multiple foci of intervention. In the earliest version of PREP the most time was devoted to prevention of destructive conflict, as that was argued to be central to the prevention of relationship problems, but more recent versions have increased the emphasis on shared positive activities, building commitment and other positive aspects of the relationship (Markman et al., 2010). Individual and conjoint coping with daily hassles as well as life stress is a major component of CCET that receives little attention in most other programs, although Couple CARE does include some content on this topic. In Couple CARE the development of each partners' capacity to identify and implement self-change to enhance the relationship (relationship self-regulation) is a core focus that was not in the other programs, although recent versions of PREP include some focus on this.

Another variation in RE programs is in the mode of delivery. Most RE programs are delivered in face-to-face sessions with an educator, often in small groups of couples (Halford, 2011). However, PREP, Couple CARE and CCET each have been offered in flexible delivery mode as well (e.g., Bodenmann, Hilpert, Nussbeck, & Bradbury, 2012; Braithwaite & Fincham, 2009; Halford, Wilson, et al., 2010). Flexible delivery refers to the use of self-directed learning materials (e.g. online resources, DVD) where couples can complete the program in their own time, and without attending face-to-face sessions.

A major strength of the evidence-based approaches to RE is that training is focused on potentially modifiable variables that predict relationship outcomes. In particular, teaching couple communication is a key focus of all curriculum-based RE. Observed effective communication is reliably correlated with relationship satisfaction (Woodin, 2011), and predicts the trajectory of couple relationship satisfaction (e.g., Hanzel & Segrin, 2009; McNulty & Russell, 2010). Similarly, couples' dyadic coping (Bodenmann, Meuwly, & Kayser, 2011), and couple relationship self-regulation (Halford, Lizzio, Wilson, & Occhipinti, 2007) each predict couple relationship satisfaction, which are the focus of the CCET and Couple CARE programs, respectively.

4. Established short term effects of relationship education

There are well replicated short-term benefits of RE, particularly if the programs are of sufficient duration. A meta-analysis of 117 studies of curriculum based RE reported medium effect size improvements in couple communication, $d = .44$, and small increases in relationship satisfaction, $d = .36$, immediately after RE (Hawkins, Blanchard, Baldwin, & Fawcett, 2008). Programs with moderate dosage (9–20 hours) had substantially larger effect sizes than low dose programs (1–8 hours). In all these studies RE was offered universally, and the moderate overall effect sizes likely reflect a ceiling effect in

universal RE, with couples who are initially high in satisfaction and positive communication having limited room for further improvement. Consistent with this interpretation, an early meta-analysis of RE reported that the lower couple's relationship satisfaction before RE (reflecting indicated prevention), the greater the increase in relationship satisfaction immediately after RE (Giblin, Sprenkle, & Sheehan, 1985). Hawkins et al. (2008) failed to replicate this association between lower mean satisfaction before RE and the effect size of gains in satisfaction, but they noted that the sample of studies they reviewed had predominantly high mean levels of pre-RE satisfaction, with limited variability in means across studies.

As noted earlier, the crucial issue in research on the efficacy of RE is its long-term effects in helping couples sustain healthy, mutually satisfying relationships. Unfortunately most published studies have follow-ups of 6 months or less, and in the Hawkins et al. (2008) meta-analysis they could only assess effects for between 3 and 6 months after RE. At 3 to 6 months after RE there were medium effect size gains in couple communication, $d = .45$, and relationship satisfaction, $d = .31$, which are very similar to the effect sizes immediate after RE, suggesting the benefits of RE are maintained for at least some months. However, this research really seems to be showing that there was a modest gain in satisfaction for mildly distressed couples that was sustained for 6 months. Whether there are long-term effects on maintenance of high relationship satisfaction over several years could not be determined from the meta-analysis. A number of papers with long-term follow ups have been published since the Hawkins et al. (2008) meta-analysis, and the current paper reviews these findings.

An important caveat on even the consistently positive findings for the short-term effects of RE noted by Hawkins et al. (2008), was that the majority of studies had been conducted with Caucasian, well educated couples. There was limited evidence on the generalizability of findings to minority, and less educated couples. The lack of evidence of the effects of RE for non-Caucasian and socially disadvantaged couples was also raised in a more recent review of the RE field (e.g., Johnson, 2012). However, there is growing number of recent studies that do assess RE with socially disadvantaged and culturally diverse couples. Two key aims of the current review are to evaluate recent evidence on the long-term effects of RE on maintenance of relationship satisfaction, and the generalizability of RE effects across diverse couples.

5. Challenges in assessing effects on relationship satisfaction maintenance

To demonstrate an impact of RE on maintenance of couple relationship satisfaction, studies need extended follow-up assessment because the erosion of average relationship satisfaction in initially satisfied couples tends to be gradual. To illustrate, in a longitudinal study of newlywed couples, Halford et al. (2007) reported mean declines in newlywed couple relationship satisfaction over the first four years of marriage of .4 SD for men and .5 SD for women on the widely used Dyadic Adjustment Scale of relationship satisfaction. If RE prevented half of any decline in satisfaction, then after 4 years this would show up as a small effect in comparison to the Halford et

al. (2007) sample. Any shorter follow-up than three or four years, and the effects of RE would be so small that they would only be detectable with a sample of thousands of couples. Thus, studies need to have extended follow-ups of years, and sufficient sample sizes to have adequate power to detect effects of RE. Studies with such extended follow up are challenging to conduct. It can be difficult to get the long-term funding needed to support extended follow-up assessments. Couples in control conditions with limited contact or input from the research (e.g., placebo-control condition couples or wait list control couples) can drop out.

Detecting any effects of RE on separation is even harder than detecting effects on relationship satisfaction and skills improvements. About 3 to 4% of couples separate each year across the first 10 years of marriage (Glenn, 1998). If RE prevented half of the separations that otherwise would have happened, (which would be a major achievement), then after four years there would be about 12 to 16% of separated couples in a control condition and 6 to 8% in the RE condition. This is an effect detectable only with hundreds of couples in each condition (Cohen, 1992), and only a very few recent studies have had those numbers.

One way to enhance the power of studies to detect effects of RE is to focus on couples at high risk for deteriorating relationship satisfaction (selective or indicated prevention, rather than universal). Media outreach for participation in RE tends to recruit couples with more relationship distress, and with other characteristics that place them at higher risk for relationship problems than more representative samples of couples (Rogge et al., 2006). For example, Halford, Sanders, and Behrens (2001) included statements in media outreach that family-of-origin parental divorce or violence put couples at risk for future relationship problems, and found that strategy yielded high proportions of couples presenting for RE with those risk factors. Halford et al. (2001) demonstrated a large effect size of $d = 1.0$ for RE over four years in the high-risk couples, with the high-risk control samples showing a decline of .9 SD on relationship satisfaction over the four years compared with a slight (non-significant) increase for the couples who received RE. In contrast, the low-risk control sample in the Halford et al. (2001) study showed no significant decline in relationship satisfaction over the four years, making demonstrating any prevention effect with low-risk couples impossible.

Another strategy to enhance detection of the effects of RE is to focus on couples experiencing times of hardship, characterized by an accumulation of everyday hassles or by major life stresses, both of which are well established to predict deteriorating relationship satisfaction (e.g., Bodenmann, Ledermann, & Bradbury, 2007; Karney & Bradbury, 2005; Ledermann, Bodenmann, Rudaz, & Bradbury, 2010; Randall & Bodenmann, 2009). Stress increases the likelihood of negative dyadic interactions and withdrawal (Repetti, 1989; Schulz, Cowan, Pape-Cowan, & Brennan, 2004). For example, there are rapid declines in relationship satisfaction often associated with the transition to parenthood (Mitnick, Heyman, & Slep, 2009). RE for expectant parents is both appropriate and likely to detect any positive effects of RE in maintaining couple relationship satisfaction.

