

Research Article

Gratitude and Well-being during COVID-19 Pandemic in Malaysia: Mediating Role of Resilience

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Abstract

The outbreak of the COVID-19 pandemic has severely disrupted the well-being and mental health of people around the world. Positive emotions like resilience and gratitude have been proven to be able to improve one's well-being. The theory of Broaden-and-build was used to explore resilience's mediating role in the relationship between gratitude and well-being among Malaysian adults during the COVID-19 pandemic. The data of 530 participants aged 18 to 35 years was analyzed using SmartPLS. The results showed that grateful and more resilient participants showed a better well-being, and the effects were further moderated by financial income and marital status. The results also supported the hypothetical statistical mediation model in which resilience is the statistical mediator for the association between gratitude and well-being. The results highlighted the significant influence of gratitude and resilience on Malaysian adults' well-being and explained the role of gratitude in boosting their well-being. It is suggested that policymakers and mental health professionals should consider promoting gratitude and resilience to increase positive emotions and well-being in young adults and help society to be prepared for challenging times of adversity in the future.

Keywords: gratitude; Malaysia; mediator; positive psychology; resilience; well-being.

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The Coronavirus disease (COVID-19) outbreak was ranked as the world's worst disaster after World War 2 (Seddighi, 2020). The outbreak of the pandemic poses a big problem to the psychological and physical well-being of people around the world (Bartoszek et al., 2020). The United Nations Secretary General has called for action as the pandemic has resulted in severe mental suffering (Dai et al., 2020). Countries all over the world including Malaysia have implemented lockdown and social distancing measures to contain the pandemic, however, those restrictions have caused a big problem to the psychological well-being of the society (Kamaludin et al., 2020). Even before the pandemic, Malaysia ranked a mere 80th spot among 156 countries in an international survey that ranked countries by their citizen's happiness level (Helliwell et al., 2019). These results are worrying as mental health and happiness are closely related to well-being (Jirkovská & Janečková, 2019).

Well-being can be divided into two different research paradigms that emerge from the distinct Greek Philosophy which are hedonic and eudaimonic well-being (Vainio & Daukantaitė, 2016). Eudaimonic well-being is the occurrence of personal and interpersonal skills and abilities such as the meaning of life that contribute to optimal psychosocial functioning (Ryff & Singer, 1998). Eudaimonic well-being concentrates on self-actualization and giving life meaning. In contrast, hedonic well-being is defined by pleasure or stimulative experience and is often identified as attaining emotions that are positive and satisfaction with life and avoiding gloomy emotions (Diener et al., 2018). Subjective well-being is a crucial factor in the hedonic viewpoint, related to a person's affective and cognitive interpretation of a person's life (Vainio & Daukantaitė, 2016). Subjective well-being is a subjective evaluation of how a person views their own life according to their principles (Huta & Waterman, 2014).

The sudden occurrence of COVID-19 has highlighted the significance of an individuals' mental state and psychological skills and capabilities to face calamity while keeping taking care of their



well-being. One of the important concepts linked to individuals' well-being when facing stress is resilience. Psychological resilience is an adaptive attribute that enables an individual to develop and learn while facing high stress and traumatic circumstances (Serrão et al., 2021). Resilience is dynamic personal support against all type of significant stressor (Rushton et al., 2015). For example, although almost every individual faces difficulties and stress from the COVID-19 pandemic, the mental health implications still differ among individuals (Li et al., 2021). This showed that individuals who have resilience can also face difficulties and stress.

Resilience and Well-being

Resilience has been positively associated with an individual's well-being and negatively related to stress. Resilience has been proven to be able to reduce stress and, in some cases, even prevent stress (Mehta et al., 2018). Resilience can increase the psychological and subjective well-being of an individual through different ways such as a good self-image, optimism, and decrease negative affect (Burns et al., 2011). Resilient individuals can cultivate positive and good emotions that can subsequently improve their overall well-being (Steinhardt & Dolbier, 2008).

Research by Mehta et al. (2018) among 198 American students discovered that resilience has a significant correlation with well-being. These results also showed that resilience can help to increase self-esteem and positive feeling about the self that can subsequently lead to increased well-being, even in a stressful situation. Sagone and De Caroli (2014) conducted a study among 183 Italian students and discovered that resilience and psychological well-being are positively correlated. Another study showed that resilience was able to indirectly affect well-being through the mediating effect of hope (Mak et al., 2011). Khodabakhsh and Ahmadi (2020) reported that resilience showed a moderating role in the effect between subjective happiness and the usage of social media during the pandemic.

