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RESEARCH



Multifaceted effects of promotion focus on marital outcomes under mate value discrepancy

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Abstract

Objective: This study aimed to examine the effects of promotion focus on the relationship between high mate value discrepancy (MVD) and marital satisfaction and alternative monitoring behavior.

Background: Much research has documented the detrimental effects of MVD on marriage. Nevertheless, little work has been devoted to investigating the individual differences within the negative relationship between MVD and marital outcomes.

Method: In all, 700 Korean participants (350 men and 350 women) were recruited for an online survey. The moderating effects of promotion focus on the relationship between MVD and (a) marital satisfaction and (b) alternative monitoring were tested. We computed MVD with three methodologies: absolute difference, weighted difference, and residual score.

Results: When confronted with a high MVD, highly promotion-focused individuals were shown to maintain a more satisfactory marriage than did those low in promotion focus. At the same time, however, highly promotion-focused individuals showed a greater tendency to engage in alternative monitoring behavior under high MVD.

Conclusion: Promotion focus could buffer the negative effects of MVD on marital satisfaction, but it could also exacerbate the detrimental effects of MVD on alternative monitoring behavior.

Implications: Understanding one of the underlying reasons on seeking alternative romantic partners and how individuals differ in their chronic ways to be motivated can help counselors and family practitioners. The information helps tailor strategies to meet specific goals and directions that individuals have. This may, therefore, better guide couples to adjust their marital lives.

KEYWORDS

alternative monitoring, marital quality, marriage, mate value discrepancy, promotion focus

The literature on assortative mating suggests that romantic partners likely have similar mate values to each other (Gangestad & Simpson, 2000). Mate value, defined as the sum of desirable traits a romantic partner has (Conroy-Beam et al., 2016), is an indicator of how much benefit a partner can provide to the other partner's own fitness. A partner with a higher mate value can provide greater resources, genetic superiority, or security (Fisher et al., 2008). In some circumstances, however, one does not end up with a "matching" partner; sometimes one individual may possess more desirable characteristics than his or her partner. A person with a higher mate value could undergo a significant imbalance in the costs and benefits, which may undermine evolutionary fitness. What happens when a mate value discrepancy (MVD) arises? The evolutionary ground has repeatedly demonstrated detrimental outcomes in cases like this, including decreased marital satisfaction and increased attentiveness to alternative partners (Buss et al., 2017; Shackelford & Buss, 1997).

Regarding the economic perspective of costs and benefits, the dominant orientation that one takes in approaching benefits and avoiding costs may have a range of effects on the relationship between MVD and marital outcomes. Building on regulatory focus theory (Higgins, 1997), we focus on the gain sensitivity of the promotion focus to establish its multifaceted influence on the effect of MVD. On the one hand, because promotion-focused people seek positive outcomes, they may be more likely to maintain their satisfaction within marriage, even under conditions of high MVD. On the other hand, the simple motivation of promotion-focused people (i.e., maximizing gain) may threaten the stability of their marriage by seeking extramarital partners who might provide additional gain under conditions of high MVD. Hence, in combination, the tendency to be promotion focused can exert significant and varied effects on different aspects of marriage in the context of a partner with less potential gain. However, little work has been done on this apparently contradictory possibility. We examine the effect of promotion focus on the relationship between MVD and marital satisfaction, along with alternative monitoring behavior.

Mate value and marital outcomes

Mate value directly indicates the benefits of a relationship in evolutionary terms. Some desirable traits include physical attractiveness, personality, intelligence, and social status (Danel et al., 2017; Graham-Kevan & Archer, 2009), all of which offer sizable benefits to survivorship. Natural selection has guided humanity to pursue high-value mates, and consequently, the mate values of a pair of spouses tend to positively correlate with each other (Gangestad & Simpson, 2000). However, human mating is a complicated procedure. A myriad of factors are involved in mating, and each is differently interpreted in terms of costs and benefits across time, individuals, and cultures. In addition, mate value itself entails possibilities of deception and change (Buss et al., 2017). For example, men might falsely present themselves as desirable by deceiving potential partners. Similarly, as the fertility rate changes over time, women's mate value would tend to decrease over time (Fisher et al., 2008). Thus, some individuals may find themselves in a "bad match." The way that they cope with MVD and the common outcomes of MVD is a topic of some research interest.

The effects of MVD on romantic relationships have been topics of investigation in the context of both the intramarital and extramarital perspectives. From the intramarital perspective,

MVD impacts how spouses perceive the quality of the relationship between them (Conroy-Beam et al., 2016; Shackelford & Buss, 1997). This is because "marital satisfaction can be viewed as a psychological state regulated by mechanisms that monitor the benefits and costs of marriage" (Shackelford & Buss, 2000, p. 918). According to this view, a spouse who possesses a higher mate value than the other spouse experiences lowered marital satisfaction (Salkicevic et al., 2014). Conversely, from an extramarital perspective, MVD is related to attentiveness to alternative romantic partners (Buss & Shackelford, 1997). An individual with a higher mate value than the spouse tends to search for better mates who can provide an increased chance of survival and reproduction (Fisher et al., 2008). Thus, MVD can trigger alternative monitoring behavior that causes opportunities to "switch up to" a more desirable partner who can provide better fitness (Buss et al., 2017).

Gain sensitivity of promotion focus inside and outside of marriage

A framework of regulatory focus (Higgins, 1997) provides a consistent explanation of how individuals are motivated to pursue hedonic goals. Two distinct constructs are found in the way that people achieve their goals, namely, a promotion focus and a prevention focus. Promotion-focused individuals are sensitive to the presence and absence of potential positive outcomes, whereas prevention-focused individuals are sensitive to the presence and absence of potential negative outcomes. Not only do people differ from each other in terms of the goals that they pursue, but they also adopt varying strategies to achieve their goals in relation to their regulatory foci. Promotion-focused individuals adopt approach/eager strategies to maximize potential gain. By contrast, prevention-focused individuals tend to seek avoid-ance/vigilant strategies to minimize potential loss (Higgins & Molden, 2003). How promotion- and prevention-focused individuals pursue goals in their romantic relationships is not an exception. It has been demonstrated that promotion- and prevention-focused individuals adopt different strategies and actions in their romantic lives as well as in other domains of life (Hofmann et al., 2015).

