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Does Self-esteem Mediate the Relationship between Gratitude and Subjective Well-being?

Abstract: There is a growing body of research investigating the relationships among gratitude, self-esteem, and subjective well-being. However, there remains a scarcity of research examining the impact of self-esteem on the relationship between gratitude and subjective well-being within Arabic context. In this study, 300 Arabic speaking adults completed measurements of gratitude, self-esteem, satisfaction with life, and positive and negative experiences. Participants' ages ranged between 18 and 54 years with a mean age of 29.67 years ($SD = 8.91$). The correlation results revealed that there were significant positive relationships between gratitude, self-esteem, satisfaction with life, and positive experience, while there were significant negative relationships between gratitude, self-esteem, satisfaction with life, and negative experience. The results also showed that gratitude and self-esteem directly predicted subjective well-being. Additionally, using structural equation modeling, self-esteem exerted a mediation effect on the relationship between gratitude and subjective well-being. The results suggest that enhancing self-esteem could assist adults who have gratitude to experience greater subjective well-being. Using the source of self-esteem, researchers and professionals could improve one's subjective well-being by employing various gratitude activities.

Keywords: subjective well-being, gratitude, self-esteem, satisfaction with life, positive experience, negative experience

Introduction

Many studies have examined the association between gratitude, self-esteem, and well-being among different groups of people, especially among undergraduate students (e.g., Lin, 2015) however research of this issue within the context of Saudi Arabia is underrepresented, particularly on adults. It has been documented that self-esteem could be a process relating gratitude with greater well-being (Lin, 2015). Addressing self-esteem in conjunction with gratitude and subjective well-being remains unclear among the Arabic speaking population.

The root of subjective well-being (SWB) rests on the hedonic perspective of well-being. SWB is defined as individuals' cognitive and emotional experience of life (Diener, 2000). In the emerging field of positive psychology, SWB is a prevalent multidimensional concept with three main components: life satisfaction, positive affect, and negative affect (Diener, 1984). These

three components are typically highly related to each other: individuals who are satisfied with their lives tend to experience more positive emotions and less negative emotions. Similarly, individuals who often experience negative feelings such as distress, upset, nervousness, and guilt may conclude that their life is not going well and thereby experience less positive feelings such as happiness, joy, excitement, interest and satisfaction with life.

Research on SWB has consistently shown that it is strongly associated with various important life domains. Greater levels of SWB is related with better social relationships (Lyubomirsky, King, & Diener, 2005; Oishi, Diener, & Lucas, 2007; Seligman, 2011), better physical health (Diener, Pressman, Hunter, & Delgado-Gil, 2017), better mental health (Diener & Seligman, 2002; Keyes, 2002; 2006), and higher work performance and success (Judge, Thoresen, Bono, & Patton, 2001; Lyubomirsky et al., 2005). Accumulating evidence also suggests that SWB is not only a significant indicator

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of positive functioning but also an outcome of it as well (Yildirim & Aziz, 2017; Yildirim, Barmanpek & Farag, 2018; Yildirim & Belen, 2018, 2019). Furthermore, studies demonstrated that subjective well-being is associated with positive psychological constructs such as gratitude (Froh, Yurkewicz, & Kashdan, 2009; Wood, Joseph, & Maltby, 2008) and self-esteem (Abdel-Khalek, 2011; Lin, 2015). Thus, subjective well-being can be an important outcome that needs to be taken into account when the importance of psychological constructs is examined.