Accordingly, it is expected that: H1. Resilience is positively associated with well-being.

Gratitude and Well-being

In addition to resilience, gratitude is also a significant predictor of subjective well-being. Gratitude symbolizes an individual's emotional responses when receiving favor and the propensity to undergo a positive affective condition when receiving kindness (Wang & Kong, 2020). Gratitude can be divided into two different approaches which are the trait gratitude and state gratitude. According to Robustelli and Whisman (2018), trait gratitude is the propensity to be thankful when receiving another person's assistance and can be a positive and grounded

personality trait. Alternatively, the feeling of appreciation and delightful feelings developed at the moment the person acquire support is defined as state gratitude. Previous research has also found that trait gratitude positively affects biological and psychological well-being (Cheng et al., 2015; Hill et al., 2013; O'Connell et al., 2016).

A growing number of studies in social psychology has suggested that gratitude can predict well-being (Froh et al., 2009). Gratitude is a well-known aspect of positive psychology and has been studied in connection with various factors. A study by Williams and Bartlett (2015) viewed gratitude as an emotion, while Fehr et al. (2017) viewed gratitude as a mood. Jia et al. (2014) stated that gratitude is the result of an individual perceived that they have gained an intended favour from other people or God. In Malaysia, Yee and Walet (2013) conducted a study on gratitude among Asia countries and discovered that Malaysia scored lower on gratitude compared to the other countries. The authors suggested that the low level of gratitude could be caused by their demanding and deleterious lifestyle; as proven by Kisi's 2020 Work-Life-Balance report that ranked Kuala Lumpur 4th for the most overworked city among 50 of the world's top metropolis (Cho, 2020). Gratitude is a useful positive emotion that has the capability of making a person's life better, especially during adversities such as the pandemic. Positive psychology is a subject that focuses on increasing an individual's well-being by fostering positive emotion such as gratitude.

Other than emotion, Villani et al. (2019) found out that religious individuals have higher subjective well-being compared to individuals without religion. The result is not surprising, considering that religious individuals have acquired more adaptive ways to control their emotions such as gratitude (Lambert et al., 2009) from religious teaching (Vishkin et al., 2019). In one study by Tsang et al. (2014) the findings showed that gratitude is significantly associated with multiple factors of well-being such as reducing depression (Toepfer et al., 2012), positive affect (Froh et al., 2009), perceived purpose of life (Lambert et al., 2009), religious beliefs and spirituality (Al-Seheel & Noor, 2016; Lambert et al., 2009; Villani et al., 2019) and life satisfaction (Wood et al., 2008). Similarly, a study by Tian et al. (2015) had discovered that people who show more gratitude, experience greater positive effects like higher satisfaction with life, hope, and happiness, in addition to lesser gloomy effects such as depression and jealousy. Rash et al. (2011) discovered that gratitude intervention has a positive effect on well-being. Thus, it is hypothesized that: H2: Gratitude is positively associated with well-being.



Broaden-and-build Theory

The theory of Broaden-and-build was introduced by [Fredrickson \(1998\)](#) to describe how positive emotions can be beneficial. The theory suggests that experiences of positive emotions are frequently linked with fostering good social relationships in addition to increasing cognitive complexity, attention, learning and mastery ([Zautra et al., 2010](#)). Fredrickson proposed that positive emotions can promote human blooming and well-being by increasing thought-action repertoire, which subsequently can be effective solutions to the constant effect of negative emotions ([Fredrickson, 2000](#)). People must cultivate these positive emotions to attain growth in terms of psychological and develop well-being from psychological and physical aspect ([Fredrickson, 2004](#)).

[Fredrickson \(2004\)](#) proposed that positive emotions can lead to psychological resilience. Psychological resilience is defined as one's capability to cope while facing calamity, hardship, and loss ([Tugade & Fredrickson, 2004](#)). Positive emotions can motivate an individual to find creative and innovative ways and thoughts to cope during times of stress and anxiety ([Fredrickson, 2001](#)). [Tugade and Fredrickson \(2004\)](#) investigated the cognitive, physiological and subjective perspective of psychological resilience, and discovered that individuals with resilience can efficiently deal with stressful situations, whereas individuals without resilience are not able to deal with stressful situations as effectively.

