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## SOCIAL PSYCHOLOGY | RESEARCH ARTICLE

# An exploration of the relationships between gratitude, life satisfaction, and importance of helping others among a representative sample of the adult population of Mexico

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**Abstract:** We used a representative sample of the adult population of Mexico to examine the influence of gratitude on life satisfaction and importance given to helping others. Questionnaires were administered by a trained interviewer in a face-to-face format outside the participants' home. Path analysis, treating the variables as observed, was used to test our hypotheses. Results showed that gratitude had a positive relationship with life satisfaction while controlling for financial satisfaction. Similarly, gratitude was positively related to importance given to helping others. For the most part, the positive influence of gratitude on life satisfaction and importance given to helping other remained significant at different income levels. The implications of the results were discussed.

**Subjects:** Applied Social Psychology; Positive Psychology; Social Psychology

**Keywords:** gratitude; life satisfaction; helping others; representative samples; income levels

### 1. Introduction

Adam Smith, in his theory of moral sentiments (Smith, 1976/1790), was one of the first scholars to take a serious look at the emotion of gratitude. Psychology has recently shown more enthusiasm for understanding the positive aspects of life (Fredrickson, 2013), including an examination of gratitude and its consequences. Across different investigations, gratitude has been related to higher levels of well-being (Wood, Froh, & Geraghty, 2010) and prosocial behavior (McCullough, Kimeldorf, & Cohen, 2008). However, one of the shortcomings of these empirical investigations is that most of them have used samples of convenience: college students (see Chan, 2013; Szcześniak & Soares, 2011 for some exceptions). The excessive use of samples of college students has been criticized recently (Henrich, Heine, & Norenzayan, 2010), suggesting the need to conduct research with more diverse samples.



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Rogelio Puente-Díaz is the José Cuervo professor of marketing at Universidad Anahuac México Norte. Rogelio conducts research on creativity, context effects, and gratitude. Results from this investigation are part of research program that seeks to examine the positive consequences of gratitude and its implications for life satisfaction, the generation of novel and useful ideas, and prosocial behavior.

### PUBLIC INTEREST STATEMENT

Public opinion research has recently paid closer attention to the predictors of life satisfaction since results from empirical investigations are often used to make policy decisions by government officials. Yet, this research often neglects conducting investigations with participants from developing countries or participants from low-income levels. Our investigation tries to address these limitations.

Hence, the purpose of the present investigation is twofold. First, we want to examine the influence of gratitude on life satisfaction and importance given to helping others among a robust, representative sample of the adult population of Mexico. Second, we want to examine if the influence of gratitude on life satisfaction and importance given to helping others is moderated by income level. We first discuss the theoretical work and empirical findings on gratitude and its positive consequences and then propose why it is important to establish the robustness of these findings among more diverse segments of the population.

## 2. Gratitude

Gratitude is conceptualized as an emotion and a life orientation in which individuals appreciate and notice positive aspects in their lives (Wood et al., 2010). Gratitude emerges when one recognizes another agent as a source of one's positive aspects in life. The broaden-and-build theory of positive emotions suggests that positive emotions such as gratitude broaden thought repertoires and build personal resources (Fredrickson, 2013). When one is grateful, then, there is a tendency to broaden one's mindset and acknowledge, among other aspects, the role of important others in life. Similarly, gratitude helps build durable resources for well-being such as intrinsic motivation and purposefulness (Froh & Bono, 2008).

Since gratitude is an orientation toward appreciating and noticing the positive aspects of life, it has been hypothesized to be related to variables reflecting this positive outlook such well-being and its components: life satisfaction and positive and negative affect (Sheldon & Kashdan, 2011; Wood et al., 2010). A recent review of the relationship between well-being and gratitude supports this conclusion (Wood et al., 2010). However, many of the reviewed investigations had limitations. Out of all the studies reviewed, only two used robust samples (Park, Peterson, & Seligman, 2004; Peterson, Ruch, Beermann, & Park, 2007), and as far as we know, not a single investigation used representative samples of the population. The use of convenience samples, especially the use of participants from Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies, has been criticized (Henrich et al., 2010).<sup>1</sup> We are not implying that the positive influence of gratitude on well-being might not hold with more diverse samples. Yet, this is something that should be put to empirical scrutiny rather than something to be taken as given.

With regards to prosocial behavior, it is suggested that gratitude serves as a motivator of prosocial behavior (McCullough et al., 2008). Specifically, gratitude is more than a positive emotion because it also involves acknowledging and appreciating that one is a recipient of good "things" in life. It is precisely these acknowledgment and appreciation what motivate people to behave and act prosocially (McCullough, Kilpatrick, Emmons, & Larson, 2001).