Table 1 summarizes how the offering of RE is predicted to influence couple relationships in terms of the immediate effects on risk factors and relationship satisfaction, and the long term maintenance

Table 1
Association of type of relationship education offering with risk factors and predicted effects on couple relationship.

Form of education	Risk profile of couples	Relationship satisfaction before RE	Life stress	Immediate effects of RE on relationship	Long term effects of RE on relationship
Universal	Mix of high and low risk	Mixed, with majority highly satisfied	Mixed, with majority mild stress	Reduction in risk factors in some couples; small to nil effect on satisfaction	Small improvements in maintenance of high satisfaction
Selective	High risk only	Mixed, with majority highly satisfied	Can select for high stress	Reduction in risk factors for all couples; small to nil effect on satisfaction	Large improvements in maintenance of high satisfaction
Indicated	High risk only	At least mild relationship distress	Likely to have high stress	Reduction in risk factors for all couples; moderate to large effect on satisfaction	Large improvements in maintenance of high satisfaction

Table 2
Summary of controlled trials promoting relationship satisfaction with 12-month or more follow-up.

Author	Participants	Intervention	Measures	Key findings
<i>Early stage relationships</i>				
Halford et al. (2001)	83 engaged couples stratified into high- and low-risk based on parental divorce or violence.	Self-PREP, a 6-session group program compared to an awareness control condition.	Self-report of relationship satisfaction, observed couple communication.	High-risk couples showed sustained gains in communication to 1-year follow-up, low-risk couples showed no sustained effect of Self-PREP on communication. High-risk couples receiving Self-PREP showed higher satisfaction at 4-year follow-up than high-risk control couples. Low-risk couples did not benefit from Self-PREP.
Halford, Wilson, et al. (2010)	60 newlywed couples	RELATE assessment plus feedback versus RELATE assessment plus feedback followed by Couple CARE.	Self-report of satisfaction at pre- and post-intervention and 12-month follow-up, observed couple communication at pre- and post-intervention.	RELATE + Couple CARE couples improved in couple communication more than couples who undertook RELATE alone after CRE, and also better sustained high relationship satisfaction to 12-month follow-up.
Laurenceau, Stanley, Olmos-Gallo, Baucom, and Markman (2004)	217 couples planning to marry	PREP delivered by either religious organizations (RO-PREP), or by Denver University staff (U-PREP) versus naturally occurring education in the religious organizations (NO).	Observed couple communication, self-reported relationship satisfaction, at pre- and post-intervention and 1-year follow-up.	RO-PREP produced an increase in positive communication, and both RO-PREP and U-PREP produced decreases in negative communication relative to NO. No effects of PREP on relationship satisfaction at post-assessment or 12-month follow-up.
<i>Established relationships</i>				
Allen, Stanley, Rhoades, Markman, and Loew (2011), Allen, Rhoades, Stanley, Loew, and Markman (2012), Stanley, Allen, Markman, Rhoades, and Prentice (2010).	662 married Army couples, married for a mean of 7.2 years	An adaptation of PREP called PREP for strong bonds, compared to assessment only control.	Self-reported Communication, marital satisfaction, and rates of separation at post-intervention and 12 month follow-up.	No overall effects on relationship satisfaction, but PREP couples show lower rates of separation at follow-up, and couples with a history of infidelity showed increased relationship satisfaction relative to control.
Beach et al. (2011)	393 African American married couples	Culturally Sensitive PREP (CS-PREP); CS-PREP plus Prayer (PSP); Control (information only)	Self-reported communication, marital satisfaction, and positive marital intentions at pre, post, 6- and 12-month follow-up.	For husbands both active interventions, but for wives only the PSP, produced a large effect size improvement in marital adjustment pre to 12 month follow-up. For wives the CS-PREP produced a small effect size improvement in marital adjustment to 12 month follow.
Bodenmann, Cina, Ledermann & Sanders (2008)	n = 150 couples with young children	Triple P, CCET or wait list control	Relationship satisfaction, parenting, child behavior problems	CCET & Triple P both better parenting and couples outcomes than control; Triple P more effect on child behavior than CCET, CCET more effect on couple relationship satisfaction than Triple P.
Braukhaus, Hahlweg, Kroeger, Groth, and Fehm-Wolfsdorf (2003)	62 couples seeking couple enrichment.	EPL (German PREP) delivered as a weekend workshop versus EPL plus two booster sessions.	Relationship satisfaction and observed couple communication assessed at pre- and post-assessment, and at 4- and 12-month follow-ups.	Both conditions resulted in enhanced couple communication and relationship satisfaction, with the booster session enhancing long-term outcomes.
Hsueh et al. (2012) Strengthening Health Marriages (SHM)	n = 6298 couples, 80% married, of those married mean 6.2 years.	Intervention condition received one of three CRE programs delivered at 8 different US sites, supplemented with other family support services. intervention compared with no intervention control at same sites	Relationship satisfaction, self-reported relationship functioning, observed communication. NB assessments only made at post-intervention	Overall small effect size increases in relationship satisfaction, several aspects of self-reported relationship functioning, observed communication, no effect on relationship stability. > 50% of couples report marriage "in trouble".

(continued on next page)

Table 2 (continued)

Author	Participants	Intervention	Measures	Key findings
Kaiser, Hahlweg, Fehm-Wolfsdorf, and Groth (1998)	67 couples together at least 3 years ($M = 11$ years), seeking relationship enrichment.	EPL (German PREP) delivered as 2 day workshop, compared with a wait list control.	Self-reported relationship satisfaction and problems, and observed couple communication.	EPL produced significant improvements in couple communication and relationship satisfaction at 1-year follow-up.
Ledermann, Bodenmann, and Cina (2007)	$n = 100$ couples with children	18 hours of CCET, compared with no intervention control	Self report relationship satisfaction couple communication dyadic coping	CCET produced moderate to large effect size increase in relationship satisfaction, effects attenuated somewhat by 12 months.
van Widenfelt, Hosman, Schaap, and van der Staak (1996)	67 couples with history of parental divorce	Dutch PREP plus family-of-origin session.	Self-report of problem intensity, problem solving efficacy, and relationship satisfaction at pre- and post-intervention and at 2-year follow-up.	All couples deteriorated over time on all measures, no evidence of effect of PREP.
<i>Transition to parenthood</i>				
Cowan and Cowan (1992); Schulz, Cowan, and Cowan (2006)	72 couples expecting their first child, 24 couples not expecting a child	24 weekly group sessions focused on parental relationship, parenting expectations; no treatment control; only post-assessment control; 24 couples not expecting children as comparison group.	Relationship satisfaction, couple separations up to 5 years after intervention	Program enhanced maintenance of relationship satisfaction relative to no treatment control; childless comparison couples experienced less decline in relationship satisfaction than the control couples who became parents.
Cowan, Cowan, Pruett, Pruett, and Wong (2009)	289 couples expecting their first child, or who had a young child; predominantly low income couples of Mexican or European ancestry.	16 weekly 2 hour group session focused on parenting, couple communication, individual stress management, and social support, with a focus on promoting father's involvement with parenting; compared with a fathers only group covering similar content; or a single information session (control).	Relationship satisfaction, father involvement with parenting, couple conflict about parenting 18 months after RE.	Both the couple and father only condition showed higher relationship satisfaction than the control, with the couple condition producing stronger effects than the father only condition.
Halford, Petch, and Creedy (2010)	71 couples expecting their first child	Couple CARE for Parents (CCP), a 6-unit program running from 2 months before birth to 6 months after; control was standard antenatal and postnatal care.	Self reports of relationship satisfaction, observed communication, and parenting satisfaction and competence before the program and 12 months after the child's birth.	CCP significantly enhanced couple communication and prevented the deterioration in relationship satisfaction observed in control condition women.
Petch et al. (2012)	250 couples, expecting their first child, 125 assigned to each of two conditions.	6 session couple program on communication, realistic expectations, parenting and stress management. Control was care as usual support program for the women alone.	Multi-factorial index of risk, couple communication, relationship satisfaction, and parenting	Couples receiving the couple program showed more positive communication and higher sustained relationship satisfaction than control couples, but the effect on satisfaction was only evident for high risk couples.
Shapiro and Gottman (2005)	38 couples expecting their first child	Couples randomly assigned to a couple focused workshop plus 5 home visits or a wait list control. The intervention consisted of information and skill training on couple communication, positive interaction and infant care.	Self-reported marital satisfaction, self-reported depression in the woman, and observed couple communication assessed before birth, 3 months after birth and 12 months after birth.	Relationship satisfaction declined and depression increased in the control group, satisfaction was sustained and depression declined in the intervention group. Couple negative communication (hostility) increased in the control condition and declined in the intervention condition. NB: Means and standard deviations not presented, effect sizes are unclear.
Wood, McConnell, Moore, Clarkwest, and Hsueh (2010). Building Strong families (BSF)	6212 low-income, unmarried couples expecting or recently had a child	Couples randomly assigned to 20-42 h of Building Strong Families (BSF) CRE across 9US locations.	Relationship satisfaction and separations after CRE and at 15 month follow-up.	At 15 month follow-up no overall significant intervention effects. African-American intervention couples reported higher relationship quality than control in 6 locations. Intervention couples in Oklahoma reported increased relationship duration, happiness, support, fidelity and conflict management.