The gain sensitivity and approach strategies of promotion focus could guide individuals to vigorously pursue positive outcomes within the relationship, leading to the maintenance of a satisfactory marriage even in the context of unfavorable MVD. Previous studies have documented that the approach strategies of promotion-focused individuals are linked with positive outcomes such as higher satisfaction and sexual desire in marriage (Impett et al., 2010). This can be explained by some desirable interpersonal behaviors that promotion-focused people display within the relationship. For example, they are more likely to approach their partners and tend to seek more creative or constructive conflict resolution (Rodrigues et al., 2019), and provide more enthusiastic responses when their partner shares positive news (Paek et al., 2022). Further, they tend to forgive their partners when a positive outcome in return is expected (Molden & Finkel, 2010). These characteristics of promotion-focused individuals seemingly guide them to vigorously pursue positive outcomes within the relationship, leading to the maintenance of a satisfactory marriage. Accordingly, we predict that promotion-focused individuals should also experience higher marital satisfaction, even in the context of unfavorable MVD.

The same gain-maximizing mechanism may as well encourage promotion-focused individuals to seek potential gain from partners *outside* the relationship, leading to increased attentiveness to alternative partners. Specifically, we expect that highly promotion-focused individuals would actively seek alternative options under conditions of higher mate value than the spouse. After all, the gain maximization rule is not bound by an interaction between spouses, and it may involve potential gains from extramarital relationships. To support this idea, previous findings have shown that those high in promotion focus tend to be inclusive of alternative options and interested in unexplored possibilities that may feature more risk (Higgins & Molden, 2003).

Additional direct evidence has been found by Finkel et al. (2009), who reported that highly promotion-focused individuals could evaluate alternative romantic partners more positively. Together, we demonstrate that the promotion focus aggravates the effect of MVD on alternative monitoring behavior.

It is important to note that predictions on the effects of prevention focus are not made in this study for several reasons. Of course, prevention-focused individuals adopt certain strategies in response to MVD outcomes. Nevertheless, seeking advancement in one's current relationship and becoming more attentive to alternative partners in search of potential gain are both closely related to the gain sensitivity of the promotion focus (Molden & Winterheld, 2013). Moreover, there is a consensus on the independence of the two concepts; that is, being highly promotion focused is not equivalent to having low prevention focus, and vice versa (Scholer & Higgins, 2008). Nevertheless, it would be meaningful to include the effects of prevention focus on the relationship between MVD and marital outcomes to establish the nomological network of regulatory foci. Therefore, we will report the effects of prevention focus in the footnotes without making specific predictions.

Current study

We investigate the moderating effects of promotion focus on the relationship between MVD and two marital outcomes. Specifically, we investigate the association between MVD and two dependent variables to replicate previous findings. Next, we examine the multifaceted effects of promotion focus on the relationship between MVD and marital outcomes. Whereas a positive effect is expected, such as that highly promotion-focused individuals would show higher marital satisfaction (Hypothesis 1), a negative effect is also expected, namely, that high promotion focus would be related to more alternative monitoring behavior (Hypothesis 2) as MVD increases.

METHOD

Participants and procedure

A large sample of married individuals in South Korea was recruited using the online survey panel EMBRAIN and was given a monetary reward upon completing the survey. South Korean participants who were over 18 years old and legally married were considered eligible for this study. This study was performed as part of a larger project in which other questionnaires irrelevant to the topic of this study served as a filler. After participants were briefly informed of the aims of the overall study, they were required to complete a consent form and then were provided with a set of questionnaires. After they completed the survey, all of the participants were thanked and paid. For data analysis, we excluded responses from the participants who did not pass the attention check items, leaving data from 700 adult heterosexual couples (350 men and 350 women; $M_{\rm age} = 51.44$, $SD_{\rm age} = 11.40$ for men, $M_{\rm age} = 49.33$, $SD_{\rm age} = 12.91$ for women) remaining for analysis. The duration of marriage ranged from 1 year to 47 years (M = 21.51 years, SD = 13.03).

Measurements

All items used in the present study were translated into Korean, with several graduate students and researchers being involved in the process.

Mate value

Mate value for self and spouse was measured using a questionnaire developed by Graham-Kevan and Archer (2009). This scale has been used in other studies as well (Danel et al., 2017; Nowak & Danel, 2014). The participants were asked to rate themselves and their spouses on six attributes (i.e., attractiveness, personality, education, intelligence, career prospects, and social status), on a 7-point Likert scale (1 = very low, 7 = very high), relative to other people they knew. Cronbach's α for all items for self–mate value was .81 and for partner's mate value was .79. All of the ratings were averaged to make a composite variable, as was done in previous studies.

Regulatory focus

Promotion focus was measured using the Promotion/Prevention Scale (Lockwood et al., 2002). Among the items, four that were exclusively related to the academic domain (i.e., "I often think about how I will achieve academic success" and "My major goal in school right now is to avoid becoming an academic failure") were excluded, leaving 14 items in total (Cronbach's $\alpha=.86$ for promotion focus, .75 for prevention focus). The participants rated each item on a 7-point Likert scale.

Marital satisfaction

The Quality Marriage Index by Norton (1983) was utilized, following numerous previous studies. All items (e.g., "we have a good marriage" and "my relationship with my partner is very stable") were rated on a 7-point Likert scale ($1 = strongly\ disagree$, $7 = strongly\ agree$). The values for all items were averaged to make a composite variable. The scale showed high reliability (Cronbach's $\alpha = .97$).