Several correlational and experimental studies have found support for the proposed link between gratitude and different forms of prosocial behavior (Bartlett & DeSteno, 2006; DeSteno, Bartlett, Baumann, Williams, & Dickens, 2010; Froh, Sefick, & Emmons, 2008; McCullough, Emmons, & Tsang, 2002; Naito, Wangwan, & Tani, 2005; Tsang, 2006). Even though the findings from these investigations have been valuable in increasing our understanding of how gratitude influences prosocial behavior, they have had the same limitation of using primarily samples of convenience.

Even though our criticism about the excessive use of samples of college students from Western countries is valid, this does not mean that the examination of gratitude, satisfaction with life, and prosocial behavior with diverse samples has been completely neglected. For example, one investigation with school teachers from Hong Kong found a positive relationship between gratitude and satisfaction with life (Chan, 2013). Another investigation with Italian residents also found a positive relationship between life satisfaction and gratitude (Szcześniak & Soares, 2011). Similarly, another investigation with Chinese students found a positive relationship between gratitude and helping behavior (Li & Chow, 2015). Hence, there seems to be some empirical support for the generalizability of the positive influence of gratitude on life satisfaction and importance given to helping other among more diverse samples. Yet, the use of more diverse samples has been more the exception than the rule.

As explained before, we are also interested in testing if income moderates the relationships between gratitude, life satisfaction, and importance given to helping others. Even though the examination of the moderating influence of income on the relationships between gratitude, satisfaction with life, and importance given to helping others is more exploratory in nature, there is some evidence suggesting that individuals belonging to the highest social class tend to show less empathy and compassion than the lower class counterparts (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). Whether this reduced empathy and compassion influence the relationship between gratitude and satisfaction with life or gratitude and importance given to helping others is something that needs to be empirically examined. Hence, we test for the moderating influence of income.

In sum, the influence of gratitude on well-being and prosocial behavior has not been examined with representative samples of the population, which limits our ability, for example, to investigate if the positive effects of gratitude are moderated by income level. Thus, we want to address this limitation using a representative sample of the adult population of Mexico, which includes, among others, people whose monthly income is \$100 dollars or less. For our investigation, we have two research hypotheses and one research question:

- (1a) Gratitude would have a positive relationship with life satisfaction.
- (1b) Gratitude would have a positive relationship with importance given to helping others.
- (2) Are these relationships moderated by income level?

### 3. Participants and sampling design

Participants were 1,200 (591 females and 609 males; ages 18–89,  $M = 42.53$  years and  $SD = 16.30$ ) residents of Mexico. We used a stratified two-stage cluster sample design. In the first step, we randomly selected Primary Sampling Units (PSUs) which in this case were the electoral sections created by the institution that organizes all the elections in Mexico (INE). In the second stage, we randomly selected houses and one individual from each house who was 18+ years of age and had a voting ID. Interviews were conducted in both rural and urban areas. The sample was representative of the adult population of Mexico in terms of age, sex, and income levels.

### 4. Measures

The questionnaire included, among other questions measuring political attitudes, two questions to assess gratitude taken from the Gratitude Scale (McCullough et al., 2002). The questions were: (1) I have so much in life to be thankful for and I am grateful to a wide variety of people. Both questions were measured in a scale of 1 (strongly disagree) to 5 (strongly agree). The wording of the life and financial satisfaction questions were taken from the World Values Survey (World Values Survey Association, 2009). Both items had a scale from 1 “Completely Unsatisfied” to 10 “Completely Satisfied.” The life satisfaction item was phrased as “Considering all things, how satisfied are you with your life?” The financial satisfaction question was worded as “How satisfied are you with the financial situation of your house?” Lastly, the willingness to help question was phrased as: In your personal life, how important is it to help others? and used a scale from 1 (Not important) to 4 (Very important). We acknowledge that it would have been ideal to use the full gratitude scale or a more robust satisfaction with life scale, yet in studies with large and representative samples, it is not uncommon to use single items to measure psychological variables (Strack & Schwarz, 2007). Lastly, participants reported their monthly income by choosing one of the following alternatives:<sup>2</sup> \$100 or less, \$101–\$300, \$301–\$500, \$501–\$1,000, and \$1,001 or more.

### 5. Procedure

Questionnaires were administered by a trained interviewer in a face-to-face format outside the participants' home. This is a typical way of collecting data in public opinion research in Mexico since it is a more reliable way of obtaining representative samples of the population than doing telephone or Internet interviews. It took between 20 and 25 min to complete the questionnaires.