Moreover, [Fredrickson \(2004\)](#) proposed that positive emotions like gratitude can expand one's temporary thought action repertoires and create lasting social resources. Grateful individuals will creatively and innovatively explore various activities to show their gratitude ([Garg & Sarkar, 2020](#)). Previous studies have also discovered that grateful individuals showed an increased number of positive emotions like resilience, happiness, and life satisfaction ([Hwei & Abdullah, 2017](#); [McCullough et al., 2002](#)). Further, [Alkozei et al., \(2017\)](#) proposed a cognitive model based on the Broaden-and-build theory which explains how trait gratitude can influence an individual's well-being. The model proposed that trait gratitude is capable of expanding an individual's intellect to overcome unfortunate circumstances in a better way. Therefore, it is hypothesized that: H3: Gratitude is positively associated with resilience.

The Mediating Role of Resilience

During the last pandemic virus outbreak, [Havnen et al. \(2020\)](#) discovered that positive emotions such as resilience can buffer against stress. [Bonanno et al. \(2008\)](#) researched survivors of the Severe Acute Respiratory Syndrome (SARS) virus and discovered that patients with higher



resilience had lower levels of worry related to SARS. The study also discovered that male patients showed a higher level of resilience compared to female patients. A review study conducted by [Masten and Obradović \(2008\)](#) on how communities should prepare for major calamity, found out that resilience is one of the important factors that should be considered. The study also proposed that steps should be taken by policymakers to promote resilience among the society during the outbreak of calamity. A recent study regarding COVID-19 also highlighted the importance of resilience as an important instrument to improve an individual's coping ability against the COVID-19 pandemic ([Rosenberg, 2020](#)).

Resilience has been studied as a mediator to clarify the association between the stressor and the unpleasant psychological effect such as stress ([Anyan et al., 2017](#)). Nevertheless, there are limited studies that use resilience as a mediator to explain the relationship between another positive emotion such as gratitude and positive outcome such as well-being. A study conducted by [Arnout and Almoied \(2020\)](#) discovered that well-being can be a mediator for the correlation of gratitude and well-being. Similarly, people that are more grateful have a more optimistic opinion of self and this directly helps to deal with the unpleasant feelings from daily stressors. Further, it is hoped that this will guide the growth of resilience which will subsequently promote subjective well-being. Therefore, as a crucial protective factor, resilience is predicted to be a statistical mediator for the relationship between gratitude and well-being. Thus, it is expected that: H4: Resilience statistically mediates the effects of gratitude on well-being.

The Moderating Roles of Gender, Marital Status and Financial Income

Studies have shown that the expression of gratitude differs among men and women ([Froh et al., 2009](#); [Naito et al., 2005](#)). Furthermore, studies across multiple approaches have supported the notion that women tend to convey and express gratitude, and subsequently acquire benefit from gratitude ([Froh et al., 2008](#); [Kashdan et al., 2009](#)). Accordingly, [Hill et al. \(2013\)](#) also tested the moderating effect of gender and marital status on the effect of gratitude and well-being and discovered that the results are insignificant. Such contradictory results may imply cultural differences whereby social influence is a more significant predictor in Asian samples than in North American samples. Culture is a vital factor in a person's values and way of life, which subsequently will dictate the way individuals assess life and satisfaction ([Oishi, 2018](#)). Based on previous literature, culture has been found to be able to influence factors such as gratitude, resilience, and well-being directly and indirectly ([Chen et al., 2020](#); [Kumar & Dixit, 2014](#); [Noor et al., 2018](#)).



Studies have found out that there are small but significant relationships between financial income and well-being (Netemeyer et al., 2017; Ng & Diener, 2014). Yost-Dubrow and Dunham (2018) also discovered that gratitude is positively correlated with financial income. Since most literature on well-being recognizes financial income as one of the variables that could influence well-being (Dolan et al., 2008), therefore this study uses financial income as a moderator to the effect of gratitude and well-being. Moreover, this study aims to further suggest that gratitude promotes well-being across different demographic variables among adults in Malaysia. Figure 1 is the proposed conceptual framework of this research based on the Broaden-and-build theory (Fredrickson, 1998). Accordingly, it is hypothesized that: H5: Gender moderates the effect of gratitude on well-being, H6: Marital status moderates the effect of gratitude on well-being, and H7: Financial income moderates the effect of gratitude on well-being.