PREP = Prevention and Relationship Enhancement Program ; CCET = Couple Coping Enhancement Training.

of relationship satisfaction. Based on the logic developed above, we predict that only couples who show moderate or lower relationship satisfaction before RE will show immediate increases in relationship satisfaction after RE, while couples with high satisfaction before RE will show minimal or no increase in satisfaction immediately after RE. Turning to the effects on maintenance of relationship satisfaction, we predict that couples who are at high risk for future relationship problems, or who are highly stressed, will show the largest long-term effects on relationship satisfaction from RE. There might be some benefits from RE for low risk couples, but they would likely be of smaller magnitude, and therefore harder to detect, than effects for high risk couples. It is important to note there might be a disjunction between immediate and later effects of RE on satisfaction. Halford et al. (2001) and Petch, Halford, Creedy, and Gamble (2012) both found high-risk couples had high satisfaction before RE, showed little or no immediate gain in satisfaction after RE, but across a period of years RE enhanced maintenance of high satisfaction relative to a control condition.

6. Studies evaluating maintenance of relationship satisfaction

6.1. Description of studies

We conducted a literature search of the psychINFO data base seeking randomized controlled trials of RE that included follow up assessment of at least 12 months, and which evaluated the effects on relationship satisfaction and/or stability. We searched using the terms “marriage education”, “relationship education”, “marriage enrichment”, “couple enrichment”, “couple education”, and “couple relationship education”. We examined the reference lists and citations of all identified papers to locate additional studies. Table 2 summarizes 17 published randomized, controlled trials of RE for couples, which had follow-up assessment of effects at least one year (and ranged up to 5 years) after RE, that assessed the effect of RE on couple relationship satisfaction, and were published up to the end of June 2012. In addition to the studies in Table 2 there are some published quasi-experimental studies evaluating CRE with follow-up of more than 1 and up to 10 years (e.g., Bodenmann, Pihet, Cina, Widmer, & Shantinath, 2006; Hahlweg, Markman, Thurmaier, Engl, & Eckert, 1998; Markman, Renick, Floyd, Stanley, & Clements, 1993). However, couple self-selection into RE confounds clear interpretation of those studies, and so we focus just on randomized controlled trials with follow-up. There were two studies identified that evaluated a RE program in a randomized controlled trial with 12 months or longer follow-up, but that did not report relationship satisfaction or stability at follow-up. Schaer, Bodenmann, and Klink (2008) found RE reduced work stress and burnout, and Bradley and Gottman (2012) found RE reduced low severity interpartner violence. However, as neither paper reported on RE effects on couple relationship satisfaction or stability we have not included those studies in the Table.

Most (12/17) identified studies had just a one year follow-up, and five had follow ups of 2 or more years. Three of the 17 trials have been with early stage committed relationships. Fourteen trials were with couples in longer established relationships ($M=8-11$ years), 9 of those 14 trials being evaluations of general relationship enrichment. Fifteen of the 17 trials could be characterized as selective prevention trials of RE, in that couples were at elevated risk of future relationship problems, either on the basis of stressful events occurring in their lives or characteristics of the couples themselves. As noted previously, the transition to parenthood is associated with notable decline in relationship satisfaction for many couples, and 5 of the 17 studies were with expectant parents, and one study was with low income couples either expecting a child or who already had a young child (Cowan et al., 2009). The mean initial relationship satisfaction of couples in three relationship enrichment studies was not distressed, but was notably lower than population averages (Braukhaus et al., 2003; Hsueh

et al., 2012; Kaiser et al., 1998). Somewhat low initial satisfaction predicts deteriorating satisfaction across time (Lavner, Bradbury, & Karney, 2012), suggesting these were couples at elevated risk for developing relationship distress. Two studies had couples with histories of parental divorce or where violence was over-represented in the participant couples, relative to the population (Halford, Wilson, et al., 2010; Halford et al., 2001), and one study focused only on such couples (van Widenfelt et al., 1996). One study worked exclusively with African American couples (Beach et al., 2011); and the multi-site Building Strong Families (BSF) and the Supporting Healthy Marriage (SHM) projects each evaluated several different RE programs at multiple sites working with low income couples (Hsueh et al., 2012; Wood et al., 2010). African-American and low income couples are at elevated risk of relationship problems relative to the United States population of all married couples (Markman & Rhoades, 2012). One study was with military couples (Allen et al., 2011), and the risk status of military couples is not entirely clear. On the one hand, military couples face some unusual challenges that can undermine relationship satisfaction, such as combat deployment of one spouse, and frequent separations (Snyder & Monson, 2012). On the other hand, military couples have good health care, a reliable income, and strong levels of employer support that might enhance relationship satisfaction and stability (Snyder & Monson, 2012). Only the Laurenceau et al. (2004) study was a truly universal prevention trial with couples planning to marry. In fact, as Laurenceau et al. studied couples marrying in churches, and religiosity is known to predict lower risk for future relationship problems, this study might best be conceptualized as a trial with low-risk couples.

Of the 17 RE trials the majority of studies were evaluating one of three programs: PREP ($n=6$ studies), Couple CARE ($n=4$ studies), or CCET ($n=2$ studies) including variants of these programs such as EPL (the German version of PREP), or Couple CARE for Parents. The remaining four studies evaluated a variety of different programs, none of which have replicated evaluations with follow-up. In most studies RE was delivered in face-to-face group sessions ($n=14$). One study used flexible delivery consisting of self-directed learning with DVDs and exercises completed by couples at home, supplemented by telephone contact with a relationship educator (Halford, Wilson, et al., 2010), and two studies used a mixture of face-to-face and flexible delivery (Halford, Petch, et al., 2010; Petch et al., 2012).