## 6. Results

Before testing our hypotheses, we wanted to examine differences in gratitude and importance given to helping others as a function of income level. We calculated the mean for the two gratitude questions ( $r = .33$  between both gratitude items). For gratitude, results showed a significant effect of income level,  $F(3, 1,024)^3 = 5.18, p < .05, \eta^2 = .02$ . Tukey post hoc comparisons showed that participants from the lowest income level had the lowest levels of gratitude, yet the effect size was small. Conversely, results for the variable importance given to helping others showed that income level did not have a significant effect,  $F(3, 1,024) < 1$ .

We used path analysis to test the influence of gratitude on importance given to helping others and life satisfaction, while controlling for the known effects of financial satisfaction on life satisfaction (Schimmack, 2007). We used the Robust Diagonally Weighted Least Square (DWLS) estimation with LISREL 9.1 to model non-normally distributed data in all our analyses. We report a combination of absolute and incremental fit index (IFI): Satorra–Bentler  $\chi^2$ , Root Mean Square Error of Approximation (RMSEA), and IFI.

We first report the results for the model with the whole sample. Results showed that the model fit was good  $\chi^2 = 3.26, p = .20$  ( $df = 2$ ), RMSEA = .02, and IFI = .99. Examination of individual parameters revealed that gratitude had significant effects on life satisfaction and importance given to helping others,  $\gamma = .14, p < .001; \gamma = .33, p < .001$ , respectively. The influence of financial satisfaction on life satisfaction was also significant,  $\gamma = .41, p < .001$ . Squared multiple correlations for the endogenous variables were, respectively, life satisfaction (0.21) and importance given to helping others (.11).

Results for the model with participants reporting monthly income levels of \$100 American dollars or less showed that the model fit was good  $\chi^2 = 2.69, p = .26$  ( $df = 2$ ), RMSEA = .01, and IFI = .99. Examination of individual parameters revealed that gratitude had significant effects on life satisfaction and importance given to helping others,  $\gamma = .23, p = .01; \gamma = .46, p < .001$ , respectively. The influence of financial satisfaction on life satisfaction was also significant,  $\gamma = .40, p < .001$ . Squared multiple correlations for the endogenous variables were, respectively, life satisfaction (.25) and importance given to helping others (.21).

Results for the model with participants reporting monthly income levels between \$101 and \$300 American dollars showed that the model fit was good  $\chi^2 = 1.98, p = .37$  ( $df = 2$ ), RMSEA = .01, and IFI = .99. Examination of individual parameters revealed that gratitude had significant effects on life satisfaction and importance given to helping others,  $\gamma = .13, p = .01; \gamma = .34, p < .001$ , respectively. The influence of financial satisfaction on life satisfaction was also significant,  $\gamma = .38, p < .001$ . Squared multiple correlations for the endogenous variables were, respectively, life satisfaction (.18) and importance given to helping others (.12).

Results for the model with participants reporting monthly income levels between \$301 and \$500 American dollars showed that the model fit was good  $\chi^2 = 1.36, p = .51$  ( $df = 2$ ), RMSEA = .001, and IFI = .99. Examination of individual parameters revealed that gratitude had significant effects on life satisfaction and importance given to helping others,  $\gamma = .21, p < .001; \gamma = .26, p < .001$ , respectively. The influence of financial satisfaction on life satisfaction was also significant,  $\gamma = .34, p < .001$ . Squared multiple correlations for the endogenous variables were, respectively, life satisfaction (.19) and importance given to helping others (.07).

Results for the model with participants reporting monthly income levels between \$501 and \$1,000 and \$1,001+<sup>4</sup> American dollars showed that the model fit was good  $\chi^2 = 2.28, p = .32$  ( $df = 2$ ), RMSEA = .03, and IFI = .99. Examination of individual parameters revealed that gratitude did not have a significant effect on life satisfaction,  $\gamma = .02, p = .55$ . Conversely, gratitude had a significant effect on importance given to helping others;  $\gamma = .24, p < .001$ , respectively. The influence of financial satisfaction on life satisfaction was also significant,  $\gamma = .54, p < .001$  (for a summary of results for all models, see Table 1). Squared multiple correlations for the endogenous variables were, respectively, life satisfaction (.29) and importance given to helping others (.06).

**Table 1. Descriptive statistics and gamma coefficients for all models**

	Income level				
	Total	\$100 or less	\$101–\$300	\$301–\$500	\$500–\$1,000 and \$1,000+
Sample size	1,025	190	370	254	211
Mean/Standard Deviation gratitude	4.40 (.76)	4.23 (.89)	4.41 (.75)	4.44 (.68)	4.52 (.70)
Mean/Standard Deviation importance given to helping others	3.43 (.76)	3.42 (.81)	3.41 (.79)	3.42 (.79)	3.47 (.75)
Mean/Standard Deviation life satisfaction	8.63 (1.52)	8.36 (1.82)	8.54 (1.67)	8.64 (1.38)	8.86 (1.18)
Mean/Standard Deviation financial satisfaction	7.05 (2.29)	6.09 (2.84)	6.88 (2.22)	7.31 (1.94)	7.78 (1.97)
Influence of gratitude on life satisfaction	.14*	.23*	.13*	.21*	.02
Influence of gratitude on importance given to helping others	.33*	.46*	.34*	.26*	.24*
Influence of financial satisfaction on life satisfaction	.41*	.40*	.38*	.34*	.54*

\*Significant at the .05 level.

## 7. Discussion

The purpose of the present investigation was to examine the influence of gratitude on life satisfaction and importance given to helping others among a representative sample of the adult population of Mexico. We found support for the hypothesized positive relationships between gratitude and life satisfaction and gratitude and importance given to helping others. Thus, our results are consistent with the literature on gratitude, well-being, and prosocial behavior (Sheldon & Kashdan, 2011; Wood et al., 2010). For the most part, the hypothesized correlations did not change as a function of income level. We believe it was important to empirically test if the proposed relationships between gratitude and life satisfaction and importance given to helping others held among representative samples of the population.

Even though one can be grateful about different things besides financial resources, one cannot ignore that income is related to a wide variety of important life outcomes such as health, life expectancy, job stability, perceived autonomy, among others, which might represent “things” to be grateful for (Kraus et al., 2012; Rojas, 2010). Thus, it was important to examine and establish that even under difficult economic conditions and its related consequences, being grateful is related to higher levels of life satisfaction and helping intentions. Establishing the positive consequences of being grateful among representative sample of the population provides more robust evidence about the universality of some psychological constructs such as gratitude. It also provides evidence about the ability that humans have to experience positive psychological states even under difficult circumstances.

The non-significant relationship between gratitude and life satisfaction among members from the highest income level was somewhat unexpected. We are hesitant to make any conclusions based on a single study. However, future research might want to examine if gratitude and its positive effects are significantly reduced among people whose basic needs are met. For example, a recent investigation found that individuals with fewer financial resources showed more compassion than individuals with more financial resources (Stellar, Manzo, Kraus, & Keltner, 2011). Similarly, another investigation found that individuals with fewer financial resources showed higher levels of prosocial behavior in terms of helping others and giving charity than individuals with more financial resources (Piff, Kraus, Côté, Cheng, & Keltner, 2010). Hence, there seems to be some empirical evidence suggesting differences between individuals with more/less financial resources or higher/lower socioeconomic status in variables relevant for our investigation. Future research with representative samples should continue exploring the relationships between gratitude, life satisfaction, and different forms of prosocial behavior.

### 7.1. Limitations and future directions

Our investigation had several limitations. First, we used a standard questionnaire to assess gratitude, life satisfaction, and helping intentions and test, quantitatively, for the proposed relationships. Yet, a qualitative approach could shed light on some very important aspects of gratitude. For example, with a monthly income of \$100 dollars, a family cannot fulfill its basic needs. Thus, it would be interesting to conduct in-depth interviews and ethnographic observations to investigate how gratitude operates under these difficult economic conditions. Further research might want to use mixed designs to examine gratitude among different segments of the population.

A second, somewhat related, limitation is that we did not use the complete gratitude scale or a more robust life satisfaction questionnaire. It is often the case that public opinion research uses single items to measure psychological variables in order to manage the trade-off between the quality of information and time constraints (Strack & Schwarz, 2007). Future research might want to use more robust scales to examine the influence of gratitude on different psychological outcomes among more representative samples. Last, we used a cross-sectional research design which limited our ability to directly test for the directionality of our proposed effects. Hence, we could not directly test if the directionality went from gratitude to life satisfaction or from life satisfaction to gratitude, to mention one example.

In sum, our investigation was able to provide further evidence about the positive influence of gratitude on life satisfaction and helping intentions. We were able, in our opinion, to address one of the limitations of the current state of knowledge in gratitude and in psychological research in general: the excessive use convenience samples, especially the use of participants from WEIRD societies (Henrich et al., 2010). We encourage researchers to continue seeking opportunities to test some of the proposed positive consequences of gratitude among more robust and diverse samples.

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#### Competing Interests

The authors declare no competing interest.

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#### Notes

1. We do not try to claim that all investigations on gratitude and life satisfaction have been conducted with college students from Western countries. We just would like to propose that the use of diverse samples has been more the exception than the rule. We thank one of reviewers for pointing this out.
2. The question was asked in Mexican pesos but we report the results in American dollars for the sake of clarity.
3. We had some missing data and we used list-wise deletion to handle it. Given the nature of the questions asked, we have no reason to believe that nature of the missing values was not random.
4. We collapsed the last two income categories in order to have a larger sample size.

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