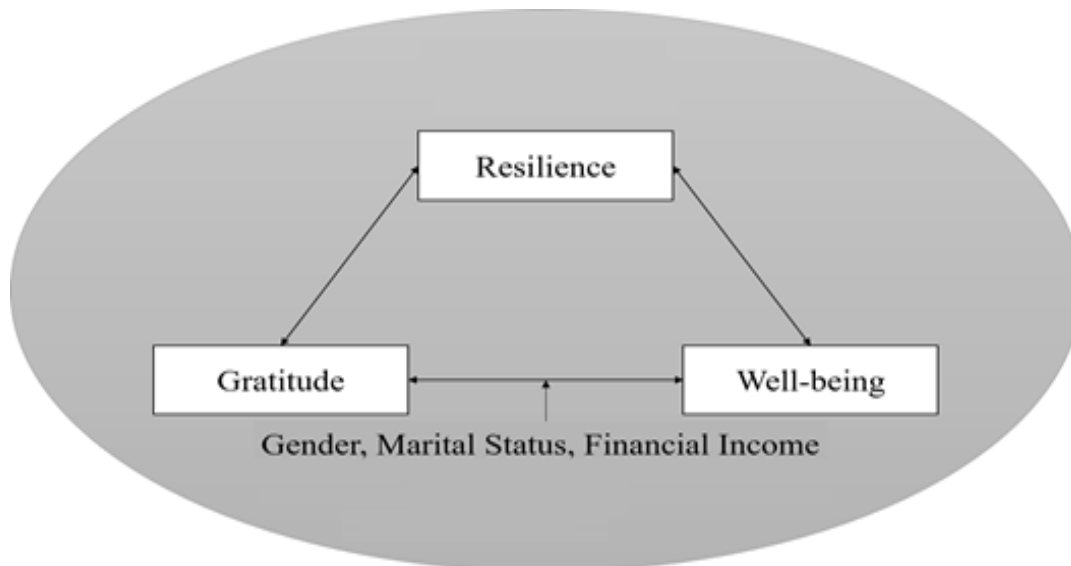


Figure 1. *Conceptual Framework*

Method

Participants and Sampling

To examine the research questions, an online survey was carried out. The minimum sample size needs to fulfill the criteria of being identical to the larger of ten times the biggest amount of formative indicators applied to quantify one construct (Hair et al., 2017). There are six items in gratitude construct which will add up to 60 sample size. Additionally, analysis of sample statistical power (Cohen, 1992) was also conducted using the G-Power Model's calculation, and

the minimum sample size of this research is 166 in order to obtain the actual power of .95. The sample size collected exceeded the minimum requirement of this study because the larger the sample, the more reliable the Partial Least Square estimates (Garson, 2016).

There were 544 participants sampled using convenience and snowball sampling method. The inclusion criteria for the sample were being Malaysian in the age bracket of 18 to 35 years old. After the filtration process to exclude missing and incomplete data from 15 participants, the final valid number of the participants was 529. The sample consisted of 332 (62.8%) female, 190 (35.9%) male and 7 (1.3%) identified as Others. The participants were from different parts of Malaysia including Sabah and Sarawak. The sample's age is 18 to 35 years and the mean age of 24.71 ($SD = 4.09$). The distribution of ethnics was as follows: 47.4% Chinese, 20% Indians, 25.5% Malays and 7% Others. Most of the participants were single (86.8%, $n = 459$), and educated at the level of bachelor's degree (74.1%, $n = 392$).

Research Procedure

Prior to the data collection, the proposed research method and questionnaires of this study were assessed and approved by the Scientific and Ethical Review Committee of the university. The first page of the online survey was to inform the participants about the aim of the research and permission was granted by all participants. The participants were informed about the fact that their participation in the research is voluntary and does not involve any risks. The participants were also aware that all data obtained would be anonymous and confidential. The questionnaires were posted online using Google Forms and shared on different platforms such as emails and social networking sites by considering reaching the variety of participants in terms of ethnicity, religion, education level, and all states of Malaysia.

Instruments

Self-administrated questionnaires were used in this research. The instruments used are the questionnaires that contain sociodemographic information, well-being index, gratitude questionnaire and brief resilience scale.

