

## RESEARCH ARTICLE

# Partner Support and Goal Outcomes: A Multilevel Meta-Analysis and a Methodological Critique

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## Abstract

In the meta-analysis, we combined evidence across studies from different theoretical perspectives addressing the association between partner support (responsive, practical and negative support) and goal outcomes (self-efficacy, commitment and progress). The sample included 195 effect sizes from 36 samples with 10,130 participants in romantic relationships. The results were analysed using a random-effects multilevel model and the overall effect size was  $r = .25$ . This effect size is comparable to strong individual predictors of goal outcomes (e.g. high intention to achieve a goal) highlighting the importance of close relationships in goal pursuit. In line with the theory of thriving through relationships, the findings suggested that both responsiveness ( $r = .27$ ) and practical ( $r = .22$ ) support are helpful for goal outcomes whereas negative ( $r = -.14$ ) support can hinder goal pursuit. Existing studies have strong methods but lack validated measures. Results have implications for areas including changing health behaviours and improving occupational, educational and therapy outcomes.

## KEYWORDS

attachment theory, close relationships, goals, interdependence theory, partner support

## 1 | INTRODUCTION

In the past two decades, researchers have become increasingly interested in studying whether perceived support from close others predicts goal outcomes (Brunstein et al., 1996; Feeney, 2004; Feeney & Collins, 2015; Laurin et al., 2016; Overall et al., 2010; Rafaeli & Gleason, 2009; Rusbult, Finkel, et al., 2009). Theoretically, partner support should be beneficial for both goal progress and well-being, but the research evidence for the benefits of partner support on goal outcomes is mixed (Gleason et al., 2008). For example, research has shown that perceiving one's partner as supportive and responsive towards one's goal pursuit is associated with greater individual and relational well-being (Drigotas et al., 1999; Fitzsimons & Finkel, 2015; Rusbult, Finkel, et al., 2009) and greater progress towards these goals (Brunstein et al., 1996; Drigotas et al., 1999; Feeney, 2004; Kumashiro et al., 2007). However, other studies have shown that support is either unrelated to

positive outcomes or can even at times be associated with negative outcomes (Barrera, 1986; Bolger et al., 2000). Several reasons have been examined as potential explanations for the discrepancy in the literature including support visibility (Bolger & Amarel, 2007; Girme et al., 2013; Jakubiak et al., 2020) and support type (Bar-Kalifa et al., 2016; Girme et al., 2015; Jakubiak et al., 2020; Rafaeli & Gleason, 2009). However, even these findings tend to be mixed with results not replicating across studies (Bolger et al., 2000; Jakubiak et al., 2020; Morelli et al., 2015).

Over time, research into partner support towards goal pursuit has evolved into several different research strands with separate definitions, and therefore measures and types, of support, with little overlap. Therefore, to truly move the field forward, it is important to bring together these research strands to quantify the existing evidence and create a path towards a more coherent and comprehensive literature. The purpose of the present meta-analysis is to address the state of the evidence of the association between partner support and goal

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outcomes and also to examine whether the correlation between these variables differs depending on the different conceptualizations of support or goal outcomes. We also provide a methodological critique of the existing research and provide suggestions for improving the research.

### 1.1 | Theoretical underpinnings of partner support and goal outcomes

The majority of the literature on partner support for goals has been conceptualized from one of three theories: interdependence theory (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003), attachment theory (Bowlby, 1969; Feeney & Collins, 2015), or self-determination theory (Ryan & Deci, 2000). In addition to theory-based research, some studies have focused on testing support typologies rather than specific theories (Overall & Fletcher, 2010; Overall et al., 2010). All of these theories highlight the importance of close relationships in the pursuit and achievement of goals, although they have somewhat different conceptualizations of support. In the meta-analysis, we used the following broad definition of partner support: a recipient or observer's perception that the recipient's partner was attempting to provide support and assistance of any kind in the service of the recipient's goals, regardless of whether that support was asked for, wanted or appropriate for the situation. This definition aimed to capture all different types of partner support that have been examined in the literature in relation to goal outcomes.

Researchers have long been interested in categorizing different types of support and there are several terms that have been used in the literature to refer to different support types. However, the literature has generally converged on two types of support: emotional/responsive (e.g. reassurance, encouragement or understanding) and instrumental/practical (e.g. advice, assistance or information) support (Morelli et al., 2015). Many researchers also acknowledge that negative forms of support (e.g. control, coercion or interference) are qualitatively different from emotional and practical support, which are both seen as generally positive (Overall et al., 2010). Researchers disagree on the degree to which emotional and practical support may be beneficial for a range of outcomes with some researchers finding that both forms of support predict better outcomes (Jakubiak et al., 2020; Overall et al., 2010) while others have found that emotional support is more beneficial than practical support, at least for well-being (Morelli et al., 2015). Negative support, however, has generally been found to predict negative outcomes (Feeney et al., 2017; Overall et al., 2010; Vowels et al., 2021). Therefore, on the strength of previous research, we would expect that both emotional and practical support will be positively, and negative support negatively, associated with goal outcomes.

All major theories of partner support (interdependence, attachment and self-determination theories) agree that emotional support is beneficial for goal outcomes although the terminology used varies across theoretical traditions. The Michelangelo phenomenon, based on the interdependence theory, uses the term *partner affirmation* and suggests that individuals experience more movement towards their goals when their partner provides affirmation towards these goals. Partner affirmation involves seeing one's partner in a way that is consistent with

their ideal self-goals, and behaving in a manner that elicits ideal self-related behaviours. Attachment theory (Bowlby, 1969) defines support towards goals as *secure base support*, which involves being available and encouraging but not interfering unless absolutely necessary. When partners provide secure base support, individuals explore more and experience more growth and progress towards their goals (Feeney, 2004, 2007; Feeney & Thrush, 2010). Finally, self-determination theory (Ryan & Deci, 2000) suggests that when partners provide *autonomy support* (i.e. support that is encouraging and affirming but not excessively controlling or intrusive) the recipients are more likely to experience progress towards their goals. Therefore, affirmation, secure base support and autonomy support all suggest that what is needed is to be available and responsive to the needs of the support recipient (i.e. providing emotional or responsive support) but not necessarily being an active participant in the support process (e.g. providing advice or assistance).

Additionally, there are times when practical support may also be beneficial for goal outcomes. All the aforementioned theories focus less on practical support and the measures generally used for affirmation, secure base and autonomy support tend to exclude practical support. Because the focus of these theories is on responsive support, we would expect practical support to have a smaller association with goal outcomes compared to responsive support. It is, however, theoretically possible to provide practical support that is also responsive to the needs of the recipient and can enhance autonomy or affirm goal outcomes. In fact, Feeney and Collins (2015) expanded the notion of secure base to relational catalyst (RC) support in their theoretical framework of thriving through relationships. The framework suggested that romantic relationship partners need to take an active role in each other's goal pursuits by providing both emotional support (i.e. being available and encouraging) as well as practical support (i.e. intervening and providing tangible assistance if necessary). Therefore, given this framework, we would expect both emotional and practical support to be positive for goal outcomes.

### 1.2 | Types of goal outcomes

Goal progress is typically defined as the degree of progress made towards attaining a goal whereas attainment refers to accomplishing a goal. While the majority of studies that examine partner support and goal outcomes have focused on goal progress (Brunstein et al., 1996; Dailey, 2018a; Drigotas et al., 1999; Feeney & Thrush, 2010; Hofmann et al., 2015; Tomlinson et al., 2016), some researchers have also examined whether partner support is associated with greater motivation, commitment or effort towards goal pursuit (Brunstein et al., 1996; Feeney, 2004; Overall et al., 2010), as well as one's confidence in their one's own abilities to succeed or accomplish a goal (Feeney, 2004; Hammond & Overall, 2015; Tomlinson et al., 2016). In the present meta-analysis, we included progress, commitment and self-efficacy as goal outcomes.