Alternative monitoring

A six-item alternative monitoring scale was drawn from the commitment inventory of Stanley and Markman (1992) to assess attentiveness to alternatives. The participants rated each item on a 7-point Likert scale. The items (e.g., "I know people of the opposite sex whom I desire more than my partner" and "I am not seriously attracted to people of the opposite sex other than my partner" [reverse-coded]) showed good reliability (Cronbach's $\alpha = .86$). All items were averaged to create a composite variable.

Analysis plan

The primary method used to measure MVD here was to subtract the spouse's mate value from his or her own mate value, where a higher score indicates relatively lower gain from the current relationship. Thus, in this article, high MVD refers to a lower level of gain from the current partner. The subtraction method allows us to capture the concept of a relative discrepancy between spouses, as a considerable body of research proposes a difference score to investigate MVD (Nowak & Danel, 2014). Nonetheless, there has been an argument over the validity of the difference score (Griffin et al., 1999).

One of the most discussed problems in this area is that the absolute difference score fails to accurately reflect the relationship between independent variables and dependent variables

because it ignores the distinct relationships between independent and dependent variables. Taking our research variables as an example, the extent to which marital satisfaction with oneself is related to one's own mate value differs from the extent to which marital satisfaction with oneself is related to the spouse's mate value (i.e., self-marital satisfaction [dependent variable] = β_{self} self-mate value $-\beta_{spouse}$ spouse mate value). Nevertheless, the absolute difference score does not consider such differences. Instead, it imperatively assumes "equal and opposite weights" so that each independent variable is related to the dependent variable to the same extent (i.e., self-marital satisfaction [dependent variable] = β [self-mate value - spouse mate value]; see Klein et al., 2009). To address this issue, Theiss and Solomon (2008) adopted a weighted difference score. This score is calculated by weighting each variable in terms of its unique association with the dependent variable. Following the same logic, we regressed selfreported marital satisfaction on the self-mate value and weighted the self-mate value utilizing the unstandardized coefficient that reflects the relationship between self-mate value and marital satisfaction with oneself. The same procedure was then used for spouse mate value. Finally, we subtracted the weighted spouse mate value from the weighted self-mate value. The same procedure was conducted when analyzing the effects of MVD on alternative monitoring behavior.

Another issue that frequently arises is the correlation between the independent variables (Griffin et al., 1999). As the independent variables used to create the difference score are already related to each other, it is questionable whether the result is fully attributable to the difference score. Looking again at our research variables, people's own mate value is closely related to their spouse's mate value. Thus, unless the main effects of the two independent variables are controlled for at once, we cannot conclude that the effect of MVD results solely from the difference score. This is where a major criticism of the absolute difference score arises; that is, it is not possible to control both the main effects of the independent variables when testing the effects of the difference score. To address this problem, we adopted another method to calculate MVD. Several researchers have recommended using a residual score to overcome statistical limitations of the different score (Griffin et al., 1999). This score allows the concept of a difference without requiring a direct subtraction between variables. By these means, we calculated a residual score by regressing own mate value on spouse's mate value so that a positive residual score is interpreted as relatively less gain from the current relationship. Nevertheless, it should be noted that the residual score has certain limitations, particularly with respect to the research question of this study. The residual score represents how far one deviates from the regression line. Our question of interest lies in the relative mate value within a dyad, and the residual score examines the effect of the difference between one's mate value and the expected value in an average population.

We acknowledge that each method has its own strengths and limitations. After all, there is no one-and-only way to address concerns regarding the difference score; instead, it has repeatedly been shown that the research question matters (Stephens et al., 2015). For this reason, we adopted all three of the abovementioned methods (i.e., absolute difference, weighted difference, and residual score) to investigate the effects of MVD in a parsimonious manner. In addition, we conducted a mini meta-analysis to demonstrate comprehensive effects across adopted methodologies.

RESULTS

Table 1 presents the demographic information across gender. Table 2 shows the means, standard deviations, and correlations of the tested variables. For further analyses, marital length was controlled for, given previous findings that mate value fluctuates over time and generally decreases, in particular for women as they age (Fisher et al., 2008). Similarly, considering that marital satisfaction and alternative monitoring behavior are highly correlated and exert a

TABLE 1 Descriptive statistics of demographic information by gender

	Men n = 350		Women n = 350	
	Mean/%	SD	Mean/%	SD
Age (range: 26–69 years)	51.43	11.40	49.33	12.91
Spouse's age (range: 26–73 years)	49.55	11.10	51.25	12.71
Marital length (range: 1-47 years)	21.22	12.18	21.80	13.83
Number of children (%)				
0	9		19	
1	25		23	
2	58		54	
3 or more	8		4	
Education (%)				
Less than high school	1		1	
High school	14		24	
College/associate degree	9		14	
Bachelor's degree	59		53	
Graduate or professional degree	17		8	

TABLE 2 Means, standard deviations, and correlations of independent and dependent variables

Variable	M	SD	1	2	3	4	5	6
1 Self-mate value	4.40	0.77	1	.59***	.45***	.43***	.22***	.11**
2 Spouse mate value	4.54	0.77		1	46 ***	.38***	.44***	14***
3 Mate value discrepancy	-0.14	0.70			1	.05	24***	.27***
4 Promotion focus	4.87	0.81				1	.34***	02
5 Marital satisfaction	5.15	1.36					1	41***
6 Alternative seeking	3.18	1.25						1

^{**}p < .01.***p < .001.

significant influence on each other (Johnson & Rusbult, 1989), each was controlled for when examining the effect of the other.

First, we replicated previous findings that MVD is related to marital satisfaction and alternative monitoring behavior. Corroborating previous findings, high MVD (i.e., lower gain from the current partner) showed a strong negative correlation with marital satisfaction, r (698) = -.24, p < .001 and a strong positive correlation with alternative monitoring behavior, r (698) = .27, p < .001. Next, marital satisfaction and alternative monitoring behavior showed a strong negative relationship, r(698) = -.41, p < .001, validating the reason for controlling for one variable when examining the other.

Absolute difference score

First, we tested the effect of promotion focus on the relationship between MVD and marital satisfaction. For analysis, the PROCESS macro developed by Hayes (2022) was utilized, which entails bootstrapping with 5,000 resamples at a 95% confidence interval (CI). To test whether a

promotion focus would buffer the negative effects of high MVD on marital satisfaction (Hypothesis 1), a moderation model (Model 1; Hayes, 2022) was tested in which a promotion focus moderates the relationship between high MVD and marital satisfaction. The interaction effect was significant, F(1, 694) = 12.13, p < .001 (Figure 1), which supported Hypothesis 1. Breaking the results down further, the marital satisfaction of highly promotion-focused individuals (+1 SD) was not significantly related to MVD, b = -.12, SE = .08, CI = [-.28, .04]. By contrast, the marital satisfaction of those with low promotion focus (-1 SD) was negatively associated with MVD, b = -.49, SE = .08, CI = [-.66, -.33] (see Table 3).

Next, we tested Hypothesis 2 on whether promotion focus would exacerbate the effect of high MVD on alternative monitoring. Supporting Hypothesis 2, the interaction effect was found to be significant, F(1, 694) = 5.16, p = .02 (Figure 1). Highly promotion-focused individuals (+1 SD) reported significantly higher alternative monitoring behaviors when faced with

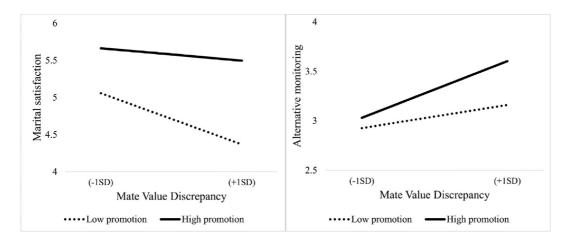


FIGURE 1 Effect of promotion focus on the relationship between mate value discrepancy and marital satisfaction (left) and alternative monitoring (right)

TABLE 3 Conditional effects of the interaction on dependent variables at values of moderators

Independent variable	Dependent variable	Moderator	b	SE	95% CI
Absolute difference score	Marital satisfaction	Low promotion $(-1 SD)$	49 ***	.08	[66,33]
		High promotion (+1 SD)	12	.08	[28, .04]
	Alternative monitoring	Low promotion $(-1 SD)$.17	.09	[00, .33]
		High promotion (+1 SD)	.41***	.08	[.25, .57]
Weighted difference score	Marital satisfaction	Low promotion $(-1 SD)$	93***	.11	[-1.14,71]
		High promotion (+1 SD)	49 ***	.12	[72,26]
	Alternative monitoring	Low promotion $(-1 SD)$.53	.41	[27, 1.34]
		High promotion (+1 SD)	1.91***	.39	[1.14, 2.68]
Residual score	Marital satisfaction	Low promotion $(-1 SD)$	21 *	.10	[40,01]
		High promotion (+1 SD)	.04	.09	[14, .21]
	Alternative monitoring	Low promotion $(-1 SD)$.33***	.10	[.15, .52]
		High promotion (+1 SD)	.44***	.09	[.27, .61]

Note. CI = confidence interval.

^{*}p < .05.***p < .001.

high MVD, b = .41, SE = .08, 95% CI = [.25, .57]. By contrast, those with low promotion focus (-1 SD) showed no such tendency, b = .17, SE = .09, CI = [-.00, .33] (Table 3).

Supplementary analysis

Weighted difference score

The same procedure was followed using a weighted difference score as the independent variable. First, we tested the effect of promotion focus on the relationship between MVD and marital satisfaction. The interaction effect was significant, F(1, 694) = 9.49, p = .002, which supported Hypothesis 1. Breaking down the interaction, the marital satisfaction of highly promotion-focused individuals (+1 SD) was significantly less negatively associated with MVD, b = -.49, SE = .12, 95% CI = [-.72, -.26] than that of those low in promotion focus, b = -.93, SE = .11, CI = [-1.14, -.71] (Table 3).

Next, the same moderation model was utilized to test whether promotion focus moderates the relationship between MVD and alternative monitoring. Again, the interaction effect was found to be significant, F(1, 694) = 7.19, p = .008, supporting Hypothesis 2. Further break down replicated the results of the previous analysis, using an absolute difference score. That is, highly promotion-focused individuals (+1 SD) reported significantly higher alternative monitoring when faced with high MVD, b = 1.91, SE = .39, 95% CI = [1.14, 2.68]. By contrast, those with low promotion focus (-1 SD) had a nonsignificant relationship between MVD and alternative monitoring, b = .53, SE = .41, CI = [-.27, 1.34] (see Table 3).

Residual score

The effect of promotion focus on marital satisfaction and alternative monitoring was tested using the residual score. When marital satisfaction was the dependent variable, the interaction effect between MVD and promotion focus was significant, F(1, 694) = 4.47, p = .03. Specifically, the marital satisfaction of highly promotion-focused individuals (+1 SD) was not significantly related to the residual score, b = .04, SE = .09, 95% CI = [-.14, .21]. By contrast, less promotion-focused individuals (-1 SD) experienced a significant decrease in marital satisfaction as the residual score increased, b = -.21, SE = .10, CI = [-.40, -.01] (see Table 3).

Finally, the effect of promotion focus on the relationship between MVD residual score and alternative monitoring was tested. The interaction effect of residual score and promotion focus on alternative monitoring behavior was nonsignificant, F(1, 694) = .91, p = .34. As briefly mentioned in the analysis plan, this result could imply that what matters necessarily remains within the marital dyad, not in the average across a given population. The main effect of promotion focus was significant (b = .12, SE = .06, 95% CI = [.00, .23]), which suggests that highly promotion-focused individuals are more likely to be attentive to extramarital partners (for figures, see the supplemental materials).

Mini meta-analysis across three methodologies

Besides the abovementioned analyses, a combined (Stouffer) Z score across all three methods was calculated (Stouffer et al., 1949). First, the three analyses on the effect of promotion focus on the relationship between MVD and marital satisfaction were combined. The Z scores for each analysis were as follows: Z score of 3.48 (raw difference score), Z score of 3.07 (weighted difference score), and Z of 2.11 (residual score). The Stouffer Z score for marital satisfaction

was 5.00, indicating a significant meta-effect, $p = 5.742 \times 10^{-7}$. Next, the same mini meta-analysis was conducted on the effects of promotion focus on the relationship between MVD and alternative monitoring. The Z scores for each analysis were as follows: Z score of 2.26 (raw difference score), Z score of 2.67 (weighted difference score), and Z of 0.95 (residual score). The Stouffer Z score for marital satisfaction was 3.40, also indicating a significant effect, p < .001. Thus, it is confirmed that the overall effect of promotion focus on both marital outcomes is largely significant across various methodologies.

DISCUSSION

Previous investigation of MVD has consistently demonstrated that MVD has negative outcomes for marriage in both the intramarital and extramarital perspectives (Shackelford & Buss, 1997). Drawing on the individual differences in pursuing gain and avoiding loss, we examined the effects of a promotion focus that could have a multifaceted influence on the relationship between MVD and marital outcomes. As hypothesized, high promotion focus was related to adaptive outcomes with respect to marital satisfaction when one's partner is of less reproductive value than oneself. It can be that promotion-focused individuals lead a more satisfactory marriage by actively seeking advancement with desirable approach strategies, even when there is less gain expected from the relationship. Again, expectedly, a promotion focus was also related to maladaptive outcomes with respect to alternative monitoring behavior under gain imbalance between spouses, except for one analysis. In other words, promotion-focused people could rather seek potential gain from outside marriage by monitoring romantic alternatives. Thus, it is ascertained that in lower-gain situations, promotion-focused individuals might yield both positive and negative outcomes by maintaining a satisfactory marriage and by searching for other romantic partners, respectively.

We consider that our research findings are impactful for several reasons. First, they draw a more comprehensive picture of the effect of promotion focus on marital relationships by considering the core aspect of gain sensitivity in the promotion focus. Hitherto, there has only been a modest investigation of the effects of promotion focus within close relationships, and the majority suggests positive outcomes. However, our investigation indicates that the promotion focus has both pros and cons; being highly promotion focused certainly has advantages for maintaining high levels of marital satisfaction, but it has disadvantages for alternative monitoring, particularly when there is less gain expected from a present relationship. Such results are a contribution to the literature that sheds light on a multidimensional effect of promotion focus on marriage. More importantly, the present study has the strength of examining two marital outcomes as dependent variables. To our knowledge, no previous study has examined the effects of promotion focus on marital satisfaction and alternative monitoring behavior simultaneously. Expanding the previous discussion of the effect of promotion focus, our findings show an insightful perspective into the multifaceted dynamics of promotion focus in various contexts.

Second, we adopted a range of methodological approaches to deal with previous concerns regarding the difference score, which contributed to the parsimoniousness of the findings. The absolute difference score, weighted difference score, and residual score were adopted, with all but one result consistently supporting our predictions. Although the effect of promotion focus on the relationship between MVD and alternative monitoring was not significant in one analysis using the residual score, mini meta-analyses across three methods indicated a significant combined Z score, suggesting an overall significance of our findings. Still, there could be other means of addressing the concept of MVD. A promising method of investigating MVD is the use of the Euclidean distance that was developed by Conroy-Beam et al. (2016). Euclidean distances reflect multidimensional aspects of mate value, providing more appropriate and comprehensive information.

Another, more recent way of testing the effects of similarity and discrepancy is dyadic response surface analysis (DRSA; Schönbrodt et al., 2018), which effectively addresses the criticism of interrelatedness between variables. Recent literature on sexual desire (Busby et al., 2023) and gratitude (Park et al., 2023) in close relationships adopts DRSA to demonstrate the similarity effects between partners. Thus, it would be fruitful to validate our results using alternative methods. Nonetheless, it is of note that there is no one-and-only absolute solution to this issue (including the abovementioned methods). In exactly this sense, our study has the strength of consistently validating its results with various methods.

Finally, the results of this study imply a substantial influence of mate value on a long-term committed relationship. Mate value is usually investigated in the context of an initial matching of potential partners. Nevertheless, in light of the mean age and length of time married in the sample (50.38 years old and 21.51 years, respectively), we suggest that the effect of mate value continues to have considerable influence on the relationship in the form of gain. These results correspond with findings obtained from the evolutionary perspective. That is, it is not the case that individuals cease to consider the value of the mate after settling down with a long-term partner; instead, mate value is continuously monitored, and significant effects are exerted on perceptions and corresponding behaviors (Buss et al., 2017; Salkicevic et al., 2014; Shackelford & Buss, 1997). This study highlights the continued significance of mate value in marital life.

Limitations and future directions

Our study, although it produced insightful results, involved limitations. First, despite a large sample of 700 married individuals, our study's cross-sectional and correlational design can posit no direct causal relationship but only indirect suggestions. Furthermore, the effects of mate value and regulatory focus may vary over time. We cannot, therefore, conclude that our study presents a possible negative effect of promotion focus, nor whether this tendency extends to infidelity or divorce.

Second, if increased alternative monitoring behavior indeed becomes a serious threat to a stable marriage, another interesting question rises pertaining to the long-term effects of promotion focus. That is, being highly promotion focused can be related to both positive (i.e., maintaining satisfactory marriage) and negative (i.e., threatening stable marriage) outcomes. This seemingly contradictory effect of promotion focus may be explained in two ways. On the one hand, it might be the case that highly promotion-focused individuals struggle to benefit from the current relationship, which leads to satisfactory marriage, but at the same time they also try to benefit from alternative relationships, which leads to heightened alternative monitoring behavior. In this case, both gain-maximizing tendencies would be demonstrated within an individual. On the other hand, there is a possibility of a third moderating variable that determines which strategy promotion-focused people adopt. In this case, each gain-maximizing strategy would be adopted between individuals depending on another moderating variable. For example, Rodrigues et al. (2017) demonstrated that among promotion-focused people, only those highly committed to the relationship showed less attentiveness to alternative partners. Given this finding, commitment level might be a potential moderator.

Third, our findings do not specify exactly how promotion focus affects marriage under MVD. Although we suggest that the gain sensitivity of promotion focus encourages people to adopt approach behavior in the current relationship, which in turn is associated with higher relationship satisfaction, this suggestion cannot be tested with our data. Combined, the limitations and untested possibilities of this study call for further studies, especially ones that adopt a longitudinal or experimental design to understand the diverse effects of promotion focus in greater detail.

Additionally, it is highly recommended to collect dyadic data in future studies. Taking the spouse's perspective (i.e., using both self-reported and partner-reported responses) into

consideration may provide a deeper insight into the effects of MVD on marital outcomes. For instance, results obtained using the self-report may differ from those obtained using the partner report. Although it is a difficult question to identify the report that is better able to capture the reality, estimating the perceptions of both spouses can extend understanding on the exact extent to which both partners perceive mutual gains in the relationship. Nonetheless, a considerable body of previous literature suggests the importance of self-reported (vs. partner-reported) perceptions in marital life. After all, every event that one experiences in a relationship lies within one's perception and interpretation. Indeed, many researchers have measured and utilized self-reported perception in relation to the effect of similarity or expressions of gratitude (Park et al., 2019) on close relationships. Park et al. (2019) also suggested that perceived self-report data predict relationship satisfaction more accurately than partner-reported data. Nevertheless, collecting a dyadic sample to examine the various effects of MVD may provide fruitful results.

Given that the works cited in this paper mainly involve Western samples, data from Korean participants may have yielded different outcomes. Indeed, cultural and ecological differences have been theorized to impact the degree and characteristics of people's mate-related behaviors (e.g., Babaeizad et al., 2022). Moreover, people from highly interdependent cultures tend to be more chronically prevention focused than those from independent cultures, which opens up the possibility of cultural differences in our findings. Although this might be one of the limitations of our study, documenting the data of individuals from non-White, educated, industrialized, rich, and democratic (WEIRD) samples can have important implications. To our knowledge, no empirical studies have investigated the effects of MVD and regulatory focus on marital outcomes. As the issue of mating and reproduction pervades across cultures, we expect that the direction of the association of mate value on marital satisfaction and alternative monitoring would not differ by culture. Yet, with a lack of cross-cultural studies investigating such differences, especially in regards to alternative monitoring, future studies may benefit from crossculturally examining the hypothesized association. Another limitation regarding the sample is that our study only included heterosexual couples. It has long been demonstrated that different types of couples (e.g., cohabitating heterosexual, gay, and lesbian couples) differ in relationship quality and predictors of relationship quality (Kurdek & Schmitt, 1986). Therefore, the demonstrated effects of promotion focus can be differently manifested in other types of relationships. In addition, considering that same-sex marriages are being more recognized and legalized globally, it is highly recommended that future studies include diverse types of relationships.

Last, the type and intensity of mate retention behaviors has been shown to be related to the mate value of each partner (Conroy-Beam et al., 2016; Danel et al., 2017), relationship satisfaction (Salkicevic et al., 2014), and romantic attachment (Barbaro et al., 2019). The mate retention behaviors can be categorized into two types (i.e., benefit provisioning and cost inflicting), and each type yields different relationship outcomes (Buss & Shackelford, 1997). Therefore, investigating whether the type or intensity of mate retention behaviors is moderated by the regulatory focus might be helpful for drawing a more comprehensive picture. For example, Buss and Shackelford (1997) suggested that men allocate more resources to mate retention behaviors when their female mates possess a higher mate value. Given that our study focuses on when one's own mate value is higher than that of their partner, it can be meaningful to expand the scope of research to examine the effects of regulatory focus on mate retention behavior and marital life when one's partner has higher mate value.

Implications

The present study holds important clinical implications for marital couples. First, the present study promotes a better understanding on one of the underlying reasons on seeking alternative romantic partners. Although motivations for extradyadic infidelity have been widely studied,

the approach or promotion motivation has rarely been mentioned. Our findings suggest that one's motivation toward approaching positive events in general may be associated to heightened attentiveness to alternatives. Understanding such motivations is important for counselors to better help couples adjust their marital lives. Specifically, applying the results of the current research, counselors may help individuals relocate the need to achieve positive outcomes of highly promotion-focused clients to other domains of life that are considered more desirable.

Furthermore, the findings of the present study may help broaden the field of motivational interviewing (MI). MI emphasizes the role of motivation in counseling (for a review, see Hettema et al., 2005). That is, motivations play an important role in changing behaviors. Investigating how individuals differ in their chronic ways to be motivated, therefore, can help practitioners tailor counseling strategies to meet specific goals and directions that clients have. In detail, practitioners may take the gain sensitivity into account when guiding behavioral changes in promotion-focused individuals. Counselors could also guide promotion-focused individuals to identify and focus on positive aspects and accomplishments within the current relationship to prevent marital dissolution.

CONCLUSION

Is promotion focus a double-edged sword? Given our findings, we conclude that promotion focus has multifaceted effects on marriage in relation to possible gain. Across analyses utilizing several methods, highly promotion-focused individuals were shown to better cope with lowered marital satisfaction resulting from MVD; however, they were also more attentive to extramarital partners where there was a substantial difference in mate value between spouses. The results illuminate the multifaceted effects of promotion focus, the significance of mate value as an indicator of gain in marriage, and the need to further examine various possibilities that have arisen from our study.

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ENDNOTE

A moderation model was tested in which prevention focus moderates the relationship between high MVD and marital satisfaction. The interaction effect was not significant, F(1, 694) = .01, p = .92. Next, we tested whether prevention focus moderates the relationship between the high MVD and alternative monitoring. The interaction effect was not significant, F(1, 694) = 1.59, p = .21. When testing was conducted with other methods, all analyses showed insignificant results. When tested with the weighted difference score, the effects of prevention focus on the relationship between the MVD and marital satisfaction, and MVD and alternative monitoring, were insignificant. Last, when tested with the residual score, prevention focus did not considerably moderate the relationship between the MVD and marital satisfaction, and MVD and alternative monitoring.

REFERENCES

- Babaeizad, A., Fallahchai, R., & Abbasnejad, T. (2022). Mate-value and relationship satisfaction: The moderating roles of mate retention behaviors. *PLoS One*, 17(1), Article e0262154. https://doi.org/10.1371/journal.pone. 0262154
- Barbaro, N., Sela, Y., Atari, M., Shackelford, T. K., & Zeigler-Hill, V. (2019). Romantic attachment and mate retention behavior: The mediating role of perceived risk of partner infidelity. *Journal of Social and Personal Relationships*, 36(3), 940–956. https://doi.org/10.1177/0265407517749330
- Busby, D. M., Hanna-Walker, V., Leonhardt, N. D., & Kim, J. J. (2023). Sexual passion in couple relationships: Emerging patterns from dyadic response surface analysis. *Journal of Marriage and Family*, 85(1), 92–115. https://doi.org/10.1111/jomf.12888
- Buss, D. M., Goetz, C., Duntley, J. D., Asao, K., & Conroy-Beam, D. (2017). The mate switching hypothesis. *Personality and Individual Differences*, 104, 143–149. https://doi.org/10.1016/j.paid.2016.07.022

- Buss, D. M., & Shackelford, T. K. (1997). From vigilance to violence: Mate retention tactics in married couples. *Journal of Personality and Social Psychology*, 72(2), 346–361. https://doi.org/10.1037/0022-3514.72.2.346
- Conroy-Beam, D., Goetz, C. D., & Buss, D. M. (2016). What predicts romantic relationship satisfaction and mate retention intensity: Mate preference fulfillment or mate value discrepancies? *Evolution and Human Behavior*, 37(6), 440–448. https://doi.org/10.1016/j.evolhumbehav.2016.04.003
- Danel, D. P., Siennicka, A., Glińska, K., Fedurek, P., Nowak-Szczepańska, N., Jankowska, E. A., Pawłowski, B., & Lewandowski, Z. (2017). Female perception of a partner's mate value discrepancy and controlling behaviour in romantic relationships. *Acta Ethologica*, 20(1), 1–8. https://doi.org/10.1007/s10211-016-0240-5
- Finkel, E. J., Molden, D. C., Johnson, S. E., & Eastwick, P. W. (2009). Regulatory focus and romantic alternatives. In J. P. Forgas, R. F. Baumeister, & D. M. Tice (Eds.), Psychology of self-regulation: Cognitive, affective, and motivational processes (pp. 319–335). Psychology Press.
- Fisher, M., Cox, A., Bennett, S., & Gavric, D. (2008). Components of self-perceived mate value. *Journal of Social, Evolutionary, and Cultural Psychology*, 2(4), 156–168. https://doi.org/10.1037/h0099347
- Gangestad, S. W., & Simpson, J. A. (2000). The evolution of human mating: Trade-offs and strategic pluralism. Behavioral and Brain Sciences, 23(4), 573–587. https://doi.org/10.1017/S0140525X0000337X
- Graham-Kevan, N., & Archer, J. (2009). Control tactics and partner violence in heterosexual relationships. Evolution and Human Behavior, 30(6), 445–452. https://doi.org/10.1016/j.evolhumbehav.2009.06.007
- Griffin, D., Murray, S., & Gonzalez, R. (1999). Difference score correlations in relationship research: A conceptual primer. *Personal Relationships*, 6(4), 505–518. https://doi.org/10.1111/j.1475-6811.1999.tb00206.x
- Hettema, J., Steele, J., & Miller, W. R. (2005). Motivational interviewing. *Annual Review of Clinical Psychology*, 1, 91–111. https://doi.org/10.1146/annurev.clinpsy.1.102803.143833
- Hayes, A. F. (2022). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (3rd ed.). Guilford Press.
- Higgins, E. T. (1997). Beyond pleasure and pain. American Psychologist, 52(12), 1280–1300. https://doi.org/10.1037/0003-066X.52.12.1280
- Higgins, E. T., & Molden, D. C. (2003). How strategies for making judgments and decisions affect cognition: Motivated cognition revisited. In G. V. Bodenhausen & A. J. Lambert (Eds.), *Foundations of social cognition: A festschrift in honor of Robert S. Wyer, Jr.* (pp. 211–236). Psychology Press.
- Hofmann, W., Finkel, E. J., & Fitzsimons, G. M. (2015). Close relationships and self-regulation: How relationship satisfaction facilitates momentary goal pursuit. *Journal of Personality and Social Psychology*, 109(3), 434–452. https://doi.org/10.1037/pspi0000020
- Impett, E. A., Gordon, A. M., Kogan, A., Oveis, C., Gable, S. L., & Keltner, D. (2010). Moving toward more perfect unions: Daily and long-term consequences of approach and avoidance goals in romantic relationships. *Journal of Personality and Social Psychology*, 99(6), 948–963. https://doi.org/10.1037/a0020271
- Johnson, D. J., & Rusbult, C. E. (1989). Resisting temptation: Devaluation of alternative partners as a means of maintaining commitment in close relationships. *Journal of Personality and Social Psychology*, 57(6), 967–980. https://doi.org/10.1037/0022-3514.57.6.967
- Klein, G., Jiang, J. J., & Cheney, P. (2009). Resolving difference score issues in information systems research. MIS Quarterly, 33(4), 811–826. https://doi.org/10.2307/20650328
- Kurdek, L. A., & Schmitt, J. P. (1986). Relationship quality of partners in heterosexual married, heterosexual cohabiting, and gay and lesbian relationships. *Journal of Personality and Social Psychology*, 51(4), 711–720. https://doi.org/10.1037/0022-3514.51.4.711
- Lockwood, P., Jordan, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: Regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology*, 83(4), 854–864. https://doi.org/ 10.1037/0022-3514.83.4.854
- Molden, D. C., & Finkel, E. J. (2010). Motivations for promotion and prevention and the role of trust and commitment in interpersonal forgiveness. *Journal of Experimental Social Psychology*, 46(2), 255–268. https://doi.org/10.1016/j.jesp.2009.10.014
- Molden, D. C., & Winterheld, H. A. (2013). Motivations for promotion or prevention in close relationships. In J. A. Simpson & L. Campbell (Eds.), *The Oxford handbook of close relationships* (pp. 321–347). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780195398694.013.0015
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and Family*, 54(1), 141–151. https://doi.org/10.2307/351302
- Nowak, N., & Danel, D. (2014). Mate value asymmetry and relationship satisfaction in female opinion. *Journal of Sex & Marital Therapy*, 40(5), 425–433. https://doi.org/10.1080/0092623X.2012.756839
- Paek, J. J. W., Zee, K. S., Fitzsimons, G. M., & Higgins, E. T. (2022). Congratulations, so happy for you! Promotion motivation predicts social support for positive events. *Motivation Science*, 8(4), 285–297. https://doi.org/10.1037/ mot0000272
- Park, Y., Gordon, A., Humberg, S., Muise, A., & Impett, E. A. (2023). Differing levels of gratitude between romantic partners: Concurrent and longitudinal links with satisfaction and commitment in six dyadic datasets. *Personality Science*, 4, Article e10537. https://doi.org/10.5964/ps.10537

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- Park, Y., Impett, E. A., MacDonald, G., & Lemay, E. P., Jr. (2019). Saying "thank you": Partners' expressions of gratitude protect relationship satisfaction and commitment from the harmful effects of attachment insecurity. Journal of Personality and Social Psychology, 117(4), 773-806. https://doi.org/10.1037/pspi0000178
- Rodrigues, D. L., Huic, A., Lopes, D., & Kumashiro, M. (2019). Regulatory focus in relationships and conflict resolution strategies. Personality and Individual Differences, 142, 116-121. https://doi.org/10.1016/j.paid.2019.01.041
- Rodrigues, D., Lopes, D., & Kumashiro, M. (2017). The "I" in us, or the eye on us? Regulatory focus, commitment and derogation of an attractive alternative person. PLoS One, 12(3), Article e0174350. https://doi.org/10.1371/journal. pone.0174350
- Salkicevic, S., Stanic, A. L., & Grabovac, M. T. (2014). Good mates retain us right: Investigating the relationship between mate retention strategies, mate value, and relationship satisfaction. Evolutionary Psychology, 12(5), 1038-1052. https://doi.org/10.1177/147470491401200512
- Scholer, A. A., & Higgins, E. T. (2008). Distinguishing levels of approach and avoidance: An analysis using regulatory focus theory. In A. J. Elliot (Ed.), Handbook of approach and avoidance motivation (pp. 489-503). Psychology Press.
- Schönbrodt, F. D., Humberg, S., & Nestler, S. (2018). Testing similarity effects with dyadic response surface analysis. European Journal of Personality, 32(6), 627-641. https://doi.org/10.1002/per.2169
- Shackelford, T. K., & Buss, D. M. (1997). Marital satisfaction in evolutionary psychological perspective. In R. J. Sternberg & M. Hojjat (Eds.), Satisfaction in close relationships (pp. 7-25). Guilford Press.
- Shackelford, T. K., & Buss, D. M. (2000). Marital satisfaction and spousal cost-infliction. Personality and Individual Differences, 28(5), 917–928. https://doi.org/10.1016/S0191-8869(99)00150-6
- Stanley, S. M., & Markman, H. J. (1992). Assessing commitment in personal relationships. Journal of Marriage and Family, 54(3), 595–608. https://doi.org/10.2307/353245
- Stephens, H. F., Kistner, J. A., & Lynch, R. J. (2015). The calculation of discrepancy scores in the context of biased self-perceptions of acceptance. Journal of Psychopathology and Behavioral Assessment, 37(3), 442-453. https://doi. org/10.1007/s10862-014-9466-6
- Stouffer, S. A., Suchman, E. A., DeVinney, L. C., Star, S. A., & Williams, R. M., Jr. (1949). The American soldier: Adjustment during army life. (Studies in social psychology in World War II). Princeton University Press.
- Theiss, J. A., & Solomon, D. H. (2008). Parsing the mechanisms that increase relational intimacy: The effects of uncertainty amount, open communication about uncertainty, and the reduction of uncertainty. Human Communication Research, 34(4), 625–654. https://doi.org/10.1111/j.1468-2958.2008.00335.x

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