Sociodemographic information

It included information such as including age, gender, marital status, financial income, ethnics, religion, and location of residency. Financial income is measured on a 5-point scale with cut-offs at no income, RM3,000, RM5,999, RM8,999 and above RM9,000.



WHO-5 Well-Being Index (WHO-5)

The WHO-5 is a concise, self-administered questions to determine well-being over the last two weeks, which was first developed in 1998 (Bech et al.,2003). WHO-5 has five positively written items that are measured on a 6-point Likert scale, that has a range of 0 (at no time) to 5 (all of the time). The scores were added and then multiplied by four to obtain a total amount between 0 showing the worst well-being and 100 showing the best possible well-being. A score of lower than 50 shows poor well-being and it is suggested that the participants that scored lower than 50 be tested for possible symptoms of depression. A total of twenty-eight or below is indicative of depression. According to research done in Malaysia, the Cronbach's alpha of this instrument was .87 (Ram et al.,2013).

Gratitude Questionnaire (GQ-6)

Gratitude Questionnaire- Six Item Form is a self-administred questions created by McCullough et al. (2002) to examine individual's tendency to experience gratitude. The items in GQ-6 are measured on a 7-point scale that ranges from "1 = strongly disagree" to "7= strongly agree" with reliability and the validity being .80 and .77 respectively. Question 3 and 6 need to be reverse scored before adding up all the scores, as they are negatively worded. Low amount scored showed a lower degree of gratitude and vice versa (McCullough et al., 2002).

Brief Resilience Scale (BRS-6)

Brief Resilience Scale was developed by Smith et al. (2008) to measures the capability of a person to recover from psychological distress and hardship. BRS contain six questions on a 5-point Likert scale that range from "1 = strong disagrees" to "5 = strongly agree". Questions 2, 4 and 6 need to be reverse scored. The reason for the reverse scoring is to circumvent desirability response bias. The total score of BRS can be obtained by adding up the items including the reversed score and divided by 6, which will have a range from 1 to 5. The Cronbach's alpha of BRS is .93 (Rodríguez-Rey et al., 2016) The respondent is indicated as a resilient person when he or she is having a higher mean score in the Brief Resilience Scale (Kyriazos et al., 2018).

Data Analysis

The raw scores were compiled using Excel and were examined using Statistical Package for the Social Sciences (SPSS) version 23 and Partial Least Square Structural Equation Modeling (PLS-SEM) using the SmartPLS. Descriptive statistic was used to generate a general frequency of distribution on the variables that were used in this study. The Structural Equation Model using



latent variables was used to test the proposed conceptual framework. The reason “SmartPLS” was chosen was because PLS-SEM is applicable for exploratory methodology. Added to that, “SmartPLS” does not require normal data distribution and can accommodate small sample sizes (Hair et al., 2017). The advantages of partial least square-SEM over covariance based-SEM is that PLS-SEM can measure a lot of independent variables at the same time, even when the variables display multicollinearity (Hair et al., 2017).

Results

Measurement Model

The items GQ3 and GQ6 from gratitude construct and BRS2, BRS4, and BRS6 from resilience construct were removed, because of the low outer loading values. Table 1 displayed the composite reliability of the scales ranged from .83 to .94, which were higher than 0.6 also recommended by Hair et al. (2017). The composite reliability is a superior substitute of Cronbach’s alpha to test the convergent validity, and that can generate better estimated reliability (Hair et al., 2017). The Average Variance Extracted (AVE) ranged from .63 to .79 (see Table 1), which is within the recommended value of above .50 (Hair et al., 2017). The AVE shows the average communality for each latent factor in a reflective model. Hair et al. (2017) stated that variables with AVE greater than .50 can explain for at least half of the variance of the respective indicators. Accordingly, the construct reliability and discriminant validities of all scales are acceptable.