Gratitude is an adaptive psychological characteristic that people experience in everyday life. Gratitude is defined as being grateful for favourable behaviours from anyone (Froh, Miller, & Snyder, 2007). According to McCullough, Emmons and Tsang (2002), gratitude is a general dispositional positive characteristic that refers to the acknowledgment of the roles of other people's goodness in the positive experiences and outcomes that one obtains and respond these with grateful feelings. The feeling of gratitude occurs when one has been given something valued or needed (McCullough, Kilpatrick, Emmons, & Larson, 2001). High levels of gratitude could have various benefits across different life domains such as social well-being, mental health, and physical health (Lambert, Fincham, Graham, & Beach, 2009) as well as subjective and psychological well-being (see Wood, Froh, & Geraghty, 2010 for a review). For example, individuals with a grateful personality characteristic experience less psychological problems such as anxiety, depression, hostility, and anger (Wood, Joseph, & Maltby, 2008). According to the results of previous studies, gratitude plays an important role in experiencing greater happiness of individuals. Watkins, Woodward, Stone, and Kolts (2003) indicated that gratitude may assist individuals to experience more positive emotions, happiness and hope, along with less depression and negative emotions in their lives in general. Gratitude was found to be uniquely important to well-being. The contribution of gratitude to subjective and psychological well-being remains significant after controlling for personality traits such as extraversion, openness to new experiences, and emotional stability (Wood et al., 2008; Wood, Joseph, & Maltby, 2009). According to a study involving undergraduate students in Saudi Arabia, higher levels of gratitude were significantly related to lower perceived stress and greater satisfaction with life (Yildirim, & Alanazi, 2018). In this study, perceived stress was found to be a full mediator between gratitude and satisfaction with life. That is, gratitude may result in lower levels of perceived stress that in turn predicts greater satisfaction with life. Various gratitude related interventions have been designed to enhance not only gratitude, but also the well-being of individuals (e.g., Emmons & McCullough, 2003).

Self-esteem refers to the one's positive and negative attitudes toward the self that is stemmed from subjective evaluation of the self under the various circumstances (Rosenberg, 1965). Individuals with limited self-esteem capacity may focus more on failures, losses, and the risk of losing self-esteem (Baumeister, Tice and Hutton, 1989).

It is of prime importance to identify factors that explain the mechanism behind the relationship between gratitude and subjective well-being to promote positive well-being among general public. In this sense, it particularly appears to be interesting to examine the role of self-esteem as a mediator between gratitude and subjective well-being. According to McCullough, Emmons, and Tsang (2002), those who have levels of gratitude are more likely to have high levels of self-evaluations and thereby experience greater subjective well-being. There is direct evidence indicating that self-esteem serves as a process that explains the relationship between gratitude and various indices of well-being. For example, Lin (2015) has found that self-esteem served as a partial mediator between dispositional gratitude and various indices of well-being among Chinese undergraduate students. The mediating role of self-esteem in the association between gratitude and well-being was also verified in different cultures on different samples (e.g., Orth, Robins, & Widaman, 2012).

The direct relationship between gratitude and subjective well-being is evident in the literature. However, mediating factors that influence the relationship between gratitude and subjective well-being are not fully elucidated. It would be useful to provide further evidence that better clarifies the mechanism underlying between gratitude and subjective well-being. Furthermore, given that there is a wealth of information in the literature in support of well-being, studies examining the factors that influence the relationships between well-being and its correlates are dearth in Arab countries. Indeed, one particular study examined the mechanism behind the relationship between gratitude and satisfaction with life through perceived stress among Saudi undergraduate students (Yildirim & Alanazi, 2018). In that study, only satisfaction with life as a key index of subjective well-being was considered as the outcome variable. Considering that subjective well-being is a tripartite model that includes both affective and cognitive components, it is necessary to examine the underlying mechanism between gratitude and the tripartite model of subjective well-being through positive construct (e.g. self-esteem). This would be useful in terms of understanding the variables associated with the complete picture of subjective well-being. Identification of mediating factors that strengthen the impact of gratitude on subjective well-being could be an effective way to further enhance subjective well-being of individuals. Self-esteem has been shown to process the positive impact of gratitude on individuals' well-being (Lin, 2015). Shedding a light on the process between gratitude and subjective well-being may deepen the understanding of the role of self-esteem between gratitude and subjective well-being among Saudi adults.

The purpose of this study was to gain a better understanding of the underlying mechanism between gratitude and subjective well-being. In this sense, it was hypothesised that gratitude and self-esteem would be positively correlated with positive affect and satisfaction with life and negatively correlated with negative affect. It was also predicted that gratitude and self-esteem would

be directly associated with greater positive affect and satisfaction with life and less negative affect. In addition, it was hypothesised that self-esteem would serve as a significant mediator between gratitude and subjective well-being. A theoretical structural model was proposed to investigate these relationships and this model was presented in Figure 1.