The control conditions varied widely between studies and most often was a no intervention control (e.g., Allen et al., 2012; Hsueh et al., 2012; Wood, McConnell, Moore, Clarkwest, & Hsueh, 2012). Some studies used an alternative brief form of RE such as reading a book and discussing it with other couples (Halford et al., 2001), couple assessment with feedback (e.g., Halford, Wilson, et al., 2010), or a single psychoeducational session (Cowan et al., 2009). Some studies compared RE with alternative established interventions such as midwife support of couples becoming parents (e.g., Halford, Petch, et al., 2010), or the Triple P parent-training program for couples with children (Bodenmann, Cina, Lederman, & Sanders, 2008).

6.2. Effects on maintenance of relationship satisfaction

RE enhanced relationship satisfaction for participants in 14 of the 17 studies, with effect sizes ranging from very small, as in the large scale Supporting Healthy Marriage (SHM) study (Hsueh et al., 2012), to moderate to large (e.g., Ledermann et al., 2007; Petch et al., 2012). Two studies had null effects on relationship satisfaction, one found PREP enhanced couple communication, but had no detectable effect on relationship satisfaction at 12-month follow-up when it was provided to relatively low-risk newlywed couples (Laurenceau et al., 2004). It is likely that any effects of RE are hard to detect with low-risk couples, particularly just 12 months after RE. The other

study evaluated a Dutch variant of PREP, which was provided to offspring of parental divorce (van Widenfelt et al., 1996). Couple communication was not assessed in that study, but relationship satisfaction was no different at 2-year follow up for those couples who received RE or control. The modest sample size in the study, combined with just a two year follow-up, provides low power to detect effects on maintenance of relationship satisfaction.

A third study had predominantly null results. The Building Strong Families (BSF) project is a very large ($n=6212$ couples) eight site evaluation of several different RE programs for unmarried couples expecting a child together. Within a randomized controlled trial design at each site, at 15-month follow-up there was no overall effect of RE across sites on relationship satisfaction (Wood et al., 2010). Attrition and low attendance was a substantial problem across most sites, but supplementary analyses showed that the outcome averaged across all sites for even the couples attending RE was not reliably better than for matched control couples. At one site (Baltimore) there was evidence that couples receiving RE were worse off than the control couples. A notable exception to the otherwise null results was observed at the Oklahoma City site, where an adaptation of PREP for new parents achieved high rates of attendance, reduced relationship separations and enhanced couple relationship satisfaction in participants. Interestingly, the total duration of the RE at this site was substantially shorter than at the other sites, yet this was the only program with evidence of positive effects. In a recently released 3 year follow up of the BSF, the benefits of RE in Oklahoma city on relationship satisfaction had attenuated but an effect in reducing separations from 59% of couples in the control condition to 51% of couples who received RE was evident (Wood, Moore, Clarkwest, Killewald, & Monahan, 2012).

In summary, 14 of the 17 randomized controlled trials found RE helped couples maintain high relationship satisfaction. In one further study evidence was found for small effect size benefits at one of eight sites in the large multi-site BSF study. It is noteworthy that one of the three studies with null results has only reported results at 12-months (Laurenceau et al., 2004). As noted earlier, effects of RE on maintenance of relationship satisfaction might be more evident at longer-term follow up. Applying the criteria of an evidence-based psychological intervention as requiring two randomized controlled trials showing positive effects, PREP, Couple CARE and CCET qualify as evidence-based approaches to RE that produce sustained benefits.

Two important caveats need to be placed on this summary of current knowledge. First, most studies had control conditions with substantially less professional contact than the RE condition, so specific effects of particular programs have not yet been demonstrated. While most RE programs were of brief duration (12 to 18 hours of contact), some RE programs were extensive. Most notably, in the BSF and SHM studies, couples were intended to receive between 24 and 42 hours of group RE, plus substantial additional support for individual couples, and referral for other support services (Hsueh et al., 2012; Wood, McConnell, et al., 2012; Wood, Moore, et al., 2012). Reduced rates of relationship break up and better adult and child adjustment could save a lot of future expenditure, so if these outcomes do result from RE perhaps the intervention could be cost effective. Interestingly, the site with the most positive effects in BSF had the briefest and least costly intervention. More work is needed to evaluate the true cost-effectiveness of RE.

The second caveat on our overall positive evaluation of the effects of RE on maintenance of relationship satisfaction is that the two recent, large scale BSF and SHM projects found either no overall effect of RE (Wood, McConnell, et al., 2012; Wood, Moore, et al., 2012), or only a very small effect size benefit of RE (Hsueh et al., 2012). These two studies are the largest trials ever undertaken of RE, and have a number of interesting characteristics worthy of comment. First, these two studies are the first to take RE programs that have demonstrated efficacy in small-scale trials to scale for wide dissemination,

and such wide dissemination has a number of challenges (Society for Prevention Research, 2004). In particular, there is a need for developing systems to ensure programs are delivered effectively. To date there has not been any data provided on the integrity or the competence of the delivery of the RE programs in either the BSF or SHM studies, which might be responsible for the weak effects as the quality of delivery is an important prerequisite for RE's impact. It is a common problem of all RE programs that the more broadly they are disseminated, the harder it is to control the integrity and quality of RE delivery. Further reports on the BSF and SHM studies might help to clarify the adequacy of delivery of the RE.

A second interesting characteristic of the BSF and SHM studies was that they targeted low income couples, and anticipated that poverty might be a barrier to RE attendance. Both projects incorporated extensive efforts to engage couples in their programs, including providing childcare, meals, assistance with transport to the programs, and some sites also offered cash, gifts cards and other incentives for attendance. Despite these intensive efforts attendance of the BSF programs overall was low, 45% of couples did not attend even one group RE session, while the SHM program was more successful with 83% of couples attending at least one group RE session. The attendance of RE by SHM couples does suggest engagement with RE by low income couples is feasible with the right supports.

The Wood, McConnell, et al. (2012) and Wood, Moore, et al. (2012) BSF study targeted low income, unmarried couples. Almost all prior research has been with married couples, although some studies included some couples who have been cohabiting for a minimum of 12 months (e.g. Halford, Petch, et al., 2010; Petch et al., 2012). The level of commitment to the relationship in the Wood et al. study might well have been lower than in other studies, as a proportion of the couples were not even cohabiting despite having a child together, and almost a quarter of all couples in the study separated in the first 15 months after recruitment. We will return to the possibility that relationship commitment moderates the benefits of RE later in the paper.

One limitation of both the BSF and SHM studies was that each used a single item global rating scale to assess the key outcome of couple relationship satisfaction, and the assessment was done only at post-RE. (It was assumed that random assignment of participants ensured couples in the RE and control conditions were similar before RE, and hence comparing post-RE scores would suffice to evaluate program effects.) The sensitivity of a single item administered on just one occasion to detect differential change resulting from RE is questionable, as item analysis of a range of relationship satisfaction measures highlight (Funk & Rogge, 2007). Moreover, in the BSF study mean post-RE satisfaction in the control condition was 8.3 out of a possible 10, and in the SHM study was 5.7 out of a possible 7. Even multi-item scales show low measurement precision at the upper ends of the satisfaction continuum (Funk & Rogge, 2007), which makes it likely that there was a ceiling effect with low power to detect effects of RE on satisfaction as the post-RE control condition satisfaction was high. Even the small effect size differences observed in one site in the BSF, and across sites in the SHM study, are noteworthy under these circumstances.