Table 1
Reliability and Validity Assessment

| Construct | Items | Loadings | Composite Reliability | Average Variance Extracted (AVE) |
|------------|------------|----------|-----------------------|----------------------------------|
| Resilience | BRS1 | 0.869 | 0.832 | 0.625 |
| | BRS3 | 0.827 | | |
| | BRS5 | 0.661 | | |
| Gratitude | GQ1 | 0.895 | 0.937 | 0.789 |
| | GQ2 | 0.901 | | |
| | GQ4 | 0.874 | | |
| | GQ5 | 0.882 | | |
| | Well-being | WB1 | | |
| WB2 | 0.898 | | | |
| WB3 | 0.855 | | | |
| WB4 | 0.824 | | | |
| WB5 | 0.838 | | | |

Heterotrait-monotrait (HTMT) ratio is used to measure discriminant validity. To obtain a well-fitting model, the HTMT ratio should be below 1 (Hair et al., 2017). The results showed that all the HTMT ratios were below the value of 1 as stated by Hair et al. (2017) (as shown in Table 2).

Table 2
Discriminant Validity, HTMT

| Construct | Gratitude | Resilience | Well-being |
|------------|-----------|------------|------------|
| Gratitude | | | |
| Resilience | 0.547 | | |
| Well-being | 0.607 | 0.667 | |

The coefficient of determination (r^2), effect size (f^2), assessment of collinearity (VIF) and predictive relevance (Q^2)

Table 3 showed that no multicollinearity issue was found in all measurements as all the values of the Variance inflation factor (VIF) were below 5 (Hair et al., 2017). Problematic multicollinearity could exist when the VIF coefficient is greater than 5 (Hair et al., 2017). If a VIF is greater than 10, this shows a high multicollinearity, and the variation will seem bigger, and the variables will be seen as more influential than it is. The coefficient of determination (r^2) is the overall effect size measure for the structural model (Hair et al., 2017). The effect size (f^2) measure is a different term for the r^2 change effect ($r^2 - 1 = f^2$). The f-square equation shows how big the amount of unexplained variance is accounted for by r^2 change (Hair et al., 2017). The f-square values of .02, .15, and .35 represents weak, moderate, and substantial effects. As shown in Table 3, moderate coefficients of determination were found in all dependent variables. In addition, moderate effect sizes were found on the effect of resilience on gratitude, and resilience and gratitude on well-being, as shown in Table 4. Blindfolding was also conducted to measure the predictive relevance (Q^2) of the measurement model. Table 3 showed the predictive relevance of the model which is well above the recommended value of Q^2 larger than zero (Hair et al., 2017). A Q^2 value bigger than zero showed that the PLS model contains predictive relevance for the construct.

Table 3.
Assessing of Coefficient Determinant, R^2 , Model's Predictive Relevance, Q^2 and Assessment of Multicollinearity, $VIF < 5$

| Construct | R^2 | Q^2 | VIF |
|------------|-------|-------|-------|
| Gratitude | | | 1.272 |
| Resilience | 0.214 | 0.127 | 1 |
| Well-being | 0.417 | 0.303 | 1.272 |

Table 4.
Assessing of Effect Size, F2

| Construct | Gratitude | Resilience | Well-being |
|------------|-----------|------------|------------|
| Gratitude | | 0.272 | 0.199 |
| Resilience | | | 0.186 |

Meanwhile, a complete bootstrapping was conducted to ensure the significance of the mediation effect (Hair et al., 2017). In the bootstrapping analysis, 5000 bootstrap samples were created to form a bias-corrected 95% confidence interval. The path coefficient shows the direct effects, and the specific indirect effect shows the effect through one specific mediator (Hair et al., 2017). The results of bootstrapping with 5000 samples were shown in Table 5 and Figure 2. Firstly, gratitude is found to be positively associated with resilience, $p < .001$. Secondly, gratitude is positively associated with well-being, $p < .001$. Thirdly, resilience is positively associated with well-being, $p < .001$. Therefore, hypotheses one to three were accepted.

By using the decision tree proposed by Zhao et al., (2010), the results found that resilience is a partial statistical mediator for the effects of gratitude on well-being (Table 5), as the specific indirect effect is significant, $p = .001$, and the direct effect of gratitude on well-being is also significant, $p < .001$. Therefore, hypotheses four was verified. Additionally, the results were also in accord with the sequence of predictors projected by the Broaden-and-build theory. The results support the importance of gratitude and resilience as a predictor for well-being as recommended by the theory of Broaden-and-build (Fredrickson, 1998).

Additionally, Table 5 showed that the moderating effect of marital status is negatively significant since the path coefficient is -0.086 and the value of t is 2.845, $p = .004$. On the other hand, the moderating effect of financial income is positively significant because the path coefficient is 0.080 and the t value is 2.122, $p = .034$. However, the results showed that gender is not a moderator of the effect of gratitude on well-being, $p = .276$.