Method

Participants

Three hundred Arabic-speaking adults were recruited for this study. In the sample, 38.7% were males and 61.3% were females. The participants ranged in age between 18 and 54 years. The mean age of participants was 29.67 years ($SD = 8.91$). Concerning economic status, the majority of the participants reported as having medium economic status (60.3%), followed by low (19.7%), high (10.7%), very low (9%), and very high (0.3%). A large proportion of the sample reported being married (60.7%), with 38% of the participants identified as being single, and fewer of them reported as being divorced (1.3%). Only volunteer participants took part in the study.

Measures

Gratitude Questionnaire (GQ-6; McCullough et al., 2002)

The GQ-6 measures dispositional aspect of gratitude with 6 items. Each item is rated on a 7-point scale ranging from 1 = strongly disagree to 7 = strongly agree. A sample item is "I am grateful to a wide variety of people." After reversing relevant items, a total score can be estimated by adding all items on the scale with higher scores standing for higher levels of gratitude. The GQ-6 demonstrated good reliability and validity. Yildirim and Alanazi (2018) reported an acceptable internal consistency reliability for the Arabic translation of the scale. In this study, the Cronbach alpha coefficients for the internal consistency of the GQ-6 was estimated as .78.

Satisfaction with Life Scale

(SWLS; Diener, Emmons, Larsen, & Griffin, 1985)

The SWLS is constructed to assess the cognitive aspect of SWB, with a general cognitive judgement of life satisfaction. It comprises of five items and respondents are required to answer each statement using a 7-point Likert type scale ranging from 1 = strongly disagree to 7 = strongly agree. A sample statement is "I am satisfied with my life". All statements on the scale can be summed to produce a total score that ranges between 5 and 35 with higher scores showing greater satisfaction with life. Arabic translation of the scale was found to have satisfactory reliability and valid (Abdel-Khalek, 2008). In this study, the SWLS was reliable with Cronbach's alpha coefficient of $\alpha = .84$.

Scale of Positive and Negative Experience

(SPANE; Diener et al., 2010)

The SPANE is a 10-item self-report scale made up of two subscales each comprised of 5 items: 5 Positive experiences (PE) and 5 negative experiences. Each

item is answered on a 5-point Likert type scale ranging from 1 = very rarely or never to 5 = very often or always. It consists of items such as "pleasant" (PE) and "unpleasant" (NE). The subscale scores are the sum of items on the relevant subscale. The subscales scores can range between 5 and 25 with higher scores referring to greater levels of positive and negative experiences. Forward-backward translation procedure was employed to translate the scale into Arabic language. The scale originally demonstrated good psychometric properties with a two-factor structure and high internal consistency. In the present study, the Cronbach alpha coefficients for the internal consistency of the SPANE were estimated as .83 for PE and .83 for NE.

Rosenberg Self-Esteem Scale (RSE; Rosenberg 1965)

The RSE is a 10-item self-report assessment of self-esteem. Participants are required to answer each statement using a 4-point Likert type scale ranging from 1 = strongly disagree to 4 = strongly agree. A sample statement is "I feel that I'm a person of worth, at least on an equal plane with others." The scale score is the sum of items. The scores can range between 10 and 40 with higher scores referring to higher self-esteem. Good psychometric properties have been reported for the Arabic version of the scale (e.g., Abdel-Khalek, 2011). In the present study, the Cronbach alpha coefficient for the internal consistency of self-esteem was calculated as .83.

Procedure

Data were collected through Internet questionnaires (in Arabic) that was publicised by a secure link created on secure data collection software which was distributed through social media such as forums, blogs and social networks. Concerning design, development and implementation of the questionnaires, the present study was administered following the recommendations of Andrews, Nonnecke and Preece (2003). The importance of online surveys for well-being, quality of life and health-related research have been widely acknowledged (Vereecken & Maes, 2006).