One of the frequently stated aims of RE is to help couples have a mutually satisfying relationship which they choose to continue. To date there are only three published randomized controlled trials with sufficient sample size to provide adequate power to detect an effect of RE on relationship separation (Hsueh et al., 2012; Stanley et al., 2010; Wood et al., 2010). Of these three studies only Stanley et al. (2010) found a clear overall effect of RE on separation. In the BSF project there was no overall effect of RE on separations, but the Oklahoma site did report a modest reduction in break up rates of couples after RE at 15 month and 3 year follow up (Wood, McConnell, et al., 2012; Wood, Moore, et al., 2012). The SHM study has only reported 12-month follow up data (Hsueh et al., 2012), and effects might

emerge at later follow up. Thus, there is insufficient data from randomized controlled trials to reach any clear conclusion on the impact of RE on relationship separations. It is noteworthy that a large scale survey of US adults who had been married at least once found attendance of RE was associated with a small decrease in risk for divorce even when controlling for a range of variables associated with RE attendance (Stanley, Amato, Johnson, & Markman, 2006). Furthermore a quasi-experimental 11-year follow-up study by Hahlweg and Richter (2010) evaluating the EPL program (a German adaptation of PREP) found only 28% of couples who had completed RE were divorced compared to 53% of matched control couples. Selection effects might explain the association of RE attendance with reduced divorce, but the existence of the association suggests further research is warranted.

7. Moderators of relationship education effects

To this point we have argued that some couples are likely to benefit more from RE than others. In Western countries more than 50% of couples who marry remain together for the rest of their lives, and most of these couples report being satisfied in their relationship at least most of the time (Australian Bureau of Statistics, 2011; Eurostat, 2011; United States Census Bureau, 2011). Only a minority of these couples have attended any form of RE (Halford, O'Donnell, Lizzio, & Wilson, 2006). Thus, many couples sustain stable, mutually satisfying relationships without formal RE.

Furthermore, it is possible to identify, albeit with limited accuracy, the couples who are at high risk for future relationship problems. For example, couples who have divergent or unrealistic expectations of their relationship, or who have negative communication, are at high risk of deteriorating relationship satisfaction and separation (Bradbury & Karney, 2004; Larson & Holman, 1994). If RE modifies the factors that put particular couples at high risk for future relationship problems, those high-risk couples might particularly benefit from RE. On the other hand, it is possible that some risk factors for future relationship problems might compromise benefiting from RE. For example, low relationship commitment predicts high risk for future relationship problems (Schoebi, Karney, & Bradbury, 2011) but also might be associated with low engagement with RE. In contrast, many low risk couples might sustain high relationship satisfaction without RE, and little benefit would be evident for such couples from RE. At the same time, it seems unlikely that any index of risk will predict future relationship satisfaction perfectly, and at least some low risk couples might benefit from RE. However, we expect the average effect of RE will be smaller, and therefore harder to detect, for low-risk than high-risk couples.

As noted previously, almost all of the studies summarized in Table 2 included couples that were at high risk of future deterioration of relationship satisfaction either because of couple characteristics (e.g. history of parental divorce, second marriage), or life circumstances (making the transition to parenthood, social disadvantage, stress with child conduct problems). Thus, current research shows that at least some high-risk couples maintain relationship satisfaction better after RE, supporting the benefits of selective or indicated RE. However, a universal benefit of RE for low risk couples is yet to be reliably demonstrated. It is possible that larger scale studies with longer follow up might detect benefits of RE for low risk couples.

Three studies specifically tested the moderating effects of risk on RE effects, and each found that high-risk couples benefited from RE more than low-risk couples (Allen et al., 2012; Halford et al., 2001; Petch et al., 2012). However, these studies operationalized risk variously as: negative family-of-origin experiences like parental divorce (Halford et al., 2001); vulnerability in the current relationship associated with a history of infidelity (Allen et al., 2011); or a composite index of risk associated with both family-of-origin and current relationship risk indicators (Petch et al., 2012). Consequently there is

not a replicated association of a specific index of risk with benefits from RE.

While some high-risk couples show benefit from RE, RE seems unlikely to help those high-risk couples for whom RE cannot modify the factors that place the couples at high risk. RE traditionally is brief (Markman & Rhoades, 2012), with some evidence that efficacy requires 9 to 20 program hours (Hawkins, Stanley, Blanchard, & Albright, 2012). Such brief interventions might be sufficient to address the issues of some but not all high risk couples. For example, less severe inter-partner violence (IPV) occurs in a substantial minority (30 to 40%) of couples who present for RE, and severe IPV occurs in a small but non-trivial proportion of couples (perhaps 3 to 5%) (Halford, Petch, Creedy, & Gamble, 2011). Less severe IPV is associated with poor conflict management in couples (Holtzworth-Munroe & Meehan, 2004), which is addressed in RE, and in one trial RE substantially reduced less severe IPV (Bradley & Gottman, 2012). In contrast, severe male-perpetrated IPV is associated with a range of antisocial behaviors, substance abuse, and psychopathology in the man (Holtzworth-Munroe & Meehan, 2004), and these issues seem unlikely to be addressed by brief, couple-focused RE.

One potentially important moderator of RE effects that has been identified by several previous reviewers of the RE field is social disadvantage, as reflected in low income and/or minority ethnic identification (e.g., Halford et al., 2008; Karney & Bradbury, 2005). These reviewers noted that couple relationship distress and separation occur at higher rates in socially disadvantaged couples relative to other couples. Prior to 2009 almost all RE studies had been conducted with samples consisting predominantly of Caucasian, well educated couples (Halford et al., 2008), and the effectiveness of RE with minority or socially disadvantaged couples was largely untested. A recent review by Johnson (2012) cited the lack of overall results of RE in the BSF study to suggest that RE as currently practiced is unlikely to address the contextual stresses (e.g. discrimination, financial hardship) experienced by socially disadvantaged couples living in the US. However, as noted previously, the predominantly null findings in the BSF project might reflect several issues in that study, including the low attendance of the RE by couples, the low relationship commitment of the couples in the study, the limited duration of follow up so far available, the extent to which the quality of program delivery was adequate, and the limitations of the relationship satisfaction measure that was used.

In contrast to the null effects observed in most sites of the BSF, four recent randomized controlled trials have reported significant enhancement of relationship satisfaction after RE for low income and minority couples (Allen et al., 2012; Beach et al., 2011; Cowan et al., 2009; Hsueh et al., 2012). As Hawkins et al. (in press) suggest, well structured RE programs can assist some socially disadvantaged couples even though social disadvantage is associated with stresses that potentially undermine couple relationship satisfaction and stability. At the same time, as proposed by Johnson (2012), combining RE with additional ways to assist socially disadvantaged couples might enhance RE effectiveness. For example, Wood, McConnell, et al. (2012), Wood, Moore, et al. (2012) report that in ongoing research with unemployed, unwed parents they are seeking to help spouses gain employment. Gaining employment might be an effective intervention to help couples sustain relationship satisfaction in its own right, by reducing external stresses on the couple, or such a stress reduction might enhance the couple's ability to use things learned during RE effectively.

The effect of social disadvantage is just one example, albeit an important example, of how the stresses confronting particular couples might need to be addressed in RE. Strategies to address the specific stresses of becoming a parent have been included in several effective RE programs (e.g. Petch et al., 2012; Schulz et al., 2006). There are other RE programs seeking to address other important stresses, such as work-family balance (Schaer et al., 2008), and addressing a major

health problem like cancer affecting one of the spouses (Badr & Krebs, 2012; Halford, Chambers, & Clutton, 2010).

It also is important to recognize that the broader social context in which couples live can affect their relationship satisfaction and stability. For example, the culture in which each spouse was raised; and the broader social and legal aspects of marriage can influence couple relationships' satisfaction and stability (Andrews, 2012; Hiew, Halford, & Shuang, *in press*). We distinguish between life stresses that impact upon particular couples at particular times, and contextual factors that often are stable background variables impacting on couples. RE might be broadened to address some of these contextual issues. For example, there is a large and growing proportion of intercultural couple relationships in many Western countries, and intercultural relationship have somewhat higher rates of relationship dissolution than intracultural couples (Hiew et al., *in press*). RE might be adapted to help intercultural couples to value, and manage effectively, the cultural differences in the expectations they have of their relationship.

There are interventions other than RE that can modify contexts to enhance couple relationships. For example, community and religious groups have sought to enhance support for couple relationships through mentoring programs, practical support like child minding, and promotion of the valuing of marriage (Birch, Weed, & Olsen, 2004). Some politicians (e.g., Andrews, 2012) argue governments need to include an emphasis in their social policies on the support of healthy marriages because healthy marriages constitute a social good that governments should support. Examples of such policies include tax breaks for married couples; enhanced financial support of parents of young children; and supporting the development of family-friendly, flexible working arrangements; as well as promotion of enhanced access to RE. Western governments have varied widely in their emphases on pro-marriage initiatives, with the United States making major investment in RE, Australia doing relatively little to fund RE and focusing more on social policy initiatives like paid parental leave and income support for parents, and the UK largely ignoring marriage per se and instead focusing on the needs of children by investing in wide dissemination of parenting education (van Acker, 2008). In Europe there is usually no governmental support for RE and only the Catholic Church promotes marriage prevention using an adapted form of PREP in Germany. To date the RE literature has largely ignored these broader contextual issues within which couples live and RE is delivered, but future research does need to attend to how such contextual factors might moderate RE effects.

As noted earlier, another potentially important moderator of RE that warrants research is relationship commitment. Presumably couples need some minimum level of commitment to engage in RE. (It is hard to imagine a couple who have dated once wanting to invest the time to attend RE together.) Markman and Rhoades (2012) highlight that high pre-RE relationship commitment might enhance RE effects, so that declines in relationship satisfaction cue spouses to work on their relationship, whereas only moderate commitment might cue couples to consider ending their relationship. It also is possible that RE might enhance commitment. One plausible mechanism is that RE might influence spouse's attributions for each other's behavior. For example, negative behavior of the partner that was attributed to his/her bad character prior to RE, might be attributed to external factors such as stress after RE. Negative attributions about partner behavior are known to predict declining relationship satisfaction (Fincham & Bradbury, 1990). RE that changed attributions might enhance relationship commitment and maintain relationship satisfaction, and/or it might elicit more constructive responses like supportive communication or effective dyadic coping. Another issue that has not been investigated so far is the motivation for attending RE, and whether efficacy might be lower if only one partner (mostly the wife) wishes to attend RE versus if both spouses are eager to attend RE. Benefits of RE might be moderated by motivation and

relationship commitment and future research should address this issue in more detail.

8. Mediators of relationship education effects

The assumption in RE is that couples are learning key knowledge and skill that enable them to better maintain high relationship satisfaction (Wadsworth & Markman, 2012). As noted previously, most RE programs have multiple foci in their content, and research on mediators of RE effects potentially could fine tune RE program content to more precisely address couples' needs. Almost all skill-based RE has significant focus on enhancing couple communication (Halford, 2011), so it is unsurprising that most of the research on RE mediation has evaluated changes in couple communication as the mediator. However, findings on changes in communication as a mediator of RE effects are inconsistent. In a 5.5-year follow-up of 39 newlywed couples who received PREP, an expected association was found between declines in husbands' negativity and increased likelihood of sustained relationship satisfaction, but wives' increases in positive communication predicted a paradoxical increased likelihood of marital distress for themselves and for their partners, while decreases in wives' negative behaviors were unrelated to later marital outcomes (Schilling, Baucom, Burnett, Sandin-Allen, & Ragland, 2003). Baucom, Hahlweg, Atkins, Engl, and Thurmaier (2006) partially replicated this finding in a 5 year follow-up study of 77 couples who received PREP, finding deteriorating satisfaction in the 12% of couples who showed the most increase in positive communication after PREP.

Stanley, Rhoades, Olmos-Gallo, and Markman (2007) noted that different aspects of couple communication are often highly correlated, and that when multiple indices of communication are used to predicted change after RE, as in the Schilling et al. (2003) and Baucom et al. (2007) studies, the colinearity of these predictor variables can create artifactual associations. Stanley et al. (2007) failed to replicate the paradoxical effect for changes in wives' positive communication, but reported future relationship satisfaction was predicted by reduction in wives' and husbands' negative communication, but not by increases in husbands' and wives' positive communication. Finally, Bodenmann, Bradbury, and Pihet (2009), in a 2-year follow-up study of 109 couples attending CCET, showed somewhat more expected results. Wives' increase in positive communication and husbands decrease in negative communication after RE predicted better relationship outcomes. We return to the potential explanations of the inconsistent findings on enhanced couple communication as a mediator of RE effects later in the paper.

In addition to changes in couple communication, a range of other potential mediators of RE effects have been proposed (Wadsworth & Markman, 2012). In the Couple CARE program there is a strong emphasis on enhancing relationship self-regulation (RSR), and levels of RSR after Couple CARE predict relationship satisfaction trajectory across the next 4 years (Halford & Wilson, 2008). The CCET program has a strong focus on promoting dyadic coping. Dyadic coping is defined as where spouses share thoughts and feelings about stresses external to the couple relationship, and either one spouse supports the other and/or the couple develops a conjoint approach to managing the stress (Bodenmann, 2005). Couple satisfaction 2 years after receiving CCET is predicted by wives and husbands increasing their positive dyadic coping behaviors, and by husbands decreasing their negative dyadic coping (Bodenmann et al., 2009). Replication of the findings on RSR and dyadic coping are needed, but suggest that the search for mediators of RE effects needs to be broader than just couple communication.

The lack of clear demonstration of the mediators of RE effects needs to be considered in the context of research on mediators of effective psychological interventions more generally. Kazdin (2008) notes that across the whole field of clinical psychology, the mediators

of efficacious psychological interventions have proven difficult to establish.

9. Moderated mediation of relationship education effects

One plausible explanation for the inconsistent findings about the association of changes in couple communication after RE and future relationship satisfaction is that mediation effects might be moderated by pre-intervention levels of the mediator. Moderated mediation is often observed when testing mediation of various prevention programs (e.g., depression, child behavior problems) (Mackinnon, Fairchild, & Fritz, 2007). In essence, in prevention program some of the participants are at low risk for the targeted problem before intervention, and only those with elevations on modifiable risk factors are likely to reduce those risk factors and benefit from the program.

The moderation of mediation effects seems likely to apply to RE mediation. Some couples prior to RE have high rates of negative communication, rates that make them likely to experience deteriorating relationship satisfaction (Bradbury & Karney, 2004). The extent to which RE reduces negativity in these initially negative couples would be expected to predict future high relationship satisfaction. However, other couples have low rates of negative communication, rates that make them likely to sustain high relationship satisfaction (Bradbury & Karney, 2004). Reducing low negativity seems unlikely to mediate any benefit from RE. In fact, Schilling et al. (2003) suggest that their RE attempts to reduce already low levels of negative female communication might inadvertently have promoted avoidance of difficult relationship issues, and that such avoidance might account for deteriorating relationship satisfaction.

One implication of the moderation of mediation is that using change scores in communication (or any other risk factor) across RE to predict the trajectory of relationship satisfaction is not an appropriate test of mediation. As Halford and Wilson (2009) argued, in a couple with highly negative communication before RE zero change after RE is very different to zero change in a couple with positive communication before RE. It is likely that couple behavior after RE, rather than change scores from pre-RE to post-RE, influences future couple relationship satisfaction. Consistent with this argument, Halford and Wilson (2009) reported low couple negative communication and high relationship self-regulation both predicted maintenance of relationship satisfaction four years after RE. While consistent with the possibility of a moderated mediation effect, their data analysis does not directly test such an effect.

A direct test of moderated mediation within randomized controlled trials is to test whether the interaction of the moderator (e.g., initial communication) and the mediator (e.g. communication change) account for differential trajectories of outcomes between intervention and control conditions (Mackinnon et al., 2007). In other words, this tests whether couples initially elevated in negative communication better maintain relationship satisfaction if they reduce that negativity, and also allows for the possibility that reducing negativity in couples who initially were not elevated in negativity is not beneficial. The Baucom et al. (2006), Bodenmann et al. (2009), Schilling et al. (2003), and Stanley et al. (2007) studies all reported on how decreases in negativity across all couples predicted satisfaction in a cohort of couples who all had completed RE, and their different findings might reflect differences in couple negativity before RE.

The idea of moderated mediation can be extended to consider the effects of multiple risk factors, and how modifiable those risk factors are by RE, on the likely impact of RE on couple relationship satisfaction maintenance. Fig. 1 displays hypothetical risk profiles before and after RE for 4 different couples across three risk factors: severe psychological disorder, couple communication, and dyadic coping. For simplicity of developing the argument, we assume that severe psychological disorder is unaffected by RE. We also assume that

negative couple communication and negative dyadic coping are greatly reduced by RE, but only in couples who initially are high on these risk factors. Couple 1 has one spouse with a severe psychological disorder (e.g., bipolar disorder) and we assume that couple communication and dyadic coping are not changed in such a couple as the negative effects of the disorder (e.g., mood swings, disorganized thinking) prevent sufficient change resulting from a brief RE program. In couples 2 through 4 there is no psychological disorder, which enables other elevated risk factors to change. In couple 2 negative communication and negative dyadic coping are elevated initially and decline with RE. In couple 3 negative couple coping is elevated but negative communication is not, and hence only negative dyadic coping declines after RE. Couple 4 is low across all three risk factors initially, and there is no change in risk factors after RE. Assuming all the risk factors have a causal impact on maintenance of relationship satisfaction, then couples 2 and 3 should better maintain relationship satisfaction after RE, but maintenance of relationship satisfaction in couples 1 and 4 would be less affected, or even unaffected, by receiving RE.

In brief, we suggest that couples most likely to have RE enhance their maintenance of relationship are couples with elevated risk on factors that are modifiable by RE (e.g., communication, problem-solving, self-regulation, dyadic coping). Couples who are elevated on risk factors that are less easily changed by RE (e.g., severe psychological disorder) are likely to show deteriorating relationship satisfaction even if they receive RE. Couples low on risk factors are the most likely to maintain high relationship satisfaction without RE in the short to medium term. However, as life demands vary across the life span some couple relationships that have high satisfaction for a number of years can suffer erosion of positive interaction and relationship satisfaction later, as documented by Lavner and Bradbury (2012). Thus it is possible that all, or almost all, couples might benefit from RE at some point in their relationship.

In summary, selective RE that targets couples with elevated modifiable risk factors is predicted to enhance maintenance of relationship. In couples with high satisfaction before RE, there might be little or no immediate increase in satisfaction after RE. In contrast, indicated RE that targets couples with both elevated risk factors and low relationship satisfaction is predicted to produce both immediate increase in relationship satisfaction, and enhanced maintenance of future satisfaction.

One seeming anomaly in the above analysis is that the presence of some unmodifiable risk factors (e.g., family-of-origin parental divorce or interparental violence) predicts positive benefit in maintenance of relationship satisfaction after RE (Halford et al., 2001). If an unmodifiable risk indicator (e.g. parental divorce in one spouse's history) is correlated with a modifiable risk factor this might explain the why an unmodifiable risk indicator moderates RE effects. For example, couples in which at least one spouse has experienced parental divorce or parental violence show more negative communication than other couples without those family-of-origin experiences (Sanders, Halford, & Behrens, 1999; Skuja & Halford, 2004). Moreover the presence of such negative communication mediates the association of family-of-origin divorce with the trajectory of couple relationship satisfaction (Story, Karney, Lawrence, & Bradbury, 2004). Given that RE can reduce negative couple communication (Hawkins et al., 2008), it is likely that negative family-of-origin experiences are markers for high negative communication that puts the couples at risk, and RE can help reduce that negative communication.

10. Implications for practice of relationship education

In current practice, a relatively fixed RE curriculum is offered to all couples, with the implicit assumption that a common set of knowledge and skills will be of use to most if not all couples (Halford, 2011). RE might be most effective when tailored so that content

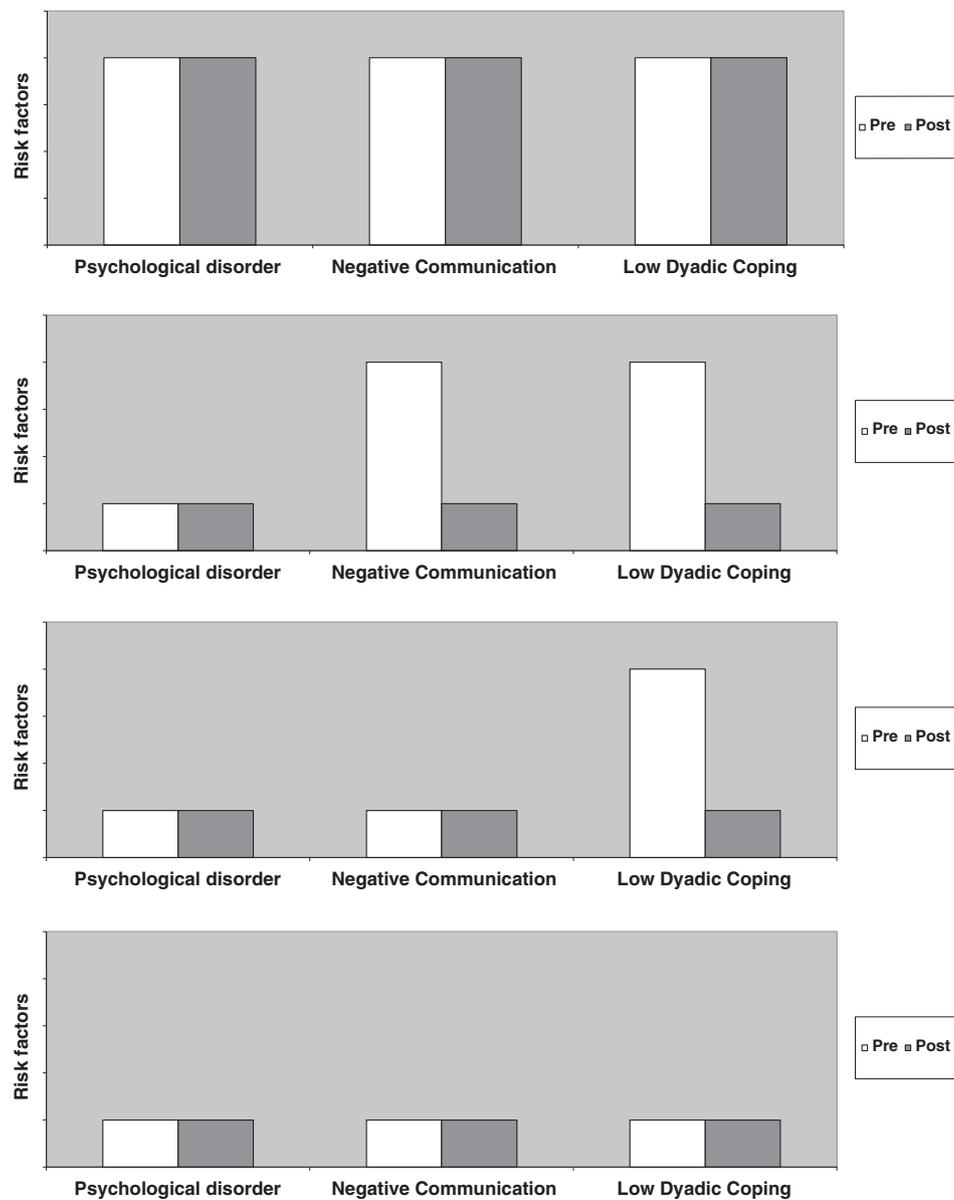


Fig. 1. Hypothesized association of risk factors and change resulting from relationship education.

addresses particular relationship risk factors that are elevated in the couples being served. For example, hazardous drinking in early stage relationships predicts aggression, deteriorating relationship satisfaction, and instability (Leonard & Mudar, 2003). Conversely, couple relationship problems predict increased risk of alcohol abuse (Whisman, Uebelacker, & Bruce, 2006). Seeking to reduce hazardous drinking as part of RE is likely to be useful to the couple relationship (Bouma, Halford, & Young, 2004; Fals-Stewart, O'Farrell, & Birchler, 2006), but only for couples having this risk factor.

Historically RE began as brief interventions offered to marrying couples. As the current review illustrates, the application of RE has broadened greatly to be offered to couples as diverse as those having a child together, those struggling to balance work and family demands, those who are stressed by social disadvantage, and those couples with a spouse who has health problems. Usually these programs adapt content to address specific couple needs. The windows of opportunity for offering RE can be expanded further, such as RE being used to assist couples with aging parents, forming stepfamilies, couples adopting a child, or couples making the transition to retirement.

The challenge is to develop systems of delivery of RE that can be widely adopted, and that provide content that is relevant to the needs of participant couples. Research is only just beginning to address how content might be effectively tailored to particular couples' needs. One interesting example combines the web-based RELATE relationship assessment with the skill-training Couple CARE program (Halford et al., 2010). In the combined program couples complete RELATE, receive a computer-generated report about their relationship strengths and challenges, and are guided by an educator to use this report to formulate relationship enhancement goals. Couples then undertake the Couple CARE program to develop their relationship skills, with the content tailored to focus on the couple's stated relationship goals.

An implication of the varying levels and modifiability of risk factors in couples who are seeking RE is the possibility of a stepped approach. The core concept of a stepped approach is to offer a range of interventions varying from low intensity, brief, inexpensive, often self-directed programs; to more intense, extended, expensive, and often professionally delivered programs. A key rationale for a stepped approach is to offer the least intensive program needed to achieve the

desired goal. The wide offering of low intensity programs can often address many people's needs and enable limited resources to be concentrated in such a way that those in most need of them get the most intensive programs (Davison, 2000). For example, this stepped approach has been successfully used in the widely used Triple P parenting program (Sanders, 2008).

Applying the concept of a stepped approach to RE, a brief intervention might take the form of offering books or DVDs with content based on evidence-based approaches to RE. Along similar lines, a meta-analysis by McAllister, Duncan, and Hawkins (2012) indicates that self-directed RE has some success, but only for some couples; which supports the notion of a stepped approach in RE meeting couples' specific needs. If such brief interventions do not meet some couples' needs, then more intensive interventions like PREP, Couple CARE or CCET, can be offered selectively to those couples likely to benefit the most from the program. If risk factors are identified which are not covered in a particular RE program, then an individually tailored RE program might be offered.

There are a number of assumptions implicit in a stepped approach to RE. First, that many couples do not need intensive RE. We have already argued that the evidence supports this assumption, albeit with the qualification that assessment of risk might well not detect some couples who could benefit from RE. Second, that low intensity interventions can have wide appeal and can be effective for at least some people. We know that low intensity education can have an extensive reach. For example, couples are more likely to read self-help books on relationships than seek couple education or therapy (Doss, Rhoades, Stanley, & Markman, 2009). Low intensity RE interventions like books, DVDs, CDs, and Internet sites are extremely popular. Moreover, we know that large numbers of couples report that they have experienced and overcome relationship distress without direct contact with professional assistance (Waite & Gallagher, 2000).

One study suggests that stepped approaches may be effective in RE. Ford, Bashford, and DeWitt (1984) compared the effects of three levels of intensity of communication skills training relative to a wait-list control: (1) bibliotherapy, consisting of reading, written exercises, and weekly telephone contacts by a relationship educator; (2) observation, consisting of watching audiovisual demonstrations of communication skills training between a couple and an educator, combined with structured exercises; and (3) face-to-face training, consisting of individualized modeling, rehearsal and feedback on communication skills with structured homework exercises. All three program intensity steps were beneficial. The initial characteristics of the couples moderated response to the education. Couples with initially low relationship satisfaction benefited most from the intense face-to-face program, while couples with initially high relationship satisfaction benefited equally well from that condition or observational learning. The Ford et al. (1984) study lacked long-term follow-up, but does show at least short-term benefits from low intensity RE.

An unresolved issue in the use of stepped programs is the effect of participating in low intensity RE on later use of more intense RE. A positive experience of using low intensity RE might build motivation for change, and increase the chance of couples later engaging in a more intensive program or couple therapy. For example, there is evidence that people seeking education or therapy often do so after reading a book on relationships (Doss et al., 2009). Some relationship educators have expressed the view that positive experiences of RE might enhance later presentation for further education or even couple therapy, when they are required (Stanley, 2001). On the other hand, ineffective low intensity programs might have a negative impact on partners' self-efficacy, reduce their motivation for change, and discourage them from seeking future RE. Research is needed to evaluate the effects of using low intensity RE on the later accessing of RE.

11. Conclusions and recommendations

Previous reviews have demonstrated that RE reliably increases couple communication positivity, and increases relationship satisfaction in less satisfied couples in the short term (up to 6 months after RE). The current review shows that RE enhances maintenance of relationship satisfaction for some years in at least some high-risk couples. While we found 17 studies with follow ups of RE of 12 months or more, only five studies had follow ups of 2 or more years. Given the aim of RE is long-term maintenance of satisfying relationships, longer-term follow up is needed in more studies.

There are replicated benefits of RE on maintenance of relationship satisfaction for couples with elevated risk on factors modifiable by RE, although here is not a replicated association between a specific index of risk and response to RE. There is less convincing evidence of a universal benefit from RE, but future research might find such a benefit. Future research needs to more rigorously test the proposition that specific indices of risk reliably moderate the effects of RE. Potential indicators of risk can usefully be classified using the ecological model of influences on couple relationships (Halford, 2011) that identified four classes of influence on couple relationship: context, individual spouse characteristics, life events impinging on the couple, and couple interaction processes. Future research needs to examine each of these risk domains as potential moderators of RE effects.

Research is also needed on the minimum required intensity of RE that is sufficient to empower couples to maintain high relationship satisfaction, whether a stepped approach to RE can enhance its reach and cost-effectiveness, and whether additional interventions can complement the effects of RE for some high risk couples. There also is need to further test the applicability of RE to diverse couples, and the effects of the broader context in which couples live, on the effects of RE. There is much work still to be done, but RE holds promise as an important part of assisting couples to have stable, healthy relationships.

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