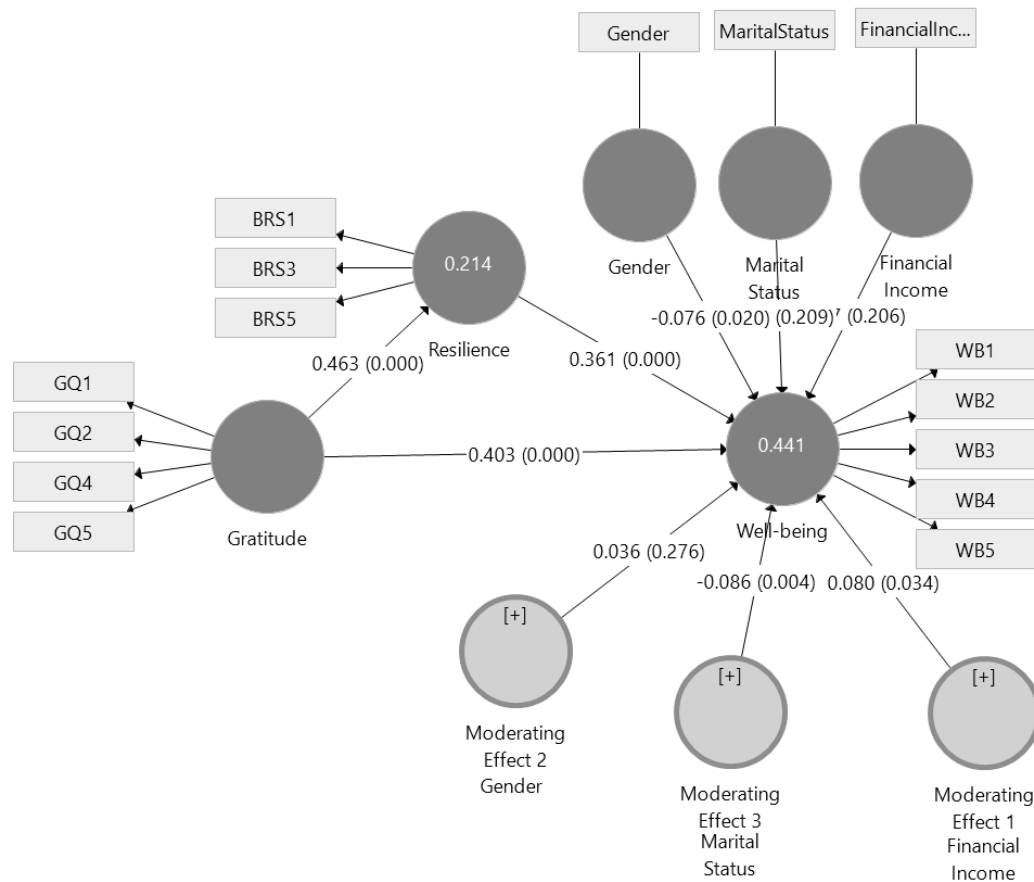


Figure 2. Structural Model of Measurements

Table 5. Path Coefficient and Specific Indirect Effect of Measurements

| Hypotheses | Indirect Beta | Standard Error | t | p | Direct Beta | Decision | Type |
|--|---------------|----------------|--------|------|-------------|-----------|---------|
| H1 Gratitude → Resilience | N/A | 0.036 | 12.725 | .001 | 0.463 | Accepted | N/A |
| H2 Gratitude → Well-being | N/A | 0.04 | 9.655 | .001 | 0.384 | Accepted | N/A |
| H3 Resilience → Well-being | N/A | 0.043 | 8.58 | .001 | 0.371 | Accepted | N/A |
| H4 Gratitude → Resilience → Well-being | 0.167 | 0.024 | 6.936 | .001 | 0.403 | Supported | Partial |
| H5 Gender × Well-being | N/A | 0.033 | 1.089 | .276 | 0.036 | Rejected | N/A |
| H6 Marital Status × Gratitude | N/A | 0.030 | 2.845 | .004 | -0.086 | Supported | N/A |
| H7 Financial Income × Gratitude | N/A | 0.038 | 2.122 | .034 | 0.08 | Supported | N/A |

Note. CI = Confidence Interval, N/A= Not available

Discussion

Studies on well-being during the outbreak of the pandemic is a crucial domain that will have an impact on a lot of people and society, given that the Malaysian administration has implemented stern guidelines and standard operating procedures multiple times in less than a year, which forced most of the Malaysian citizen to remain in their houses, to study, work from home, and adjust to the challenges which are considered the new normal. On this account, the current study aims to measure the effect of gratitude and resilience on the well-being of Malaysian adults to show the importance of positive emotions. This study uses Broaden-and-build theory (Fredrickson, 1998) to find out the roles of positive psychology and positive emotions like resilience and gratitude on the well-being of Malaysian adults.

Similar to past research (Mak et al., 2011; Mehta et al., 2018; Sagone & De Caroli, 2014), the outcome of this research revealed a significant link between resilience and well-being. Indeed, resilience is suggested to be positively associated with well-being among Malaysian adults. This suggests that Malaysian adults with higher resilience have higher well-being compared to Malaysian adults who do not have resilience. Individuals that have high resilience showed few signs of depression compared to individuals that have lesser resilience (Havnen et al., 2020). Resilient individuals tend to recover from stressful experiences swiftly and effortlessly (Fredrickson, 2004), which could explain the reason for individuals with high resilience tending to report better well-being. Further, resilience can be an important positive emotion for Malaysian adults to cultivate to protect the mental health of Malaysian during such trying times.

Similarly, the results of this study also found consistency with past studies that suggest that there is a significant association between gratitude and well-being (Froh et al., 2009; Rash et al., 2011). The results also demonstrated that gratitude is a positive predictor of well-being amongst Malaysian adults. This showed that positive emotion such as gratitude could improve an individual's well-being. When an individual has gratitude, it will also encourage the acknowledgement and concentration on the good perspective of everyday life (Aghababaei et al., 2018).

The results of this research also showed a significant link between gratitude and resilience. The results are the similar to the findings of the research done by Hwei and Abdullah (2017) among 162 Malaysian undergraduate students who discovered that gratitude was an important predictor of resilience. Furthermore, Ong et al., (2006) discovered that positive emotions such



as gratitude plays a crucial role in cultivating a person's capability to handle stressful challenges and is more commonly identified in individuals with high resilience. [Arnout and Almoied \(2020\)](#) discovered that gratitude has an indirect effect on resilience when well-being act as a mediator. Studies that were conducted on university students in India found out that gratitude is a significant predictor of resilience ([Garg & Sarkar, 2020](#); [Kumar & Dixit, 2014](#)). These results also showed that gratitude can cultivate resilience as individuals with higher gratitude showed higher resilience.

This research also clarifies the causal mechanism of the association of gratitude and well-being. The outcome of this research suggests the hypothesis of resilience being the statical mediating factor in the gratitude and well-being link. The results suggest that resilience as a statistical mediator can explain the association of another positive emotion which is gratitude and a positive outcome, such as well-being. Resilience had been examined as a mediator to clarify the association of the stressor and negative outcome like depression ([Anyan et al., 2018](#)). The findings also support the theory of Broaden-and-build which states that positive emotions are able to expand a person's momentary thought-action repertoires and create an enduring individual resource, such as resilience and well-being could be explained in terms of broadening from gratitude ([Fredrickson, 2001](#)). The experience of gratitude might happen simultaneously with favorable and good evaluation of life predicament and provide the individual a better resilience towards life challenges.

Besides the mediation factor, this study also highlighted the importance of marital status and financial income as the moderator for the effect of gratitude and well-being. The negative results showed that individuals that are single are able to strengthen the effect of gratitude on well-being compared to individuals that were married. This is an interesting finding as most studies discovered that gratitude is an important element to sustain a marriage ([Leong et al., 2020](#)). However, this result is contradicting with the results of [Hill et al., \(2013\)](#) that found out that marital status and gender do not play an important moderating role in the effect of gratitude on well-being. Similar to [Hill et al. \(2013\)](#) findings, gender is not a significant moderator for the effect of gratitude on well-being on Malaysian adults. Financial income was also underlined as a significant moderator, and the positive results showed that individuals with higher financial income are able to amplify the effect of gratitude on well-being compared to individuals with lower financial income. The results are similar to previous findings ([Netemeyer et al., 2017](#); [Ng](#)



& Diener, 2014; