Preregistered Replication of Stoeber (2012): Dyadic Perfectionism in Romantic
Relationships

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Abstract

The present study reports a preregistered replication of a study by Stoeber (2012) investigating the relationships between dyadic perfectionism, relationship satisfaction and longterm commitment. Our study included 71 couples in a dyadic design that measured actor and partner effects using multilevel regression analyses. The findings were mixed: We were able to reproduce some of the relationships reported by Stoeber, some failed to reproduce, and some new relationships were found. Participants who perceived that their partners had perfectionistic expectations of them did tend to report lower relationship satisfaction and longterm commitment. However, there was no evidence of a relationship between the degree to which participants *self-reported* having perfectionistic standards towards their partners and their *partners'* relationship satisfaction and longterm commitment.

Introduction

Perfectionism involves setting exceedingly high standards for performance, as well as making overly critical judgements (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Stoeber & Stoeber, 2009). According to Hewitt and Flett's (1991) model of perfectionism (as operationalised in the Multidimensional Perfectionism Scale or MPS), perfectionism can be divided into three dimensions: self-oriented perfectionism, other-oriented perfectionism, and socially-prescribed perfectionism. Self-oriented perfectionism is characterised by setting unrealistic standards for oneself and evaluating oneself harshly. Other-oriented perfectionism involves expecting others to achieve unrealistic standards, and critically evaluating them when these standards are not met. Socially-prescribed perfectionism is the belief that others have excessively high standards for oneself, and that others will judge oneself harshly if these standards are not met.

Perfectionism can be adaptive, helping individuals to achieve high standards in their work and other activities—as long as limitations that constrain the capacity to actually reach perfection are recognised and accepted (Hamachek, 1978). However, perfectionism can be maladaptive when a person's expectations are unrealistic, or when they are never satisfied with their performance (Hamachek, 1978). Consequently, perfectionism may in some cases have detrimental effects on mental health. For example, self-oriented perfectionism has been associated with high levels of negative affect, and low levels of positive affect (Flett, Blankstein, & Hewitt, 2009). The dimension of socially-prescribed perfectionism in particular has often been found to be associated with negative psychological outcomes. Socially-prescribed perfectionism has been repeatedly found to be positively associated with depression (e.g., Frost et al., 1993; Huggins, Davis, Rooney, & Kane, 2008; Sherry, Law, Hewitt, Flett, & Besser, 2008) and

negative affect (Flett et al., 2009; Frost et al., 1993). It has also been negatively linked with life satisfaction and wellbeing (Stoeber & Stoeber, 2009).

Perfectionism may also impact how individuals and couples function in relationships. It seems plausible, for example, that individuals who feel that their partners hold them to unreasonably high standards may grow dissatisfied and unhappy in their relationships. Several empirical studies have been dedicated to assessing the connections between dimensions of perfectionism and functioning in relationships. For example, Flett et al. (2001) examined the relationship between perfectionism and relationship beliefs and behaviours in university students (with just one participant per couple). They found that individuals who scored highly on measures of self- and other-oriented perfectionism tended to set high standards for their partners with respect to communication, trust and support.

Socially prescribed perfectionism, though, again seems to be the dimension associated with particularly problematic outcomes. Haring et al. (2003) conducted a study of 76 married couples, and amended the socially-prescribed perfectionism items of the MPS to refer to perceived expectations of the spouse (rather than others in general). They found that this measure of “spouse-prescribed perfectionism” was correlated with poorer marital coping and adjustment.

Perfectionism may even be negatively associated with relationship continuity. Lopez et al. (2006) used a reciprocal dyadic design in a study of 116 college student couples across two time points. Lopez et al. found that participants with high scores on the Discrepancy subscale of the Dyadic Almost Perfect Scale (Shea, Slaney, & Rice, 2006)—i.e., who felt that their partners fell short of their expectations—at baseline were at greater risk of ending their relationship by a second data collection point three months later. This said, this “discrepancy” measure is

obviously not a pure measure of perfectionism, and may plausibly be affected *by* relationship satisfaction.

A particularly important study investigating perfectionism in romantic relationships was conducted by Stoeber (2012). Stoeber collected data from 58 dyads (at least one of whom in each pair was a university student), and analysed their combined data using a multilevel modelling approach. In designing his study, Stoeber used a version of Hewitt and Flett's (1991) MPS adapted to ask participants about *dyadic* perfectionism (perfectionism in their romantic relationships). In this adapted version of the MPS, other-oriented perfectionism became *partner-oriented* perfectionism (the degree to which a participant has perfectionist expectations towards their partner), while socially-prescribed perfectionism became partner-prescribed perfectionism (the degree to which a participant perceives perfectionistic expectations from their partner). Self-oriented perfectionism was excluded. The outcome variables were relationship satisfaction (measured using the Relationship Assessment Scale; Hendrick, 1988) and longterm commitment (using the Relationship Agenda subscale from the Commitment Inventory; Stanley & Markman, 1992).

Stoeber's design involved an analysis of both "actor effects" (the relationship between a participant's scores on the dyadic perfectionism variables and their *own* relationship satisfaction and commitment), and "partner effects" (the relationship between a participant's scores on the dyadic perfectionism variables and their *partner's* relationship satisfaction and commitment).

Their data analyses were primarily comprised of five multilevel models:

1. A multilevel model estimating partner effects of partner-oriented perfectionism on partner-prescribed perfectionism

2. A multilevel model estimating actor effects of partner-oriented and partner-prescribed perfectionism on relationship satisfaction
3. A multilevel model estimating actor effects of partner-oriented and partner-prescribed perfectionism on longterm commitment
4. A multilevel model estimating partner effects of partner-oriented and partner-prescribed perfectionism on relationship satisfaction
5. A multilevel model estimating partner effects of partner-oriented and partner-prescribed perfectionism on longterm commitment

Stoeber found some evidence of actor effects, with negative coefficients for both partner-prescribed perfectionism and partner-prescribed perfectionism in predicting relationship satisfaction and longterm commitment (although the effect of partner-prescribed perfectionism on longterm commitment was not statistically significant). With respect to partner effects, Stoeber's abstract concluded that "The findings show that dyadic perfectionism in students' romantic relationships puts pressure on the partner and negatively affects the perception of the quality of the relationship regarding satisfaction and longterm commitment." (p. 300). However, his study did not actually find any evidence that having perfectionistic expectations of one's partner is associated with one's partner being less satisfied in the relationship, or being any less committed to it. Specifically, there were no significant effects of either partner-oriented or partner-prescribed perfectionism on either relationship satisfaction or longterm commitment. This is a surprising and important finding in that, taken at face value, it tends to suggest that having perfectionistic expectations of one's partner may damage only one's own relationship satisfaction and not one's partner's relationship satisfaction. However, Stoeber's study has not (to our knowledge) been independently replicated.

Beyond the intriguing finding mentioned in the preceding paragraph, there are several other reasons why Stoeber's study is an important target for replication. Firstly, it has been relatively influential, accruing more than 80 citations (as per Google Scholar, as at 18 December 2019). Second, its sample size was relatively small (58 couples). Third, Stoeber's study involved hypothesis-testing, but was not preregistered (see Nosek, Ebersole, DeHaven, & Mellor, 2018; Wagenmakers, Wetzels, Borsboom, van der Maas, & Kievit, 2012), meaning that it is unclear to what extent the data analyses were planned in advance as opposed to reflecting decisions made on the basis of observed data (see also Gelman & Loken, 2014). The aim of the present study was therefore to conduct a preregistered replication of Stoeber (2012).

Hypotheses

Stoeber's (2012) introduction (p. 302) included a list of relationships he "expected" to find (i.e., hypotheses). We formulated our preregistered hypotheses by taking these statements and breaking them up into their constituent parts:

Based on Stoeber's statement that "we expected both partner-oriented and partner-prescribed perfectionism to have a negative effect on relationship satisfaction and longterm commitment" we hypothesised that:

1. Partner-oriented perfectionism will have a negative effect on relationship satisfaction.
2. Partner-oriented perfectionism will have a negative effect on longterm commitment.
3. Partner-prescribed perfectionism will have a negative effect on relationship satisfaction.

4. Partner-prescribed perfectionism will have a negative effect on longterm commitment.

In retrospect, our preregistration should have more clearly signalled whether these hypotheses were for actor or partner effects. In our reported analyses, we treat these as applying to actor effects. In Stoeber's study, he found evidence of negative actor effects of both partner-oriented and partner-prescribed perfectionism on relationship satisfaction (H1, H3), but only of partner-oriented perfectionism on longterm commitment (H2).

Based on Stoeber's statement that "Regarding actor effects, we expected participants' dyadic perfectionism to have a negative effect on their own assessment of relationship satisfaction and longterm commitment" (p. 302) we hypothesised that:

5. Participants' dyadic perfectionism will have a negative effect on their own assessment of relationship satisfaction.
6. Participants' dyadic perfectionism will have a negative effect on their own assessment of longterm commitment.

Based on Stoeber's statement that "Regarding partner effects, we expected participants' dyadic perfectionism to have a negative effect on their partner's assessment of relationship satisfaction and longterm commitment." (p. 302)

7. Participants' dyadic perfectionism will have a negative effect on their partners' assessment of relationship satisfaction.
8. Participants' dyadic perfectionism will have a negative effect on their partners' assessment of longterm commitment.

For the purposes of testing hypotheses 5 to 8, we treated "dyadic perfectionism" as a composite of both partner-oriented and partner-prescribed perfectionism. Finally, based on

Stoeber's statement that "Moreover, we expected participants' partner-oriented perfectionism to have a positive effect on their partner's partner-prescribed perfectionism" (p. 302), we hypothesised that:

9. Participants' partner-oriented perfectionism will have a positive effect on their partners' partner-prescribed perfectionism, in that participants whose partner showed high levels of partner-oriented perfectionism would report higher levels of partner-prescribed perfectionism than participants whose partner showed low levels of partner-oriented perfectionism.

Post-preregistration clarification of hypotheses. It is worth noting at this point that, Stoeber phrased his hypotheses in a somewhat unusual fashion, and the way we interpreted them at the time of writing the hypotheses in our preregistration was perhaps overly literal (at least for hypotheses 1 to 8; hypothesis 9 is unproblematic). In retrospect, Stoeber's statements are perhaps better interpreted as hypothesising that both partner-oriented and partner-prescribed perfectionism have negative actor and partner effects on relationship satisfaction and longterm commitment. In this interpretation, Stoeber's use of the term "dyadic perfectionism" is just a shorthand for the two separate variables of partner-oriented and partner-prescribed perfectionism, rather than literally referring to a variable in its own right. This interpretation is then more consistent with the actual analyses that Stoeber reported, where partner-oriented and partner-prescribed perfectionism were always treated as separate predictor variables (rather than as a combined dyadic perfectionism variable, as they are in some of our hypotheses). Our Results section includes (non-preregistered) analyses testing the latter interpretation of these hypotheses, and thus replicating Stoeber's reported analyses.

Method

Design

This study used a cross-sectional dyadic survey design.

Sample Size Determination

Power analysis for multilevel models can be a relatively complex task, requiring assumptions about the structure and magnitudes of both fixed and random effects. We therefore adopted a simple heuristic approach of attempting to recruit at least as many couples as in Stoeber's study (58), with a maximum of double his sample size (116). Our preregistered data collection termination rule was as follows "Data collection will commence on the 7th November 2018. Data collection will conclude when data from a maximum of 116 couples has been collected, or on the 20th December, 2018, whichever comes first."

Participants and Procedure

This study was preregistered prior to data collection at <https://osf.io/epjk2>. Participants were recruited via posts on the researchers' personal Facebook pages, as well as Facebook pages and groups affiliated with the authors' universities, and various sporting and recreational organisations. A convenience sample was used both due to resource constraints, as well as the fact that a convenience sample was used in the original study by Stoeber (2012).

The survey itself was constructed in Qualtrics. It began with an information sheet, which indicated that participants had to be over the 18, live in Australia or New Zealand, and be in a

romantic relationship. This was followed by a consent item (participants who did not consent were screened out of the survey and their responses excluded). Participants were then asked to provide both their own initials and their partner's initials in order to allow responses to be matched during data processing. The survey then progressed to demographic items, and the main survey items (see the Measures subsection below).

We held a prize draw to compensate for participation in our study. Participants could enter the draw to win two of 30 USD\$15 Amazon vouchers (one voucher per partner in each couple, with couples only eligible for entry if both completed the survey).

There were two main differences between our study and Stoeber's study in relation to the selection of participants. First, while Stoeber recruited participants from the United Kingdom in his study, we recruited participants living in New Zealand and Australia. This provided a test of the external validity of Stoeber's findings (by replicating elsewhere in the world). In addition, the first author is a resident of New Zealand, and the second of Australia, facilitating data collection in these countries. Second, while Stoeber used a student sample for recruitment (meaning that at least one partner in each of his couples was a university student), we did not impose this restriction in our study, since there seemed to be little compelling reason to do so, and replication with non-student participants is useful for generalisability.

Our preregistered exclusion criteria stated that participants would be excluded if:

- Only one member of a dyad completed the measures (i.e., when we were unable to connect a participant to a matching partner in the dataset, they were excluded)
- One or both participants in a dyad were under 18
- One or both participants in a dyad indicated that they lived outside of New Zealand or Australia

- Either of the participants in a dyad provided no data on any of the four main study variables (partner-oriented perfectionism, partner-prescribed perfectionism, relationship satisfaction, and longterm commitment).

Initially, 401 individuals consented to participate. Of these, 164 were excluded due to not answering any of the main study items (i.e., these were participants who opened the survey and consented to participate, but almost immediately stopped responding). An additional 94 were excluded because we were unable to find a matching partner for them in the database, and one for completing the survey twice (as indicated by their initials and those they listed for their partner; this exclusion rule was not preregistered but appeared necessary). The final sample size was thus 142 participants (71 couples). Within the final sample, just 7 responses to the main study items (0.11%) were missing, and these responses were imputed using single expectation-maximisation imputation (as preregistered).

Of the 142 participants, 50% identified as male, 49% as female, and 1% as gender diverse. 45% of the sample were aged between 18 and 24, 35.2% were between 25 and 34, and the remaining participants were 35 and above. 39% of the couples were married. 74% of the participants resided in New Zealand, and the remainder in Australia. Finally, there were 64 heterosexual couples and six homosexual couples.

This study was evaluated by peer review and determined to be low risk. A low risk notification was lodged with the host institution's human ethics committee.

Measures

Partner-oriented perfectionism. Stoeber's adaptation of the other-oriented perfectionism subscale of the MPS (Hewitt & Flett, 1991) was used to measure partner-oriented perfectionism. For example, "I have high expectations for others" was changed by Stoeber to "I have high expectations for my partner". The partner-oriented perfectionism scale thus created contained 5 positively-worded items, and 9 negatively-worded items. Participants were asked to indicate their level of agreement with each item on a seven-point Likert-type scale, with response options ranging from 1 (strongly disagree) to 7 (strongly agree). Responses were averaged across items in this scale after reverse-scoring negatively-worded items.

After data collection, we discovered an error in Stoeber's partner-oriented perfectionism scale: Stoeber included an item from the self-oriented perfectionism scale in the MPS ("I set very high standards for myself"), an inadvertently excluded an other-oriented perfectionism item ("I cannot stand to see people close to me make mistakes"). Our results reported here exclude this self-oriented perfectionism item, representing a small but clearly necessary deviation from our preregistration, and meaning our scale had one fewer item than Stoeber's.

Partner-oriented perfectionism. Stoeber's adaptation of the socially-prescribed perfectionism subscale of the MPS was similarly used to measure partner-prescribed perfectionism. Again, all 15 items of this scale were adapted by Stoeber to refer to the partner (e.g. "Others expect me to succeed at everything I do" was changed to "My partner expects me to succeed at everything I do"). Participants were asked to indicate their level of agreement with each item on a seven-point scale. Responses were averaged across items after reverse-scoring five negatively-worded items to create a partner-prescribed perfectionism score.

Dyadic perfectionism. A combined dyadic perfectionism score was also created for this study, because some of our hypotheses were written based on Stoeber's (2012) hypotheses, which mentioned this variable. This dyadic perfectionism variable was created by averaging across the 29 items from the partner-oriented and partner-prescribed perfectionism scales combined, after reverse-coding negatively worded items. *Note:* Our preregistration incorrectly listed the number of negatively worded items across the partner-oriented and partner-prescribed subscales as 11; there were in fact 14.

Relationship satisfaction. To measure relationship satisfaction, the Relationship Assessment Scale (RAS; Hendrick, 1988) was used. The seven items in the RAS required participants to rate their level of satisfaction in their relationship (e.g. "How well does your partner meet your needs?") Participants were asked to indicate their responses on a five-point scale, with different anchors for each item depending on the item content. A relationship satisfaction score was created by averaging across items after reverse scoring two negatively-worded items.

Longterm commitment. To measure longterm commitment, the relationship agenda subscale from the Commitment Inventory (Stanley & Markman, 1992) was used. The six items in this subscale explored the extent to which participants wanted their relationship to continue over time (e.g. "I want to grow old with my partner"). Participants were asked to indicate their level of agreement with each item on a five-point Likert-type scale with response options ranging from 1 (strongly disagree) to 5 (strongly agree). This represented a minor and inadvertent variation from Stoeber, 2012, who used a seven-point response scale for this set of items. A score was computed for longterm commitment by averaging across items in the scale after reverse-scoring three negatively-worded items.

Statistical Analyses

The statistical analyses were conducted using R (R Core Team, 2018), using the lme4 package (Bates, Maechler, Bolker, & Walker, 2013) for multilevel models. Prior to the analyses, couples were matched according to their initials. The data was transformed into a pairwise structure, where participants' and their partners' scores were parallel to one another. A number of multilevel regression analyses were then performed to test the hypotheses. Satterthwaite degrees of freedom (Satterthwaite, 1946) were used to calculate p values for fixed effects in the multilevel models; this decision was not specifically preregistered, but replicates the approach used in Stoeber (2012), who used SPSS for analyses (SPSS applies the Satterthwaite method by default).

The scripts for data processing and analysis and a data dictionary can be found on the OSF project page at https://osf.io/z8kma/?view_only=7c37174d115f4d2182d5095deb5e6b2e. The data for this study is not openly accessible because dyadic data presents unique identifiability risks but is available on request.

Results

Preliminary Analyses

Descriptive statistics. Descriptive statistics for the entire sample are displayed in Table 1. Cronbach's alpha reliability estimates suggested that reliability was fairly high ($>.8$) for most of the scales, although the partner-oriented perfectionism scale had slightly lower reliability ($\alpha = .77$). There were relatively small correlations across partners for the perfectionism variables, but stronger correlations for relationship satisfaction and longterm commitment.

Table 1

Descriptive Statistics

Variable	Possible range	<i>M</i>	<i>SD</i>	α	r_{partner}
Partner-oriented perfectionism	1-7	3.89	0.79	.77	.23
Partner-prescribed perfectionism	1-7	2.71	0.85	.87	.27
Dyadic perfectionism ^a	1-7	3.28	0.66	.85	.41
Relationship satisfaction	1-5	4.39	0.56	.85	.69
Longterm commitment	1-5	4.63	0.58	.85	.53

Notes. *M* = mean. *SD* = standard deviation. α = Cronbach's alpha. r_{partner} = the correlation

between a participant's score on the variable and their partner's score. This table replicates Table

1 in Stoeber (2012). ^aDyadic perfectionism is a composite of partner-oriented and partner-prescribed perfectionism.

Preregistered Analyses

Our preregistered analyses involve a large number of mixed/multilevel models, for each of which a substantial quantity of output could be presented. For the sake of brevity, we have only reported the fixed effects of the predictors – i.e., the parts of the output that actually test each hypothesis – for each model in the manuscript, along with the standard deviation of the random intercept. The estimate of the fixed effect of the intercept is not shown; in every case this estimate would be zero (given that the independent and dependent variables were standardised). The use of mixed models with random intercepts across couples accounted for the presence of dependence (matched couples) in the dataset. As in Stoeber (2012), we standardised all our variables before entry into the models, and we use b' to denote standardised slopes.

Hypotheses 1 to 6 pertain to *actor* effects (i.e., the relationship between participants' scores on various dimensions of perfectionism and their *own* relationship satisfaction and longterm commitment).

Hypothesis 1. Hypothesis 1 predicted that there would be a negative effect of participants' partner-oriented perfectionism (perfectionistic expectations of their partner) on their own relationship satisfaction. This hypothesis was tested in a mixed model with participants' partner-oriented perfectionism scores as the predictor, their own relationship satisfaction as the outcome variable, and a random intercept across couples. The results showed that partner-oriented perfectionism had a significant relationship with relationship satisfaction ($b' = -0.14, p =$

.038, 95% CI [-0.27, -0.01]), meaning that hypothesis 1 was supported. The standard deviation of the random intercept across couples was 0.82.

Hypothesis 2. Hypothesis 2 predicted that there would be a negative effect of participants' partner-oriented perfectionism on their own longterm commitment. The results from a multilevel model indicated that partner-oriented perfectionism had a significant negative relationship with longterm commitment, $b' = -0.17$, $p = .023$, 95% CI [-0.32, -0.03]), supporting hypothesis 2. The standard deviation of the random intercept across couples was 0.73.

Hypothesis 3. Hypothesis 3 predicted a negative effect of participants' partner-prescribed perfectionism (perfectionistic expectations towards one's partner) on their own relationship satisfaction. The results from a multilevel model indicated that partner-prescribed perfectionism had a significant negative relationship with relationship satisfaction, $b' = -0.35$, $p < .001$, 95% CI [-0.53, -0.20], supporting hypothesis 3. The standard deviation of the random intercept across couples was 0.62.

Hypothesis 4. Hypothesis 4 predicted a negative effect of participants' partner-prescribed perfectionism on their own longterm commitment. The results from a multilevel model indicated that partner-prescribed perfectionism had a significant negative effect on longterm commitment, $b' = -0.29$, $p < .001$, 95% CI [-0.45, -0.13], supporting hypothesis 4. The standard deviation of the random intercept across couples was 0.59.

Hypothesis 5. Hypothesis 5 predicted a negative effect of participants' dyadic perfectionism (partner-oriented perfectionism and partner-prescribed perfectionism combined) on their own relationship satisfaction. The results from a multilevel model indicated that dyadic perfectionism had a significant negative effect on relationship satisfaction ($b' = -0.33$, $p < .001$,

95% CI [-0.47, -0.19]), supporting hypothesis 5. The standard deviation of the random intercept across couples was 0.70.

Hypothesis 6. Hypothesis 6 predicted a negative effect of participants' dyadic perfectionism (partner-oriented perfectionism and partner-prescribed perfectionism combined) on their own longterm commitment. The results from a multilevel model indicated that dyadic perfectionism had a significant negative effect on longterm commitment, $b' = -0.31$, $p < .001$, 95% CI [-0.46, -0.15], supporting hypothesis 6. The standard deviation of the random intercept across couples was 0.64.

Hypotheses 7 and onwards pertain to *partner* effects – i.e., the relationships between participants' scores on various dimensions of perfectionism and their *partners'* relationship satisfaction and longterm commitment scores.

Hypothesis 7. Hypothesis 7 predicted a negative effect of participants' dyadic perfectionism scores (partner-oriented and partner-prescribed perfectionism combined) on their partners' relationship satisfaction scores. This hypothesis was tested in a mixed model with participants' dyadic perfectionism scores as the predictor variable, their *partners'* relationship satisfaction scores as the outcome variable, and a random intercept across couples. Dyadic perfectionism did not have a significant partner effect on relationship satisfaction, $b' = -0.09$, $p = .243$, 95% CI [-0.27, 0.08], meaning that hypothesis 7 was not supported. The standard deviation of the random intercept across couples was 0.78.

Hypothesis 8. Hypothesis 8 predicted a negative effect of participants' dyadic perfectionism scores (partner-oriented and partner-prescribed perfectionism combined) on their partners' longterm commitment scores. The results from a multilevel model indicated that dyadic

perfectionism did not have a significant partner effect on longterm commitment, $b' = -0.11$, $p = .176$, 95% CI $[-0.29, 0.06]$, meaning that hypothesis 8 was not supported. The standard deviation of the random intercept across couples was 0.68.

Hypothesis 9. Hypothesis 9 predicted a positive effect of participants' partner-oriented perfectionism on their partners' partner-prescribed perfectionism. The results from a multilevel model indicated that participants' partner-oriented perfectionism had a significant positive partner effect on partner-prescribed perfectionism, $b' = 0.25$, $p = .003$, 95% CI $[.08, .42]$, meaning that hypothesis 9 was supported. The standard deviation of the random intercept across couples was 0.35.

Additional Analyses

In our preregistration, we focused on planning analyses that would directly test our hypotheses (which in turn had been based on Stoeber's stated hypotheses rather than his analyses, as discussed previously). This meant that our planned analyses diverged somewhat from the analyses that Stoeber actually reported (partly in the sense that several of our analyses estimated bivariate effects whereas all but one of Stoeber's models had two predictors, and partly in the sense that our preregistered analyses treated dyadic perfectionism as a composite variable in its own right). Below in Table 2 we therefore report the results of four exploratory (i.e., unpreregistered) analyses, replicating the analyses reported in Stoeber's Table 2. In this analysis there was no evidence of either actor or partner effects of partner-oriented perfectionism on either relationship satisfaction or longterm commitment, while partner-prescribed perfectionism had significant actor and partner effects on both relationship satisfaction or longterm commitment. Notably, while our results differ from Stoeber's with respect to which estimates are

statistically significant and which are not, each of the eight coefficients match the direction of the corresponding coefficient in Stoeber's analysis, and there is substantial overlap in the 95% confidence intervals for each coefficient across studies.

Table 2

Replication of Analyses Reported in Stoeber (2012) Table 2

Model/predictors	<u>Current study</u>			<u>Stoeber (2012)</u>		
	<i>b'</i>	<u>95% CI</u>		<i>b'</i>	<u>95% CI</u>	
		LL	UL		LL	UL
<i>Actor effects on relationship satisfaction</i>						
Partner-oriented perfectionism	-0.10	-0.23	0.03	-0.27*	-0.43	-0.11
Partner-prescribed perfectionism	-0.33*	-0.49	-0.18	-0.30*	-0.46	-0.14
<i>Actor effects on longterm commitment</i>						
Partner-oriented perfectionism	-0.13	-0.28	0.02	-0.16*	-0.30	-0.02
Partner-prescribed perfectionism	-0.25*	-0.42	-0.10	-0.09	-0.23	0.05
<i>Partner effects on relationship satisfaction</i>						
Partner-oriented perfectionism	0.05	-0.09	0.18	0.12	-0.06	0.30
Partner-prescribed perfectionism	-0.20*	-0.41	-0.02	-0.12	-0.30	0.06
<i>Partner effects on longterm commitment</i>						
Partner-oriented perfectionism	0.07	-0.08	0.22	0.12	-0.02	0.26
Partner-prescribed perfectionism	-0.22*	-0.40	-0.05	-0.02	-0.16	0.12

Notes. The random intercept (which varied across couples within each model) is not shown. 95% confidence intervals for the current studied were calculated using the profile method in the

current study. Confidence intervals were not provided in Stoeber (2012), and insufficient information is available in Stoeber (2012) to calculate them via the profile method, so these were calculated using the standard errors and Satterthwaite degrees of freedom provided by Stoeber.

* $p < .05$.

Discussion

The present study replicated Stoeber's (2012) research on dyadic perfectionism and relationship quality. We examined actor and partner effects of partner-oriented and partner-prescribed perfectionism on relationship satisfaction and longterm commitment. Our preregistered analyses produced findings supporting seven of our nine hypotheses. In terms of actor effects, we found very limited evidence of effects of partner-oriented perfectionism: Partner-oriented perfectionism had small and just-significant bivariate relationships on relationship satisfaction (H1) and longterm commitment (H2), but these effects became non-significant when controlling for partner-prescribed perfectionism (Table 2). These findings were not consistent with Stoeber's, who did find evidence of actor effects of partner-oriented perfectionism on both relationship satisfaction and longterm commitment even when controlling for partner-prescribed perfectionism.

In contrast, we found stronger evidence of the hypothesised negative actor effect of partner-prescribed perfectionism on both relationship satisfaction and longterm commitment, in both bivariate analyses (H3, H4) and analyses with partner-oriented perfectionism controlled (Table 2). In effect, having the perception that your partner has perfectionistic expectations towards you does seem to be associated with a lower level of relationship satisfaction and commitment. These findings are consistent with Stoeber's. These results are also in line with a

prior study which found a negative relationship between “spouse-prescribed perfectionism” and marital adjustment (Haring et al., 2003). That said, the sizes of the relationships we found were relatively modest; the largest relationship we found in our multilevel analyses was the bivariate relationship between partner-prescribed perfectionism and relationship satisfaction (H3), but the standardised regression coefficient was only -0.35. Standardised regression coefficients are conceptually similar to correlation coefficients, and a correlation of around 0.3 would typically be considered of “medium” size (see Cohen, 1988).

In terms of partner effects, we found no evidence of any effect of individuals’ self-reported partner-oriented perfectionism on their partners’ relationship satisfaction or longterm commitment. This finding is consistent with Stoeber’s. It nevertheless represents an interesting puzzle, in that it is putatively inconsistent with the actor effects of partner-prescribed perfectionism. If *perceiving* that one’s partner sets perfectionistic standards (partner-prescribed perfectionism) is associated with lower relationship quality, we would expect that participants who self-report that they do in fact have perfectionist expectations towards their partners (partner-oriented perfectionism) would have partners who report lower levels of relationship satisfaction and commitment. Yet this appears not to be the case. Why this is so is unclear, but a relevant piece of information is the relatively weak partner effect of partner-oriented perfectionism on partner-prescribed perfectionism (H9). In other words, there was only a small relationship ($b' = 0.27$) between participants’ self-reports of the degree to which they set perfectionistic standards for their partners and the degree to which their partners *perceived* that they set perfectionistic standards. Whether a person’s self-reports of their perfectionistic expectations or their partner’s perceptions of those expectations is the more accurate measurement is an open (and perhaps unresolvable) question, but our study tentatively suggests

that is the partner's perceptions which actually seem to matter in terms of relationship satisfaction and commitment.

Contradicting Stoeber's findings, we did find evidence of negative *partner* effects of partner-prescribed perfectionism on both relationship satisfaction and longterm commitment. Admittedly, this finding is difficult to make sense of conceptually: Assuming that the observed relationships are due to the independent variables in the statistical model have *causal* effects on the dependent variables, it suggests that having the perception that one's partner has perfectionistic standards towards oneself has a negative effect on one's *partner's* relationship satisfaction and commitment. This does not seem like a plausible causal pathway, and it is not clear to us why Stoeber hypothesised this causal effect. Perhaps more plausibly, ratings on partner-prescribed perfectionism might be *affected by* the perception that one's partner is not satisfied in the relationship.

Limitations

Our study has several strengths in terms of transparency, including preregistration, openly accessible measures, and openly accessible analysis scripts (see Campbell, Loving, & Lebel, 2014 for a set of guidelines for transparent research in relationship research). Nevertheless, our study has several limitations as a replication of Stoeber (2012). Some of these have been discussed above (e.g., problems with our initial interpretation of Stoeber's hypotheses, the accidental use of a 5-point rather than 7-point response scale in our measure of longterm commitment, and an error in the listed number of negatively worded items). In addition, while our sample size of 71 couples ($N = 142$) exceeded that in the original study (58 couples), it was still relatively modest, limiting the precision with which we were able to estimate relationships

(note the relatively wide confidence intervals for most estimated relationships). We also collected data from a different geographical area (Australia and New Zealand rather than the UK), meaning that this study cannot be interpreted as an *exact* replication of Stoeber's.

Further limitations were shared by both Stoeber's study and our replication. Like Stoeber used a convenience sampling method, and as such our sample cannot be assumed to be representative of all New Zealanders and Australians in romantic relationships. Furthermore, while the *intent* of Stoeber's study was clearly to test ideas about causal effects (e.g., "The findings show that dyadic perfectionism in students' romantic relationships puts pressure on the partner and **negatively affects** the perception of the quality of the relationship [emphasis added]", p. 300), neither his study nor ours applied experimental manipulations, had any longitudinal element, or attempted statistical controls for potential confounding variables. In this study, we have followed Stoeber in using causal language to describe quantities the study is attempting to estimate (e.g., "actor effects", "partner effects"), but the cross-sectional survey design and lack of controls for potential confounds means that any inferences about causality must necessarily be very tentative. At best, these two studies can assess whether the correlational evidence is *consistent* or *inconsistent* with particular hypotheses about causal effects of perfectionism, rather than providing a confident basis for conclusions about the existence of such effects.

Directions for Future Research

Perhaps the most crucial direction for research concerned with the effects of perfectionism on romantic relationships (and mental health wellbeing more generally) is to address the issue of causality more directly. It is obviously challenging (albeit not impossible;

see Radhu, Daskalakis, Arpin-Cribbie, Irvine, & Ritvo, 2012) to experimentally manipulate participants' levels of perfectionism. Nevertheless, evidence of causal effects *can* be produced by observational studies (see Pearl, 2009). Doing so, however, requires clearer specification of the relevant networks of theorised causal effects, and requires researchers to clearly specify the causal pathways via which perfectionism is presumed to affect other variables, and test those pathways. For example, Stoeber's study (and therefore our replication) focused heavily on testing relationships between perfectionism variables and relationship satisfaction variables, but did not explicate or test a specific causal mechanism or pathway that might produce relationships between these variables. An obvious candidate is the theory that partner-oriented perfectionism has a positive partner effect on partner-prescribed perfectionism, which in turn has a negative actor effect on relationship satisfaction, which in turn has a positive actor effect on longterm commitment. Second, researchers should identify and address variables and effects that might compromise the ability to accurately estimate the causal effects of perfectionism on relationship variables of interest (e.g., confounding variables, collider variables, causal effects in the opposite direction to that hypothesised). Directed acyclic graphs (see Rohrer, 2018) may be useful for guiding such research.

Conclusions

In conclusion, this study provides further evidence that individuals who perceive that their partners hold them to perfectionistic standards tend to have lower relationship satisfaction and longterm commitment. On the other hand, we found little evidence that the degree to which participants *self-report* having perfectionistic expectations of their partners is associated with their *partners'* relationship satisfaction and commitment. While the findings of our replication

differ from those of Stoeber (2012) in some respects, both studies are consistent with respect to these two key findings.

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