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Short Communication

# Prioritizing positivity optimizes positive emotions and life satisfaction: A three-wave longitudinal study

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ABSTRACT

Prioritizing positivity, which reflects the extent to which individuals organize their lives in ways that would maximize their experience of happiness, has been found to be associated with higher levels of well-being via positive emotions. However, previous research on this construct has been cross-sectional in nature which has made the temporal sequence of effects ambiguous. Moreover, previous studies have not explored the reciprocal relations among key constructs. In this study, we addressed these gaps using a three-wave longitudinal study which assessed the extent to which prioritizing positivity relates with positive emotion and life satisfaction among 408 Filipino secondary school students. Cross-lagged analysis indicated that T1 prioritizing positivity positively predicted T2 positive emotions which in turn predicted T3 life satisfaction after controlling for autoregressor effects. Notably, T2 positive emotions mediated the relations between T1 prioritizing positivity and T3 life satisfaction. We also found evidence of reciprocal effects with prior positive emotions predicting subsequent prioritizing positivity. The theoretical and practical implications are discussed.



## 1. Introduction

Everyone wants to be happy. People use various strategies to pursue happiness. However, research has shown that different strategies are not created equal and may yield distinct consequences on one's well-being. Some individuals deliberately try to maximize their happiness when experiencing a positive event. Ironically, this strategy backfires and results in lower levels of happiness (Ford, Shallcross, Mauss, Floerke, and Gruber, 2014; Mauss, Tamir, Anderson, and Savino, 2011 Mauss et al., 2012. Another strategy is paying constant attention to one's happiness levels. This strategy has been shown to rebound leading to lower happiness as well (Schooler, Ariely, & Lowenstein, 2003). Interestingly, individuals who excessively value happiness have been shown to be less happy than those who relate to their happiness in a less obsessive way (Mauss et al., 2012).

A possibly better way to pursue happiness would be to intentionally look for scenarios or circumstances (e.g., scheduling weekly hiking session with friends) that can lead to naturally-occurring positive emotions. Catalino, Algoe, and Fredrickson (2014) called this construct "prioritizing positivity." Individuals high in prioritizing positivity deliberately plan their days to select situations that would lead to greater amounts of happiness. Individuals vary in terms of their predisposition to select positive situations and incorporating these situations in their lives which supports the conceptualization of prioritizing positivity as an individual difference variable. Prioritizing positivity has been found to be positively associated with well-being via positive emotions (Catalino et al., 2014).

The aim of this study was to examine how prioritizing positivity is associated with well-being via positive emotions using a longitudinal approach. This will help shed light on the temporal sequence of effects among the variables which has been left unexplored in previous research. To date, only the ground-breaking study of Catalino et al. (2014) has explicitly focused on prioritizing positivity. They found that prioritizing positivity predicted well-being via positive emotions. However, because their study was cross-sectional in nature, it suffered from a couple of limitations.

First, although they showed that positive emotions mediated the effects of prioritizing positivity on well-being, their reliance on a cross-sectional design precluded them from making strong conclusions (Catalino et al., 2014). In fact, they admitted that they "found evidence that other causal sequences may exist" (p. 1159). That is, they found other alternatives to the prioritizing positivity → positive emotions → well-being pathway. Moreover, Cole and Maxwell (2003) also asserted that using cross-sectional designs to assess mediation is prone to common method variance which can yield inaccurate estimates of mediated effects. A longitudinal study could clarify these conceptual ambiguities.

Second, because Catalino et al. (2014) tested all the variables at a single time point, they were unable to examine the possibility of reciprocal processes. Studies have suggested that positive emotions facilitate the creation of virtuous cycles (i.e., positive emotions enhance optimal outcomes which then lead to greater positive emotions) which is

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consistent with the "upward spiral hypothesis" of Fredrickson (2001). However, previous research was not able to investigate the possibility of a reciprocal relationship between prioritizing positivity and positive emotions.

Third, individual difference variables are assumed to exhibit a certain degree of temporal stability. However, Catalino et al. (2014) were not able to test the temporal stability of prioritizing positivity. We explicitly tested the temporal stability of this construct in the current study.

This research has key theoretical and methodological strengths. From a theoretical perspective, we were able to explore the temporal sequence of the relationships among prioritizing positivity, positive emotions, and well-being. We were able to examine the possibility of reciprocal relations among the key variables, and we investigated the temporal stability of the prioritizing positivity construct.

From a methodological perspective, we addressed the weaknesses of a cross-sectional design by using a three-wave longitudinal study.