These goal outcomes are likely to be correlated but support may benefit certain goal outcomes more than others. For example, some researchers have suggested that while support can be beneficial for

making progress towards goals, it can also hinder self-efficacy (Bolger & Amarel, 2007; Bolger et al., 2000; Feeney, 2004; Rafaeli & Gleason, 2009). We would expect that more practical forms of support would be more likely to hinder a recipient's sense of self-efficacy as it may signal that the support recipient would not be able to achieve the goal themselves. Furthermore, because self-determination theory suggests that individuals have a need for autonomy and competence (Ryan & Deci, 2000), we would expect that support, which does not enhance autonomy (i.e. practical and negative support as opposed to responsive), would be especially likely to be associated with less commitment and self-efficacy.

Furthermore, some researchers let participants determine their own goals (Brunstein et al., 1996; Drigotas et al., 1999; Girma et al., 2013; Koestner et al., 2012; Overall et al., 2010) whereas other researchers assign goals to participants (Feeney & Thrush, 2010; Feeney et al., 2017) or only ask about certain types of goals (e.g. health, weight loss, career; (Dailey, 2018a, 2018b; Dailey et al., 2016). Therefore, we differentiated between participant-chosen and experimenter-chosen goals and expected that goal type may moderate the association between partner support and goal outcomes. It is possible that the type of goal moderates the association between perceived support and goal outcomes. For example, when the goals are chosen by the participant, they may pay more attention to whether their partner is supportive towards their goals compared to when the goals are chosen by an experimenter and thus may be less important for the participant.

### 1.3 | Theoretical and methodological moderators

We examined two types of moderators: theoretical and methodological. We tested three theoretical moderators discussed above: type of support (responsiveness, practical, negative support), goal outcome (progress, commitment, self-efficacy) and goal type (participant-chosen vs. experimenter-chosen). It is also possible that studies that aimed to test a particular theory would find stronger effect sizes in support of that theory (Sakaluk et al., 2020). Therefore, we also examined whether the hypothesis on partner support and goal outcome was based on an established theory (yes or no). Furthermore, several researchers have hypothesized that goal progress is likely to be higher in early adulthood (Bühler et al., 2018; Jakubiak et al., 2020). Support is also likely to be more important in early stages of the relationship with the importance of support declining over time. The results for age and relationship length to date, however, are mixed (Bühler et al., 2018; Jakubiak et al., 2020): Bühler et al. (2018) found that partner affirmation became more important for relationship satisfaction as people aged whereas Jakubiak et al. (2020) found that the association between support and relationship satisfaction was stronger in the younger sample compared to the older sample. Therefore, we chose to examine whether average age and relationship length across the samples were significant moderators potentially adding to theories of partner support for goals.

We also examined the methodological rigour across studies that may have had an impact on the results. There has been a great

deal of criticism towards research practices within psychology since the replication crisis began (Open Science Collaboration, 2015). Several issues have been suggested to have contributed to the replication crisis including, for example, insufficient power and relatedly small sample sizes, measurement issues and publication bias (Laraway et al., 2019). Therefore, we examined several methodological moderators: scale (prior scale validation, reliability of the scale, number of scale items, number of scale points, self-/observer-report), cross-sectional/longitudinal/diary, sample size, publication status, student/community and dyadic/individual.

### 1.4 | The present meta-analysis

Several meta-analyses have been conducted on the effectiveness of partner support for specific outcomes such as quitting smoking (Park et al., 2004), perinatal depression and anxiety (Pilkington et al., 2015), and chronic illness (Martire et al., 2010); these have found at least a small overall effect of partner support. However, in the last two decades of research into partner support and goal outcomes, there has not been a systematic review or a meta-analysis to evaluate the literature overall. Herein, we focus on several different strands of research with separate theoretical underpinnings that are rarely evaluated together.

The present meta-analysis had three novel objectives. Our first objective was to measure the range and average correlation between partner support and goal outcomes in the existing literature. Our second objective was to address whether the type of support (responsiveness, practical, negative) and goal outcomes (progress, commitment, self-efficacy) moderated the overall effect size. Our final objective was to examine the methodological rigour across studies that may have had an impact on the results.

## 2 | METHOD

We used the American Psychological Association's Meta-Analysis Reporting Standards (MARS) and PRISMA guidelines to complete our meta-analysis and we registered the protocol in advance on the Open Science Framework: <https://osf.io/wtn6u/>. We updated the protocol once after all data were collected but not analysed to reflect any changes made to the protocol and once after receiving feedback for the manuscript. All data, code and materials can be found on the OSF project page: <https://osf.io/p3287/>.

### 2.1 | Literature search and study selection

Prior to the full literature search, we completed scoping searches to refine our search criteria and piloted the data table. We conducted an electronic literature search using Web of Science (Web of Science Core) and PsychINFO (EBSCO) databases using the following search

criteria: (('secure base' OR caregiving OR affirm\* OR encourage\* OR responsiv\* OR 'relational catalyst' OR support\*) AND (goal\* OR striv\* OR 'possible sel\*' OR 'ideal sel\*')) and (progress OR pursu\* OR attain\* OR achiev\*) and (partner\* OR close\* OR intima\* OR romantic OR adult\* dyad\* OR couple\*)). Additionally, for the PsychINFO database, we included specific categories 'Goals' and 'Interpersonal Relationships' in the search. We included all studies that were completed before 31 December 2020.

We also completed searches on social psychology journals and performed backward and forward searches on relevant review articles (Feeny & Collins, 2015; Fitzsimons et al., 2015; Orehek & Forest, 2016). To identify any grey literature, we completed a search on PsyArXiv using 'support' and 'goals' as search criteria; went through conference abstracts and published calls to request any unpublished research on listservs for relevant scientific organizations; and contacted prominent authors in the field. However, only the backward and forward searches resulted in additional papers being identified.

The first author completed the literature searches on the databases and exported the titles and abstracts on to a citation manager (Mendely) removing duplicates. Two independent undergraduate research assistants then read through the titles and abstracts for eligibility and excluded the ones that were not relevant. The first author and another undergraduate research assistant completed searches on journal articles and grey literature. All research assistants received training prior to assessing eligibility and coding the manuscripts. Any discrepancies were resolved by a discussion between the research assistants and the first author. If there was any doubt about the eligibility of an article, the article was included in the next stage. Full texts of all articles passing the screening stage were downloaded and read by two research assistants and the first author to determine eligibility. Any discrepancies were discussed and if any discrepancies remained, the first author decided whether to include the study in the meta-analysis based on eligibility criteria. A flow diagram capturing our literature searching and subsequent screening process is presented in Figure 1.

## 2.2 | Inclusion criteria

We included studies for which an effect size was available for the association between partner support and goal outcomes based on self- or observer-report. The sample effect sizes were required to meet the following inclusion criteria.

### 2.2.1 | Predictor variables

We accepted any type of support measure that fitted within our broad definition of support and used several known terms for support to search for relevant literature (see above for the search criteria); two independent coders coded the measures into three categories: respon-

siveness, practical and negative support. The inter-rater reliability indicated substantial agreement ( $\kappa = .78$ ).<sup>1</sup>

### 2.2.2 | Outcome variables

The goal pursuit measure had to be about working towards a goal (e.g. an attempt to lose weight, get a new job or do well in exams) but could either be a goal decided by the participant or the researcher. We accepted any goal outcome that had a subjective element (e.g. perception of losing weight, how much progress one had made) but excluded studies that had an objective measure of goal outcome (e.g. BMI, minutes of physical activity a week). The outcomes were divided into three broad categories by two independent coders: progress, commitment and self-efficacy. The inter-rater reliability indicated near-perfect agreement ( $\kappa = .86$ ).

### 2.2.3 | Additional inclusion criteria

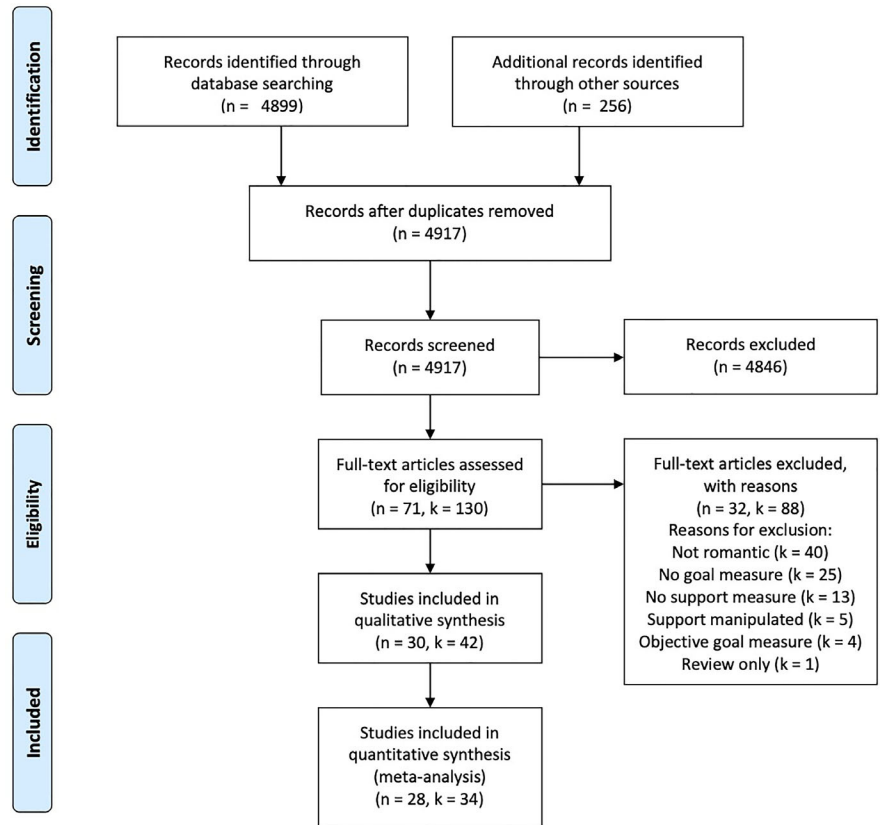
We required studies to report a correlation coefficient. If it was unavailable, we contacted the authors to obtain an effect size and were able to obtain all correlation coefficients for relevant studies. We accepted studies that only included data from one partner, but they had to be currently in a romantic relationship and reporting about their romantic partner. Participants also had to be 18 or over. We included both cross-sectional and longitudinal studies.

## 2.3 | Coding of studies

We followed specific established meta-analytic procedures for data preparation, management and analysis (Borenstein et al., 2009). We initially developed a codebook, which was piloted alongside scoping searches. After all relevant articles were identified, two research assistants completed an Excel spreadsheet based on the codebook, each going through half the papers. The first author then went through their coding checking for any mistakes and completed any information that had not been included by the two undergraduate research assistants (the information added included primarily effect sizes given these were not always easily found). We coded for several moderator variables. Some studies included in the meta-analysis had used the same sample; the effect sizes for these studies were nested within a single sample.

<sup>1</sup> Support is visible when the partner reports providing support and the support recipient reports that they received it. Support is invisible when the partner reports providing support, but the recipient does not report receiving it. Invisible support has primarily been examined in relation to well-being and relationship dynamics rather than for goal outcomes. Indeed, for support visibility, there was only one study (Girme et al., 2013a, 2013b) that examined invisible support with goal outcomes; this was not sufficient to compare visible and invisible support or to draw any meaningful conclusions about the role of invisible support for goal outcomes. Thus, we did not include invisible support in the meta-analysis and included only visible support from Girme et al. (2013a, 2013b).

**FIGURE 1** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) systematic review checklist



## 2.4 | Measures

Almost none of the studies included in the meta-analysis used a validated questionnaire for partner support or goal progress. Most studies either used a measure that had been used in previous studies, but not validated, or created measures for their study.

### 2.4.1 | Responsiveness

We included items in this category that broadly asked participants about whether their partner was available, encouraging and responsive to their needs. These included autonomy support (Dailey, 2018a, 2018b; Williams et al., 2006), secure base support (Feeney & Thrush, 2010), affirmation (Drigotas et al., 1999) and responsiveness (Reis et al., 2004). Furthermore, we included several studies that employed observational coding schemes of responsiveness, such as coding for secure base support (Feeney & Thrush, 2010) or RC support (Feeney et al., 2017; Tomlinson et al., 2016).

### 2.4.2 | Practical support

We coded measures that only focused on practical support, which involved including something tangible or directive in this category. Examples of measures coded into this category include instrumental influence (Cappuzzello & Gere, 2018; Dailey, 2018, 2018a, b), direc-

tive support (Koestner et al., 2012) and observer-coded dependency-oriented support (Hammond & Overall, 2015).

### 2.4.3 | Negative support

We coded support measures that focused on being intrusive, interfering or providing coercive support into negative support. These included both self-reported and observer-coded intrusiveness/interference (Feeney & Thrush, 2010), observer-coded anti-RC support (Feeney et al., 2017), and negative direct and indirect support (Overall & Fletcher, 2010).

### 2.4.4 | Goal progress

Goal progress was defined as moving towards goals. Most studies used a single-item measure simply asking participants whether they had made progress or moved towards their goals. Many studies included multiple goals and asked the same question around goal progress for each goal and used an average across the responses.

### 2.4.5 | Goal commitment

Goal commitment was defined as commitment, motivation or effort towards goals. None of the studies used a validated measure but more



studies used several items to measure goal commitment compared to goal progress.

#### 2.4.6 | Self-efficacy

Self-efficacy was defined as one's belief in their ability to succeed and feeling competent and capable in achieving one's goals. Some studies used a validated measure of self-efficacy, for example, the Self-Efficacy Scale (Sherer et al., 1982, e.g. Feeney, 2004, 2007), whereas other studies asked participants about how confident or competent they felt.

### 2.5 | Moderator variables

#### 2.5.1 | Theoretical moderators

Theoretical moderators included support type (responsiveness, practical, negative), goal outcome (progress, commitment, motivation), goal type (participant vs. experimenter-chosen) and whether it was theoretically driven or not (yes/no). We considered papers theoretical if they mentioned a theory relevant to partner support and goal outcomes and atheoretical if they either mentioned no theory or the theory was unrelated to partner support and goal outcomes (because the primary objective of the paper was focused on another topic). Theoretical papers included papers based on attachment theory (including its extension of theory of thriving through relationships; e.g. Feeney, 2004; 2007; Feeney et al., 2017), interdependence theory (e.g. Cappuzzello & Gere, 2018; Drigotas et al., 1999) and self-determination theory (e.g. Hammond & Overall, 2015; Koestner et al., 2012). We also included age and relationship length as moderators.

#### 2.5.2 | Methodological moderators

We collected data for the following methodological moderators. Prior scale validation was divided into single item, ad hoc (created for the study, only reliability reported), reasonable (validated within the study or has been used in previous research) and strong (prior validation study). We also included Cronbach's alpha, number of scale items within each scale, number of scale points in Likert scales, whether the measure was self- or observer-reported, cross-sectional/longitudinal/diary study, sample size, publication status, student/community and dyadic/individual.

### 2.6 | Risk of bias in individual studies

Risk of bias is more likely to occur with low-quality studies and therefore assessment of the quality of individual studies is usually included in meta-analyses (Shamseer et al., 2015). We are aware of no standardized protocol tool to assess quality specifically in social psychology and thus we use criteria that have been used in other meta-analyses in the field (Molloy et al., 2013). We included several items

that assessed the quality of the study measures. Research assistants coded the quality of the studies based on six criteria. Each criterion was worth one point and the results were rounded up to the nearest integer.

1. Sufficient sample size (below 85 or above 85).<sup>2</sup>
2. Questionnaire for partner support: the study used either a well-established questionnaire or the authors reported how the questionnaire was devised and Cronbach's alpha of the scale was at least .70. No point was given if the study used a single-item measure.
3. Questionnaire for goal outcome: either a well-established questionnaire or the authors reported how the questionnaire was devised and Cronbach's alpha of at least .70. No point was given if the study used a single-item measure.
4. Prospective design (longitudinal or daily diary). Cross-sectional designs can suffer from shared method variance, which makes the effect sizes larger than the real association between variables (Orben & Lakens, 2020).
5. Multiple reporters (e.g. both partners, observer).

### 2.7 | Meta-analytic procedures

We used the *R* package *metafor* (Viechtbauer, 2010) to analyse the results and followed the guidance by (Quintana, 2015) and a recent meta-analytic review by (Sakaluk et al., 2020). Given that we expected the effect sizes to vary across studies instead of having a single true effect size, we used a random-effects model in which each standardized zero-order correlation coefficient was weighted by its inverse variance weight (Borenstein et al., 2009). Most of the studies used a different measure of partner support and goal pursuit and there are currently no established measures for either construct, which is why a fixed-effects model would not be appropriate. The study and participant characteristics also varied across studies, making a random-effects model more appropriate.

Because the majority of the studies reported multiple effect sizes, we used a multilevel meta-analysis (Cheung, 2014) where effect sizes were nested within a sample (intra-class correlation between the two levels was .44). Using a multilevel model enabled us to: account for the dependency among effect sizes resulting in less biased estimates and more powerful tests of meta-analytic and moderator effects (López-López et al., 2017; Moeyaert et al., 2017); partition heterogeneity into between- ( $\tau^2_3$ ) and within-sample ( $\tau^2_2$ ) levels giving us greater insight into the relative amounts ( $I^2_2$  and  $I^2_3$ ) and systemic factors driving variation ( $R^2_2$  and  $R^2_3$ ) in effects; and provided greater flexibility because it does not require the researchers to know all correlations between dependent effect sizes (Becker, 2000). We also reported 95% confidence and credibility intervals for the multilevel estimates. Credibility intervals provide a more straightforward interpretation as the future correlations from the same population would be expected to fall within its range 95% of the time (Borenstein et al., 2017).

<sup>2</sup> Based on a power calculation of 80% power to detect a moderate effect size.

We addressed publication bias in studies by providing both an uncorrected and bias-corrected (PET-PEESE; Stanley & Doucouliagos, 2014) estimate of the effect size, using the funnel plot, and using the Egger's regression tests (Egger et al., 1997). In line with best practices in conducting meta-regression analyses in meta-analyses, we combined several moderator variables together rather than testing each individual moderator variable alone (Tipton et al., 2019a, 2019b). We conducted moderator tests for theoretical and methodological moderators on our uncorrected estimates. Theoretical variables were included in the model all at once but given the large number of methodological variables, we conducted three models: support-related scale variables, goal-related scale variables and other methodological variables. We have also provided the average effect for each of the support measures and used goal outcome as a moderator.

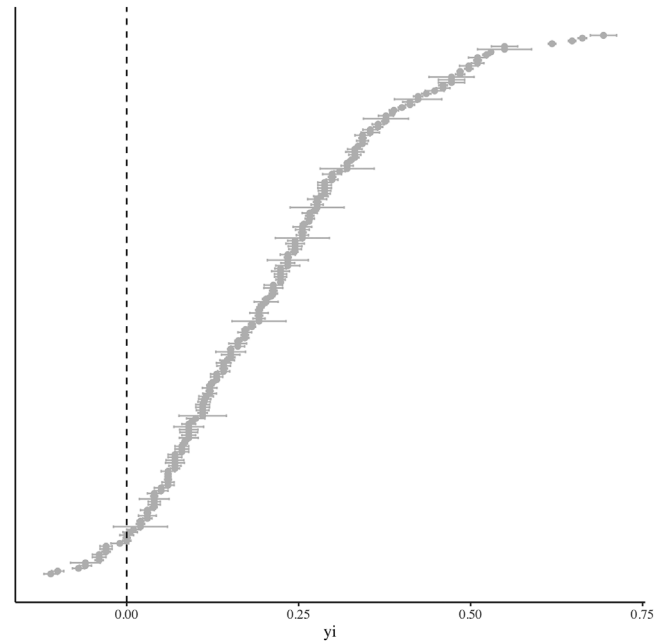
### 3 | RESULTS

#### 3.1 | Meta-analytic estimates for the total effect

Our final sample included a total of 36 studies with 195 effect sizes from 10,130 participants (see Table 1 for sample characteristics and Table 2 for estimates). Effect sizes for negative support were all reverse scored for the total effect. The effect sizes ranged between  $r = -.11$  ( $Z_r = -.11$ ) to  $r = .60$  ( $Z_r = .69$ ). We used a caterpillar plot (see Figure 2) to illustrate the effect sizes from largest to the smallest because the effect size estimates would not have fitted into a more traditional forest plot. Examining the distribution of leverage (i.e. hat values) indicated that none of the effect sizes were influential outliers (Viechtbauer & Cheung, 2010). The overall naïve and PET/PEESE effect between partner support and goal outcomes was medium ( $r = .25$  and  $r = .24$ , respectively). The effect sizes were extremely heterogeneous with the 95% credibility interval suggesting that correlations in future studies would most likely be positive but with a possibility of some null effects.

#### 3.2 | Theoretical moderator analyses

The majority of the theoretically driven moderator analyses (see Table 3 for the full results) were significant and explained most of the heterogeneity in the meta-analysis;  $QM(8) = 201.31, p < .001$ . We estimated the average effect sizes for each support type in separate analyses. The association between both responsiveness and practical support and goal outcomes was moderate ( $r = .27$  and  $r = .22$ , respectively), whereas negative support had a small negative association ( $r = -.14$ ) with goal outcomes. The correlation between support and goal outcomes was smaller for negative support even when it was not reverse coded. For responsiveness, the heterogeneity was evenly located in between- and within-sample whereas for practical and negative support, the heterogeneity was higher in within-sample than between-sample. For responsiveness and practical support, the credibility interval suggested a positive effect with a small possibility of a null effect



**FIGURE 2** Caterpillar plot of all Fisher-transformed correlations and their 95% confidence intervals. Note: Effect sizes are arranged from most positive to most negative. Vertical dashed line corresponds to correlation of 0. Negative support is reverse-scored

whereas the credibility interval for negative support ranged from a medium negative effect to a small positive effect. Except for negative support, the bias-corrected effect sizes were similar for the total effect as well as responsiveness and practical support. However, the bias-corrected value for negative support was more negative ( $r = -.26$ ) than the uncorrected estimate.<sup>3</sup>

We also examined whether the effect of goal outcomes type moderated the association between support and goal outcomes across any of the support categories. There was no difference between goal outcome categories for responsiveness. However, practical support had a significantly smaller correlation with self-efficacy ( $Z_r = .05$ ) compared to progress ( $Z_r = .25$ ;  $b = -.20^{**} [-.34, -.06]$ ) and commitment ( $Z_r = .25$ ;  $b = -.20^{**} [-.34, -.06]$ ), but commitment and progress did not significantly differ ( $b = .004 [-.09, .10]$ ). Negative support had a significantly larger negative correlation with commitment ( $Z_r = -.14$ ) compared to progress ( $Z_r = -.11$ ;  $b = -.10^{**} [-.18, -.03]$ ) and self-efficacy ( $Z_r = -.06$ ;  $b = -.15^{**} [-.25, -.06]$ ), but self-efficacy and progress did not significantly differ ( $b = .05 [-.05, .15]$ ).

Additionally, the results showed that when a study presented a theoretical foundation for the research, the effect size was greater than when there was no explicit theoretical basis for the research. Samples with older participants had a significantly smaller effect size compared to samples with younger participants. In contrast, samples in which participants had been in their relationship longer had a significantly

<sup>3</sup> Because of the large difference between the naïve and bias-corrected (PET/PEESE) values of negative support, we examined potential publication bias in the negative support further. The variance across the effect sizes significantly predicted the effect size estimate, suggesting that there may be some publication bias present ( $p = .049$ ). A funnel plot was somewhat asymmetrical, but this may just be due to a small number of samples that examined negative support.

TABLE 1 Study characteristics

| Study ID | Authors                       | Year    | N    | Mean age | Relationship length (months) | Study design    | Measures    | Unit       | Published | Country     | Quality |
|----------|-------------------------------|---------|------|----------|------------------------------|-----------------|-------------|------------|-----------|-------------|---------|
| 1        | Avivi                         | 2009    | 240  | 27.19    | 29.06                        | Prospective     | Target only | Dyadic     | No        | USA         | 4       |
| 2        | Brunstein et al.              | 1996.1  | 60   | 23       | 32.88                        | Prospective     | Target only | Individual | Yes       | Germany     | 2       |
| 3        | Buhler et al. <sup>a</sup>    | 2018    | 505  | 47.2     | 242.4                        | Cross-sectional | Target only | Individual | Yes       | Switzerland | 2       |
| 4        | Cappuzzello and Gere          | 2018    | 594  | 21.2     | 2.95                         | Prospective     | Target only | Dyadic     | Yes       | Canada      | 3       |
| 5        | Cazzell                       | 2017    | 1680 | NA       | 132                          | Cross-sectional | Target only | Dyadic     | No        | USA         | 3       |
| 6        | Dailey et al.                 | 2016    | 53   | 34.28    | 105.96                       | Daily diary     | Target only | Individual | Yes       | USA         | 3       |
| 7        | Dailey                        | 2018a.2 | 298  | 35.57    | 118.44                       | Cross-sectional | Target only | Individual | Yes       | USA         | 3       |
| 8        | Dailey                        | 2018b   | 389  | 34.6     | 103.56                       | Cross-sectional | Target only | Individual | Yes       | USA         | 3       |
| 9        | Drigotas et al.               | 1999.1  | 106  | 19.94    | 19.17                        | Prospective     | Target only | Dyadic     | Yes       | USA         | 4       |
| 10       | Drigotas et al.               | 1999.2  | 218  | 18.83    | 19.17                        | Prospective     | Target only | Individual | Yes       | USA         | 3       |
| 11       | Drigotas                      | 2002    | 63   | 19.1     | 18.1                         | Cross-sectional | Target only | Individual | Yes       | USA         | 1       |
| 12       | Feeney <sup>b</sup>           | 2004    | 232  | 27.5     | 52.8                         | Cross-sectional | Observer    | Dyadic     | Yes       | USA         | 3       |
| 13       | Feeney <sup>c</sup>           | 2007.2  | 334  | 39.2     | 122.4                        | Prospective     | Observer    | Dyadic     | Yes       | USA         | 3       |
| 14       | Feeney et al.                 | 2017    | 226  | 38.26    | 144                          | Prospective     | Observer    | Dyadic     | Yes       | USA         | 5       |
| 15       | Hammond and Overall           | 2015    | 200  | 22.5     | 39.36                        | Cross-sectional | Target only | Dyadic     | Yes       | New Zealand | 2       |
| 16       | Hofmann et al.                | 2015.1  | 224  | 24.03    | 31.32                        | Daily diary     | Target only | Dyadic     | Yes       | USA         | 3       |
| 17       | Jakubiak and Feeney           | 2016.1  | 394  | 27.4     | 4.6                          | Daily diary     | Target only | Dyadic     | Yes       | USA         | 4       |
| 18       | Jakubiak and Feeney           | 2016.2  | 476  | 70       | 480                          | Daily diary     | Target only | Dyadic     | Yes       | USA         | 4       |
| 19       | Koestner et al.               | 2012.1  | 116  | 21.52    | NA                           | Prospective     | Target only | Dyadic     | Yes       | Canada      | 4       |
| 20       | Kumashiro et al. <sup>d</sup> | 2007    | 374  | 26.97    | 38                           | Prospective     | Target only | Dyadic     | Yes       | USA         | 3       |
| 21       | Low et al.                    | 2017.1  | 146  | 21.71    | 36                           | Prospective     | Target only | Individual | Yes       | New Zealand | 4       |
| 22       | Low et al.                    | 2017.2  | 200  | 23.31    | 39.36                        | Prospective     | Target only | Dyadic     | Yes       | New Zealand | 4       |
| 23       | Mitchell                      | 2007.1  | 69   | 18       | 13.05                        | Prospective     | Target only | Individual | No        | USA         | 1       |

(Continues)



TABLE 1 (Continued)

| Study ID | Authors                     | Year    | N   | Mean age | Relationship length (months) | Study design    | Measures    | Unit       | Published | Country     | Quality |
|----------|-----------------------------|---------|-----|----------|------------------------------|-----------------|-------------|------------|-----------|-------------|---------|
| 24       | Overall and Fletcher        | 2010    | 202 | 21.9     | 24                           | Prospective     | Target only | Individual | Yes       | New Zealand | 3       |
| 25       | Overall et al.              | 2010.1  | 150 | 22.09    | 23.1                         | Cross-sectional | Target only | Individual | Yes       | New Zealand | 2       |
| 26       | Overall et al. <sup>e</sup> | 2010.2  | 122 | 23.38    | 33.67                        | Prospective     | Observer    | Dyadic     | Yes       | New Zealand | 2       |
| 27       | Ruvolo & Brennan            | 1997    | 322 | 19.85    | 15.8                         | Prospective     | Target only | Dyadic     | Yes       | USA         | 4       |
| 28       | Sadikaj et al.              | 2015    | 186 | 29.09    | 50.69                        | Prospective     | Target only | Dyadic     | Yes       | USA         | 4       |
| 29       | Tomlinson et al.            | 2016.1  | 406 | 39.08    | 150.24                       | Prospective     | Observer    | Dyadic     | Yes       | USA         | 5       |
| 30       | Tomlinson et al.            | 2016.2  | 458 | 27.04    | 4.6                          | Prospective     | Observer    | Dyadic     | Yes       | USA         | 4       |
| 31       | Vowels                      | 2018.2  | 183 | 22.05    | 22                           | Prospective     | Target only | Dyadic     | No        | USA         | 4       |
| 32       | Vowels                      | 2018.3  | 152 | 33.88    | 72                           | Prospective     | Target only | Dyadic     | No        | USA         | 4       |
| 33       | Vowels et al.               | 2021a   | 200 | 36.50    | 133.20                       | Prospective     | Target only | Individual | Yes       | UK          | 4       |
| 34       | Vowels et al.               | 2021b.1 | 148 | 20.50    | 16.90                        | Cross-sectional | Target only | Dyadic     | No        | USA         | 4       |
| 35       | Vowels et al.               | 2021b.2 | 374 | 39.65    | 165.49                       | Cross-sectional | Target only | Dyadic     | No        | USA         | 4       |
| 36       | Winterheld and Simpson      | 2016    | 190 | 23.21    | 31.22                        | Cross-sectional | Observer    | Dyadic     | Yes       | USA         | 3       |

Note. If a report included more than one sample, the sample is denoted numerically after the year. If the same authors completed multiple studies in the same year, these are denoted in alphabetic letters. The sample size for each study may not reflect the number of participants reported in the manuscript as the sample size is based on the sample size used for the correlations. In studies that use the same sample, the largest available *n* is reported here but the earliest manuscript is used for citation.

<sup>a</sup>Sample also used in Bühler et al. (2020).

<sup>b</sup>Sample also used in Feeney (2007, Study 1).

<sup>c</sup>Sample also used in Feeney and Thrush (2010).

<sup>d</sup>This sample is also used in Righetti et al. (2010, 2014); Rusbult, Kumashiro, et al. (2009); Vowels (2018).

<sup>e</sup>The same sample is also used in Girmet et al. (2013).

**TABLE 2** Meta-analytic sample description, estimates, and heterogeneity for entire sample and for each support type

|                                  | Partner support (all effects) | Responsiveness | Practical   | Negative     |
|----------------------------------|-------------------------------|----------------|-------------|--------------|
| Meta-analytic sample             |                               |                |             |              |
| Number of samples                | 36                            | 34             | 11          | 11           |
| Number of effects                | 195                           | 129            | 30          | 36           |
| Number of participants           | 10130                         | 9310           | 2720        | 2707         |
| Meta-analytic estimates          |                               |                |             |              |
| Uncorrected                      | .25                           | .27            | .22         | -.14         |
| Confidence interval              | (.21, .29)                    | (.22, .31)     | (.16, .28)  | (-.20, -.08) |
| Credibility interval             | (-.05, .54)                   | (-.03, .56)    | (-.03, .47) | (-.38, .11)  |
| Bias-corrected                   | .24                           | .27            | .20         | -.26         |
| Heterogeneity                    |                               |                |             |              |
| Between-sample: $\tau^2_3/I^2_3$ | .010/.37                      | .011/.41       | .003/.14    | .005/.29     |
| Within-sample: $\tau^2_2/I^2_2$  | .012/.48                      | .012/.45       | .013/.66    | .010/.50     |

higher effect size. While longer relationship length, when examined alone, was predictive of a smaller association, when both relationship length and age were accounted for simultaneously, the moderation by relationship length switched direction to positive. This is likely to be because age explained all the variance in the outcome given that age and relationship length are highly positively correlated.

### 3.3 | Overall measurement quality

Most of both support and goal outcome scales had adequate reliability (above .70), but only 26.7% and 16.9% of the support and goal outcome scales, respectively, had been validated in a previous study. Most goal outcomes were measured using a single item (59.5%), whereas partner support was more likely to be measured using a scale that had been

adapted from a previous study but not validated either in the current or previous study. On average, the support scales had 6.24 items and 6.97 scale points whereas the goal outcome scale had an average of 2.47 items and 10.37 scale points. For goal outcome, the mean was not meaningful because most goal progress items were single items whereas most studies measured self-efficacy using a multi-item validated questionnaire. Some studies also measured progress on a scale from 0 to 100 whereas most other goal outcomes were scored on maximum of 0–10 scale.

### 3.4 | Methodological moderator analyses

We evaluated the different methodological moderators in three different models: variables related to (1) support scale, (2) goal outcome

**TABLE 3** Theoretical moderator tests for correlations between partner support and goal outcomes

| Moderator                      | k   | %    | r    | b      | 95% CI           | p     |
|--------------------------------|-----|------|------|--------|------------------|-------|
| Support type (responsiveness)  | 129 | 66.2 | .27  |        |                  |       |
| Practical                      | 30  | 14.4 | .22  | -0.028 | (-0.089, 0.033)  | .365  |
| Negative                       | 36  | 18.5 | -.14 | -0.340 | (-0.395, -0.285) | <.001 |
| Goal outcome (progress)        | 94  | 48.2 | .24  |        |                  |       |
| Self-efficacy                  | 44  | 22.6 | .16  | -0.040 | (-0.092, 0.013)  | .137  |
| Goal commitment                | 57  | 29.2 | .21  | -0.007 | (-0.059, 0.045)  | .802  |
| Goal type (participant-chosen) | 124 | 63.6 | .24  |        |                  |       |
| Experiment-chosen              | 71  | 36.4 | .17  | 0.006  | (-0.048, 0.059)  | .839  |
| Theory (no)                    | 51  | 26.2 | .19  |        |                  |       |
| Yes                            | 144 | 73.8 | .22  | 0.090  | (0.027, 0.152)   | .005  |
| Age (years)                    |     |      |      | -0.016 | (-0.023, -0.009) | <.001 |
| Relationship length (months)   |     |      |      | 0.001  | (0.000, 0.002)   | .003  |

Note. The total  $R^2$  for the model compared against the uncorrected meta-analytic estimate on the same (reduced) sample of effects where moderator data were present was .98. The values represent unstandardized meta-regression coefficients. The total number of effect sizes included in the analysis was 192 and all moderator variables were entered into the model simultaneously.

**TABLE 4** Methodological moderator tests for correlations between partner support and goal outcomes

| Moderator   | Total | %    | <i>r</i> | <i>b</i> | 95% CI           | <i>p</i> |
|---|-------|------|----------|----------|------------------|----------|
| <b>Support scales (<math>R^2 = .24, k = 148</math>)</b>     |       |      |          |          |                  |          |
| Reliability ( $M = 0.87, SD = .07, .62-.97$ )               | 148   |      |          | 0.294    | (-0.251, 0.840)  | .290     |
| Number of scale items ( $M = 6.24, SD = 4.30, 1-20$ )       | 193   |      |          | -0.007   | (-0.019, 0.006)  | .291     |
| Number of scale points ( $M = 6.94, SD = 1.87, 5-11$ )      | 193   |      |          | 0.019    | (-0.008, 0.046)  | .159     |
| Scale development (single item)                             | 23    | 11.8 | .19      |          |                  |          |
| Ad hoc  | 42    | 21.5 | .24      | -0.043   | (-0.209, 0.123)  | .610     |
| Reasonable  | 78    | 40.0 | .17      | -0.112   | (-0.273, 0.050)  | .175     |
| Strong  | 52    | 26.7 | .26      | -0.093   | (-0.235, 0.049)  | .200     |
| <b>Goal outcome scales (<math>R^2 = .06, k = 92</math>)</b> |       |      |          |          |                  |          |
| Reliability ( $M = 0.83, SD = .09, .56-.95$ )               | 92    |      |          | -0.044   | (-0.595, 0.506)  | .874     |
| Number of scale items ( $M = 2.47, SD = 3.95, 1-23$ )       | 195   |      |          | -0.013   | (-0.023, -0.002) | .017     |
| Number of scale points ( $M = 10.37, SD = 17.58, 2-101$ )   | 195   |      |          | 0.008    | (-0.200, 0.173)  | .630     |
| Scale development (single item)                             | 116   | 59.5 | .22      |          |                  |          |
| Ad hoc  | 27    | 13.8 | .17      | -0.068   | (-0.173, 0.036)  | .200     |
| Reasonable  | 19    | 9.7  | .27      | -0.080   | (-0.211, 0.051)  | .230     |
| Strong  | 33    | 16.9 | .18      | 0.005    | (-0.161, 0.171)  | .955     |
| <b>Other moderators (<math>R^2 = .40, k = 195</math>)</b>   |       |      |          |          |                  |          |
| Correlation type (cross-sectional)                          | 135   | 69.2 | .24      |          |                  |          |
| Diary   | 16    | 8.2  | .10      | -0.100   | (-0.199, -0.001) | .048     |
| Longitudinal  | 44    | 30.8 | .15      | -0.105   | (-0.161, -0.049) | <.001    |
| Reporter (target)   | 145   | 74.4 | .22      |          |                  |          |
| Observer  | 50    | 25.6 | .19      | -0.059   | (-0.119, 0.002)  | .056     |
| Sample size ( $M = 261.82, SD = 155.27, 53-1680$ )          |       |      |          | 0.000    | (-0.000, 0.000)  | .119     |
| Publication status (published)                              | 183   | 93.8 | .20      |          |                  |          |
| Unpublished   | 12    | 6.2  | .33      | 0.034    | (-0.077, 0.144)  | .550     |
| Sample (student)  | 53    | 92.7 | .24      |          |                  |          |
| Community   | 142   | 7.3  | .20      | -0.075   | (-0.156, 0.006)  | .070     |
| Sample (individual)   | 77    | 39.5 | .19      |          |                  |          |
| Dyadic  | 118   | 60.5 | .23      | 0.081    | (0.003, 0.158)   | .042     |

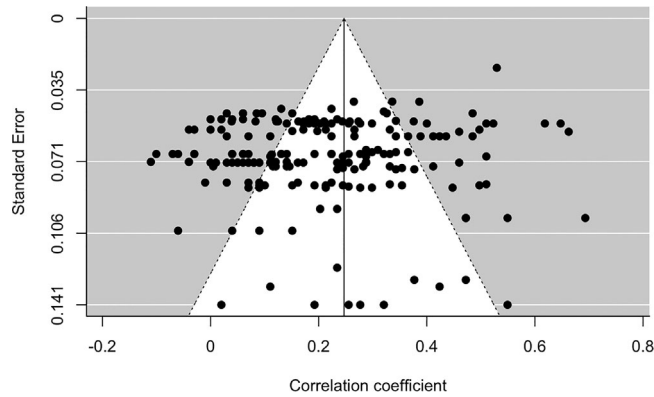
*Note.* The mean, standard deviation and range are presented for continuous variables along with the total number of effect size estimates. For binary and categorical variables, percentage, number of effect sizes and the actual correlation estimate are displayed in the table. The total  $R^2$  for the model compared against the uncorrected meta-analytic estimate on the same (reduced) sample of effects where moderator data were present. The values represent unstandardized meta-regression coefficients. The models were estimated for three groups of moderators: support scales, goal outcome scales and other moderators. We also estimated the first two models excluding reliability from the analyses (resulting in  $k = 193$ ) given the reduced sample size, but this did not change the significances of the variables.

scale and (3) other methodological considerations (see Table 4 for the full results<sup>4</sup>). We also assessed publication bias and study quality. Most of the methodological moderators were non-significant. Higher number of scale items in the goal outcomes predicted a smaller effect size compared to using a smaller number of items. Additionally, both daily diary and longitudinal correlations were significantly smaller compared to cross-sectional estimates. Finally, the effect sizes were larger in dyadic compared to individual samples.

<sup>4</sup> For interested readers, the results file on the OSF includes results for each moderator variable separately.

### 3.4.1 | Publication bias

Publication status did not significantly moderate the correlation between partner support and goal outcomes. To further evaluate potential evidence for publication bias, we used funnel plots and the Egger's regression test. Funnel plots are often used to visually identify any asymmetry in meta-analyses (Light & Pillemer, 1984). Studies should be equally distributed around the centre of the funnel plot. A visual inspection of the funnel plot (Figure 3) in the present meta-analysis did not suggest any publication bias. Consistent with the funnel plot, the Egger's regression test (Egger et al.,



**FIGURE 3** Funnel plot to identify potential publication bias

1997) also did not show any publication bias ( $b = 2.07 [-7.72, 11.86]$ ,  $p = .679$ ).

### 3.4.2 | Study quality

We divided studies into three categories based on six quality criteria. Category 1 indicated the lowest quality studies and category 3 highest quality studies. Most studies were medium quality (58%) and only four of the 36 studies were low quality. Study quality was not a significant moderator of the association between partner support and goal outcomes ( $b = -0.05 [-0.18, 0.02]$ ,  $p = .144$ ;  $QM [1] = 2.14$ ,  $p = .144$ ).

## 4 | DISCUSSION

Our meta-analysis suggests that partner support is moderately associated with goal outcomes. Responsiveness and practical support were both positively associated with goal outcomes and did not differ significantly, whereas negative support was negatively associated with goal outcomes and was significantly different from responsiveness and practical support by having a weaker overall effect. While the results were consistently and considerably heterogeneous, they showed that we would expect a small to moderate positive correlation in most future studies. Some of the theoretical moderator variables were significant and explained the substantial amount of heterogeneity. Most of the methodological variables were not significant moderators.

### 4.1 | Evaluating current theories of partner support and goal outcomes

All major theories that address partner support (interdependence, attachment, self-determination and RC support theories), while conceptualizing partner support slightly differently, agree that responsiveness is positively, and negative support negatively associated with goal outcomes, in line with the meta-analysis findings. However, these theories, while they can account for practical support, have tended to focus less on practical support compared to emotional support, suggesting

that practical support would have a smaller association with goal outcomes. However, Feeney and Collins (2015) suggested that partners should take an active role in each other's goal pursuit by providing both emotional and practical support. The meta-analysis showed that responsiveness and practical support had a similar effect size, thus supporting this proposition.

However, while responsiveness predicted progress, commitment and self-efficacy equally, the association was different for practical support depending on the goal outcome. Practical support similarly predicted progress and commitment, but the association was significantly smaller for self-efficacy. Some researchers have suggested that partner support can at times have negative consequences because it can hinder self-efficacy (Bolger & Amarel, 2007; Bolger et al., 2000; Feeney, 2004; Rafaeli & Gleason, 2009). Our results provide no support for this hypothesis for responsiveness, but the results are more mixed for practical support. While we did not find that practical support hindered self-efficacy, the effect size was much smaller, suggesting that practical support may hinder self-efficacy for some people, or that there is no association. Future research should examine potential individual differences to understand for whom practical support may hinder self-efficacy.

As expected, negative support was negatively associated with all goal outcomes. Interestingly, negative support seemed to be particularly dampening of commitment towards goals. This may be because negative support signals to the recipient that their partner does not wish them to pursue the goal. Indeed, previous research has shown that goal conflict in relationships predicts less commitment towards goals (Gere & Impett, 2018), and partners are more likely to provide negative support when goals may take the partner away from the relationship (Feeney et al., 2013).

Furthermore, we also examined several other moderators, but most were not significant apart from age. Several researchers have suggested that goal progress is likely to be higher in early adulthood and support is likely to be more important in the early stages of the relationship, but the importance may decline over time (Bühler et al., 2018; Jakubiak et al., 2020). In line with this suggestion, we found that older individuals benefited significantly less from partner support towards goal outcomes compared to younger people.

### 4.2 | Methodological critique

Most of the studies that were included in the present meta-analysis were overall relatively well conducted and adequately powered. However, one of the major weaknesses was the lack of psychometrically validated measures. This is important because measurement is a crucial component in producing replicable findings but many psychological constructs fail crucial validity tests (Flake & Fried, 2020). A recent analysis of popular measures in social and personality psychology showed that only 60% of the measures indicated good validity and only 33% had a replicable factor structure (Hussey & Hughes, 2020). Very few studies included in the present meta-analysis used measures that had been previously validated, many measures were made up for the specific study or modified from previous research, and nearly half of the effect sizes relied on a single-item measure of goal outcomes.

Furthermore, most studies used different measures, making it difficult to compare effect sizes across studies. Therefore, one of the major tasks for the future is to develop and thoroughly validate measures and test our theories using measures that are replicable and generalizable.

Only a minority of the methodological moderators were significant. Cross-sectional effect sizes were generally larger compared to both diary and longitudinal effect sizes, which would be expected given that most effects tend to decline over time (e.g. Joel et al., 2020). Additionally, cross-sectional variables often include shared method variance because they have been collected at the same time, which artificially inflates the correlations between variables (Orben & Lakens, 2020). We would not necessarily expect these methodological moderators to be significant given the large amount of heterogeneity already present in the data. Additionally, better-designed studies usually provide a more accurate estimate of an effect compared to less well-designed studies. However, this does not necessarily mean that the effect is smaller or larger, only that the effect has less uncertainty associated with it.

### 4.3 | Limitations and directions for future research and theory building

The present meta-analysis had several strengths, including preregistration of the protocol, combining a range of different research strands from different theoretical perspectives, using multilevel modelling enabling us to account for the non-independence of effect sizes in each study, obtaining all relevant correlations from study authors as well as some unpublished studies, and no apparent publication bias. However, while meta-analyses are generally considered better evidence for a phenomenon than any single study (Borenstein et al., 2009), the results can only be as good as the studies that are included in the review. In this instance, the lack of validated measures is certainly a limitation.

Furthermore, many of the studies have not included different types of support or goal outcomes in the same study, making most of the comparisons between- rather than within-studies. This makes it more problematic to directly compare the support and goal outcomes across studies as they may reflect differences in the study design rather than true differences in the constructs themselves. However, the few studies that have assessed responsiveness, practical support and negative support together have found similar results to the present meta-analysis, suggesting that the differences across support measures cannot be explained by differences across studies alone (see Dailey, 2018b; Feeney, 2007; Overall et al., 2010).

Additionally, some of the variables had only been used in a small number of studies, which limits the confidence in these findings until further research has been conducted, especially regarding commitment and self-efficacy. Therefore, future research is needed to further investigate the differences across practical and negative support and self-efficacy and commitment as there were fewer studies including these types of support and goal outcomes. For example, practical support that is directed towards the goal (e.g. providing advice) may be different from practical support that is designed to remove obstacles (e.g.

taking care of children while the other partner goes for a run). There were also several moderator categories with a small number of studies (e.g. unpublished, daily diary), which limited the power for these analyses. Furthermore, because only 20% of the effect sizes were longitudinal, we were unable to examine whether the length of the follow-up period would be associated with the effect sizes. Thus, it would be interesting in future research to examine whether the effect size between partner support and goal outcomes decreases as a result of the follow-up period.

Finally, while we tested for several different moderators, it was not possible to examine potential individual difference variables (e.g. attachment style, self-esteem, regulatory focus) beyond demographics or support visibility due to the small number of studies assessing these variables. For example, previous research has shown that individuals higher in attachment avoidance are more comfortable with practical rather than emotional support (Girme et al., 2015) and individuals who are more promotion-oriented (i.e. they focus on positive gains) perceive their partners as more supportive and make more progress towards goals (Righetti et al., 2010).

### 4.4 | Implications for theory and practice

There are several theoretical implications that arise from the results of the meta-analysis. Overall, the findings provide support for relational models of goal pursuit (attachment theory, interdependence theory, self-determination theory), suggesting that close others can play an active role in the pursuit of opportunities and have a function beyond simple social pressure advocated by the more traditional goal pursuit models (such as the theory of reasoned goal pursuit). Furthermore, we found that responsiveness and practical support had a similar-sized effect for commitment and goal progress. It appears that, at least if the practical support does not interfere or is not experienced as coercive and controlling, practical support is equally important for goal outcomes, at least in the short term. However, responsive support may have additional benefits in also bolstering confidence in the recipient's own ability to pursue goals. Practical support may be less helpful for increasing confidence possibly because it may be easier to attribute any progress made to partner's help.

Prior meta-analyses on goal outcomes have found that intention to implement a goal was moderately ( $d = .65$ ) associated with goal attainment (Gollwitzer & Sheeran, 2006) and goal setting predicted behaviour change with a small effect size (Epton et al., 2017). The association between partner support and goal outcomes in the present meta-analysis (converted effect size of  $d = .52$ ) was similar in size to having a strong intention to achieve a goal. This is particularly interesting given that intentions are one of the largest predictors of behaviour (Ajzen, 1985, 1991). The meta-analysis suggests that support from close relationship partners can be just as important for goal outcomes as individual characteristics highlighting the importance of considering partner support when addressing goal outcomes or attempting to change an individual's behaviour. This can have implications for theory as well as a wide range of applications such as changing health

behaviours, improving performance in the workplace or in education, or improving attendance and motivation towards therapy.

Humans spend much of their lives working towards various goals (e.g. education, career, relationships) that have important implications for their overall well-being. Therefore, it is important to address factors that can contribute to an optimal environment for individuals to thrive. One way of contributing to this environment is to ensure that partners are aware of each other's goals and know how to provide effective and responsive support towards these goals. Therapists working with individuals and couples should, therefore, address each partner's and the relationship's goals and how each partner can be supportive towards these goals.

## 5 | CONCLUSION

In conclusion, we found that the average association between partner support and goal outcomes was moderate. Responsiveness and practical support had similar outcomes overall with negative support being negatively associated with goal outcomes. There were also differences in these support types across goal outcomes. We have discussed the implications of the findings in relation to most relevant relationship theories. The result provides support for all four main theories, suggesting that both responsive and practical support are beneficial for goal outcomes but only responsive support is also beneficial for self-efficacy. While most of the studies included in the meta-analysis were of high quality overall, very few of them included validated measures of the constructs and tended to use different definitions of support, so making comparisons between studies difficult. Future research is needed to establish how much support and when is the most beneficial for goal outcomes and for developing validated questionnaires to measure the constructs.

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## CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

## ETHICS STATEMENT

The manuscript presents results from a meta-analysis and does not present original data. APA ethical standards and MARS guidelines for reporting meta-analyses were followed in the conduct of the study.

## DATA AVAILABILITY STATEMENT

All data, code and materials are published on the Open Science Framework: <https://osf.io/p3287/>.

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