Participants were given the survey link to take part in the study. Upon clicking the link, participants were directed to an informed consent webpage where they were required to carefully read the procedure of the study. The informed consent form comprised of statements corresponding to the aim of the research, warranty of anonymity, confidentiality of the given responses, rights to retreat from the research at any time of involvement and data protection. After they gave their consent by agreeing to participate, they were then directed to a secure online system to complete a list of questionnaires. During participation in this research, participants were not required to give any identifiable information such as name and contact details. They were asked to fill in the questionnaires in one session without receiving any breaks. After completing the questionnaires, participants were provided researchers' contact information in case they had any questions about the research and results. Only volunteers took part in the study, they did not receive any rewards in return for contributing to the study. The administration and order of

the self-reported questionnaires were kept consistent for all participants. No incentives were given for completing the survey.

Data Analyses

The asymmetry of the distribution of variables was checked using skewness and kurtosis statistics. Following inspection of the data, five cases were determined to be univariate outliers within the data set and they were dropped from the analysis, as their standardized Z scores were greater than +3.29. Multivariate outliers were checked using Mahalanobis distance and one case was identified as being a multivariate outlier and excluded from the analysis. Variance inflation factor (range: 1.63–2.07) and tolerance (range: .48–.61) did not show any multicollinearity issue. Descriptive statistics were computed. Zero-order Pearson's *r* correlations were conducted to explore the relationships between the gratitude, self-esteem, and subjective well-being variables. Confirmatory factor analysis was used to examine whether the model satisfactorily fits the data. Structural equation model was used to test whether self-esteem served as a mediator between gratitude and subjective well-being. Multicollinearity issues were investigated using standard linear regression. The analyses were carried out utilizing SPSS and AMOS version 24 for Windows.

Results

Descriptive Statistics

Table 1 presents a summary of internal consistency reliabilities and descriptive statistics for the scales of gratitude, self-esteem, and subjective well-being. Cronbach alpha coefficients for the internal consistency reliabilities for all scales were above the conventional criteria of $\alpha .70$. Table 1 also indicates that skewness and kurtosis statistics ranged between the widely used criteria of ± 1 (George & Mallery, 2010) suggesting that the data were roughly normally distributed. Participants showed high mean scores on the scales of gratitude, self-esteem, satisfaction with life, and positive experience by exceeding the midpoint of the corresponding scales, while they showed low mean scores on the scale of negative experience by failing to exceed the midpoint of that scale.

Correlation Analysis

Zero-order correlations between gratitude, self-esteem, satisfaction with life, positive experience, and negative experience are documented in Table 2. The results demonstrated that all psychological variables were significantly related with each other and those correlations were in the line with our expectations. Gratitude shared a significant positive correlation with self-esteem, satisfaction with life and positive experience. Gratitude also shared a significant negative correlation with negative experience. Similarly, self-esteem shared a significant positive correlation with satisfaction with life and positive experience. Self-esteem also shared a significant negative correlation with negative experience. Satisfaction with life shared a significant positive correlation with positive experience and shared a significant negative correlation with negative experience. It is important to note that all correlation coefficients were significant at .01 probability level.

Table 2. Pearson correlations among the study variables

	1	2	3	4	5
1. Gratitude	1				
2. Self-esteem	.57**	1			
3. Satisfaction with life	.52**	.58**	1		
4. SPANE-Positive	.57**	.58**	.57**	1	
5. SPANE-Negative	-.46**	-.58**	-.50**	-.61**	1

** $p < 0.01$.

Structural Equation Modeling

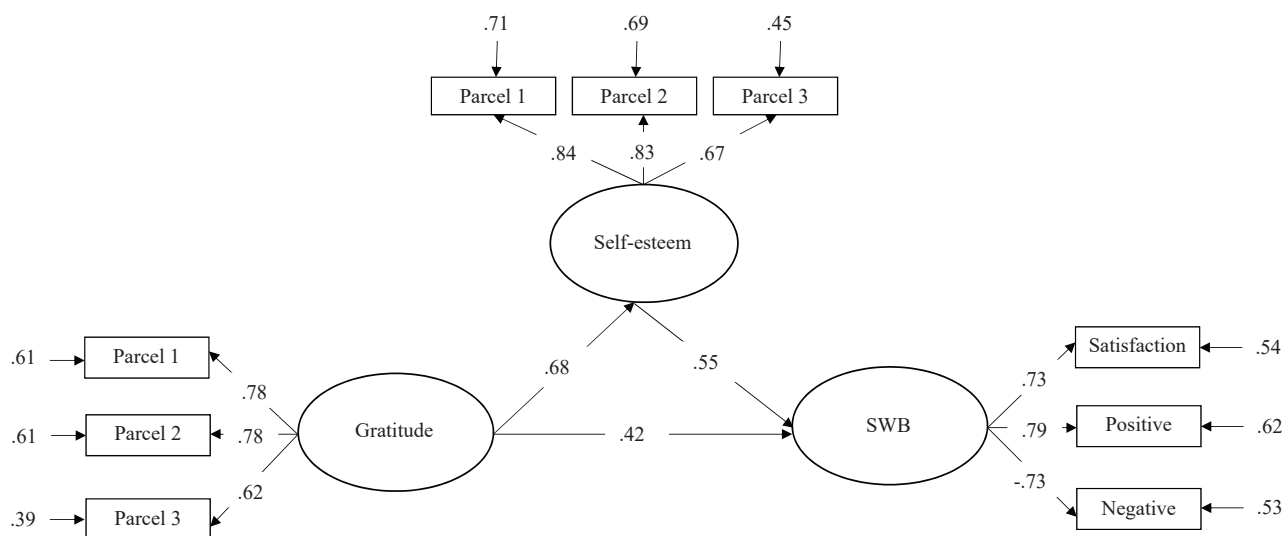
To test the hypothesis that self-esteem would act as a mediator in the relationship between gratitude and subjective well-being, SEM was performed in which self-esteem acted as the mediator variable and gratitude served as the predictor variable while subjective well-being served as the dependent variable. Direct relationships among the variables were also investigated. The theoretical structural model that was proposed to assess the direct and indirect effects of gratitude, self-esteem, and subjective well-being

Table 1. Internal consistency reliabilities and descriptive statistics for study variables (N = 300)

Variable	Cronbach's alpha	Mean	SD	Skewness		Kurtosis	
				Statistic	SE	Statistic	SE
Gratitude	.78	30.11	7.16	-.59	.14	.03	.28
Self esteem	.83	29.75	5.10	-.59	.14	.64	.28
Satisfaction with life	.84	22.19	7.27	-.42	.14	-.64	.28
SPANE-Positive	.83	21.81	3.93	-.54	.14	.37	.28
SPANE-Negative	.83	15.09	4.35	.41	.14	-.26	.28

Note. SD = standard deviation, SE = standard error.

Figure 1.



is presented in Figure 1. In the model, gratitude and self-esteem are represented with parcels, while subjective well-being is represented with its three components: satisfaction with life, positive experience, and negative experience. The parcels were created from the items on the gratitude and self-esteem scales to control for inflated measurement errors caused by having multiple indicators that refer to a latent variable. Parcels were formed by assigning scale items to parcel based on their item-total correlations. For gratitude, parcel 1 comprised of items 1 and 2; parcel 2 comprised of items 4 and 6; and parcel 3 comprised of items 3 and 5. For self-esteem, parcel 1 comprised of items 5, 6, and 9; parcel 2 comprised of items 1, 2, and 10; and parcel 3 comprised of items 3, 4, 7, and 8.

We used various goodness-of-fit statistics to assess the closeness of the hypothetical model to the empirical data. Chi-square statistic is largely sensitive to sample size and can be significant when there are small actual differences between the observed and implied model covariances (Kline, 2015). Thus, we did not rely on this statistic as an assessment of absolute fit but used the ratio of chi-square to degrees of freedom (χ^2/df , Jöreskog & Sörbom, 1993), the Non-Normed Fit Index (NNFI, Bentler, & Bonett, 1980), the Comparative Fit Index (CFI, Bentler, 1990), Root Mean Square Error of Approximation (RMSEA, Steiger, 1990), and the Standardized Root Mean Square Residual (SRMR, Byrne, 1998) to assess adequateness of fit of each model. With regard to the evaluation of the model fit, higher values for the CFI and NNFI refer to good model fit ($>.90$, acceptable and $>.95$, desirable, Hu & Bentler, 1999). As to the RMSEA and SRMR, lower values refer to good model fit ($<.08$, acceptable, $<.05$, desirable for RMSEA, Hu & Bentler, 1999) and ($<.10$, acceptable, $<.05$, desirable for SRMR, Hu & Bentler, 1999).

The results showed that although the recommended model was found to be significant as the chi-square test value was significant ($\chi^2 = 54.94$, $df = 24$, $p < 0.01$), examination of the proposed model fit indices revealed

“good” model fit to the data ($\chi^2/df = 2.29$, RMSEA = .07, SRMR = .04, CFI = .98, NNFI = .96). χ^2/df and SRMR parameters were respectively below the threshold value of 3 and .06 reflecting good fit, while RMSEA parameter was below the threshold value of .08 reflecting acceptable fit. CFI and NNFI parameters were above the threshold value of .95 reflecting good fit model to the data. Gratitude positively predicted self-esteem ($\beta = .68$, $p < .001$) and subjective well-being ($\beta = .42$, $p < .001$). Self-esteem positively predicted subjective well-being ($\beta = .55$, $p < .001$).

A bootstrapping procedure was utilized to evaluate the size of the total indirect effects and corresponding Confidence Intervals (CIs). The mediating effect of self-esteem was tested using the bootstrapping estimation procedure with a bootstrapping sample of 1000. Gratitude was significantly predicted self-esteem ($\beta = .68$, $p < .01$, 95% CI [.56, .77]) and subjective well-being ($\beta = .42$, $p < .01$, 95% CI [.23, .58]). Self-esteem significantly predicted subjective well-being ($\beta = .55$, $p < .01$, 95% CI [.40, .72]). The standardised indirect effect of gratitude on subjective well-being via self-esteem was significant ($\beta = .38$, $p < .01$, 95% CI [.27, .52]). Zero was not included in the CI, showing that there was mediating effect of self-esteem in the relationship between gratitude and subjective well-being. Moreover, the R^2 statistic was considered to determine the proportion of variance in subjective well-being explained by the parameters in the model. Gratitude accounted for 46% of the variance in self-esteem. Gratitude and self-esteem collectively accounted for 80% of the variance in subjective well-being. Gratitude could influence subjective well-being not only directly, but also through the effect of self-esteem.

Discussion

To our knowledge, this was the first study where self-esteem was a mediator of the relationship between gratitude and subjective well-being among Saudi adults.

The findings contributed to the evidence that enhancing self-worth can serve a significant indirect role in improving the positive effect of gratitude on subjective well-being.

Gratitude was positively correlated with self-esteem, satisfaction with life, and positive experience, while it was negatively correlated with negative experience. Self-esteem was also positively correlated with satisfaction with life and positive experience, while it was negatively correlated with negative experience. These results provide support for the relationship among gratitude, self-esteem and subjective well-being (Datu, 2014; Fredrickson, 2001; Kong, Ding, & Zhao, 2015; Liao & Weng, 2018). The results as to the mediating effect of self-esteem on the relationship between gratitude and satisfaction with life indicated that self-esteem exerted a mediating effect. This finding showed that higher levels of gratitude increased the levels of self-esteem, which eventually resulted in greater subjective well-being. Self-esteem as a positive psychological characteristic should be addressed in conjunction with gratitude and subjective well-being. This finding is in line with the findings of a study in which self-esteem acted as a mediator between gratitude disposition and several well-being indices in Chinese undergraduate students (Lin, 2015). This finding is also consistent with previous research; high levels of gratitude and self-esteem can have positive effect on well-being (Du, King, & Chi, 2017; Emmons & McCullough, 2003; Froh et al., 2009; McCullough et al., 2002; Wood et al., 2008; 2009; Wood et al., 2010). Therefore, professionals and practitioners should know whether individuals have adequate levels of self-esteem to assist them to support their gratitude and improve their subjective well-being.

The results of this study indicated that Saudi adults exhibited high levels of gratitude ($M = 30.11$), self-esteem ($M = 29.75$), satisfaction with life ($M = 22.19$), and positive experience ($M = 21.81$) and low levels of negative experience ($M = 15.09$), considering the cut-off point for each of the scale and subscale (24.5 for gratitude, 25 for self-esteem, 20 for satisfaction with life, 18 for positive experience, and 18 for negative experience). Consistently, in a recent study with Saudi university students, the levels of gratitude and satisfaction with life were high, while the level of perceived stress was low (Yildirim & Alanazi, 2018). In previous studies with adolescents in an Arab country, mean scores for satisfaction with life, self-esteem, happiness, and mental and physical health were high, while mean score for anxiety was low (Abdel-Khalek, 2011). The attention to gratitude and self-esteem are warranted, when professionals in Saudi Arabia provide ways to improve subjective well-being of individuals.

The findings of this research offered empirical support in respect to the links between gratitude, self-esteem, and subjective well-being in the context of Saudi Arabia. The current study contributed to subjective well-being research by investigating a mechanism that may explain the association between gratitude and subjective well-being. Using SEM, this mechanism was punctiliously examined to test the structural association between constructs. SEM is as a useful way to investigate the associations among a set

of variables simultaneously and calculate measurement error that gives a more rigorous assessment of the models being evaluated as compared to regression analyses (Bollen & Long, 1993). Given that, positive psychology aims to promote optimal human functioning and development of individuals by applying its principles, evidence pertaining to the investigation of these positive variables is dearth in Saudi Arabia. The associations between gratitude, self-esteem, and subjective well-being offer a valuable opportunity to understand that feeling worth about the self is important for being grateful in life and experiencing greater subjective well-being, which are important elements of fully functioning. The findings of this study also provided an important theoretical structural basis for intervention studies. Mediating effect of self-esteem on the relationship between gratitude and subjective well-being suggests that it is probable to enhance the effect of gratitude on subjective well-being by promoting self-esteem. That is, it could be more effective to offer resources for the improvement of self-esteem, rather than promoting gratitude itself, in enhancing subjective well-being. The findings can be used to develop important interventions that focus on factors contributing to subjective well-being. Self-esteem appears to play an important role between gratitude and subjective well-being. It shows that individuals who feel grateful for the things in life are more likely to feel worth about self, which in turn results into greater subjective well-being. Individuals who engage in activities that trigger the feeling of gratitude may experience higher subjective well-being if they perceive themselves as worthwhile. Collectively, this study indicates the importance of not only focusing on increasing gratitude, but also the importance of improving self-esteem for greater subjective well-being.

Although the findings of this study provide evidence that self-esteem can act as a significant mediator between gratitude and subjective well-being, the study is limited in comprehensively understanding the nature of these important variables. We acknowledge some important limitations of this study. First, it is difficult to conclude that the observed impact of self-esteem in the relationship between gratitude and subjective well-being holds true for all cultures. Although some research in this area has demonstrated positive relationships among the variables of this study, more systematic studies comparing various groups of people from different cultures might facilitate worthwhile information concerning the impact of self-esteem in the relationship between gratitude and subjective well-being. This would allow us to understand if there were any cross-cultural potential to the previous studies and something that could be worth investigating on this issue. Second, in this study, self-esteem was only selected as a mediator between gratitude and subjective well-being. As the results showed that the mediating role of self-esteem between the study variables was partial, suggesting that there might be other potential mediators that may be a process relating gratitude with higher well-being. Hence, future researchers are encouraged to investigate other potential mediators. Third, as this study used a conve-

nience sampling method, the present sample may not represent the entire Saudi general public. Additionally, as the variables of this study were measured using self-report questionnaires, participants may have responded in a socially desirable way by tending to give a positive self-description. It is recommended that subsequent researchers include non-self-report questionnaires such as peer ratings and objective measures to obtain more accurate information as to the study variables.

This study indicated that there are significant associations between gratitude, self-esteem, and subjective well-being among members of the public in Saudi Arabia. In light of these results, intervention studies assessing the usefulness of self-esteem are needed to facilitate a better understanding of the relationship between gratitude and subjective well-being. As to the potential practical implications, the findings are also valuable in terms of the development and implementation of the programs that include self-esteem as a key factor to boost subjective well-being of individuals and adolescents who have high levels of gratitude.

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