We posited the following hypotheses:

**H1.** Prioritizing positivity, positive emotions, and life satisfaction will remain stable across three time points.

**H2.** T1 prioritizing positivity will positively predict T2 positive emotions.

**H3.** T2 positive emotions will positively predict T3 life satisfaction.

**H4.** T2 positive emotions will mediate the relations between T1 prioritizing positivity and T3 life satisfaction.

**H5.** Positive emotions will exert a reciprocal influence on prioritizing positivity.

**H6.** Life satisfaction will exert a reciprocal influence on positive emotions.

## 2. Methods

### 2.1. Participants

The present study recruited 408 Filipino secondary students from a government-funded academic institution in Metro Manila, Philippines. The mean age of the participants was 14.31. There were 184 male and 224 female participants. The sample was comprised of 112 grade seven students, 86 grade eight students, 123 grade nine students, 83 grade ten students while 4 students failed to report their year levels. Passive consent forms were distributed to the participants' parents before the actual survey administration, and students were informed that they can withdraw from the study at any time without consequence. All the invited students participated in the study. We collected data across three time points which were done during the second (Time 1), third (Time 2), and fourth grading (Time 3) periods respectively. Each data collection phase was separated by a one-month interval.

### 2.2. Instruments

To assess prioritizing positivity, the 6-item Prioritizing Positivity Scale developed by Catalino et al. (2014) was used. Items were rated on a 9-point Likert scale (1 = Strongly disagree; 9 = Strongly agree). A sample item in the scale is: "A priority for me is experiencing happiness in everyday life."

The 10-items in the modified Differential Emotions Scale (Fredrickson, Tugade, Waugh, and Larkin, 2003) were used to gauge the intensity of individuals' positive emotions. The items were rated on a 5-point Likert scale (0 = Not at all; 4 = Extremely). A sample item is "How often have you felt amused, fun-loving, or silly?"

The 3-item life satisfaction subscale in the Concise Measure of Subjective Well-Being (Suh and Koo, 2011) was utilized to examine the degree to which the participants perceive that their lives are satisfying. Items were rated on a 7-point Likert scale (1 = Strongly disagree; 7 = Strongly agree). A sample item is: "I am satisfied with the relational aspect (e.g., interpersonal relations with family and friends) of my life".

## 3. Results

### 3.1. Missing data analysis

There was around 5% attrition rate as some students were not around during the third phase of data collection. In particular, 408 participants accomplished the questionnaire at Time 1, 395 participants at Time 2, and 387 participants at Time 3. As missing data could potentially influence the results of subsequent analyses, multivariate analysis of variance was conducted to detect possible mean differences on Time 1 key constructs between students who had complete and missing data. Results showed that no marginal difference existed, $V = .02$, $F(3404) = 2.62$, $p = .05$, *multivariate* $\eta^2 = 0.19$. In line with the recommendation of Little (1988), we performed expectation maximization strategy in imputing the missing responses. Thereafter, we used the imputed dataset in the subsequent data analyses.

### 3.2. Preliminary analysis

The descriptive statistics and bivariate correlations among the variables are shown in Table 1. The patterns of relationships observed were in line with our theoretical conjectures given that prioritizing positivity and positive emotions were positively correlated to each other across the three time points. Positive emotions were positively associated with life satisfaction across the three time points as well. The correlations were moderate in magnitude which indicated that the constructs were distinct from each other.

### 3.3. Measurement model

Before conducting the structural equation modelling, we first tested the measurement model using longitudinal confirmatory factor analysis. This enabled us to examine the factor structure of the variables. The model had 9 latent constructs with 27 indicators (e.g., 3 parcels for prioritizing positivity, 3 parcels for positive emotions and the 3 items in the life satisfaction scale) across three time points. Marsh and Yeung (1998) suggested that the error terms for the same indicators across time be correlated in order to produce more accurate estimates.

The measurement model yielded very good fit: $\chi^2 = 608.88$, df = 339, $p < .001$, CFI = .96, IFI = .96, TLI = .95, and RMSEA = .04 (.039–.050). All indicators significantly loaded on the hypothesized latent constructs at $p < .001$.

### 3.4. Cross-lagged structural equation model

We tested a three-wave cross-lagged model which can be found in Fig. 1. This model included auto-lagged effects for all the variables. That is, we posited T1 variables to predict their T2 equivalents, which in turn predicted the T3 variables. Of greater interest in the current study, we posited that prioritizing positivity would predict positive emotions which in turn would predict subsequent well-being. We also included cross-lagged effects by modelling the reciprocal relations between prioritizing positivity and positive emotions as well as that between positive emotions and well-being.

The cross-lagged model had excellent fit: $\chi^2 = 506.13$, df = 274, $p < .001$, CFI = .96, IFI = .96, TLI = .95, and RMSEA = .046 (.039–.052). Only the significant paths are shown in Fig. 1. H1 was supported. We found that prioritizing positivity, positive emotions, and life satisfaction were temporally stable. H2 was supported given that T1 prioritizing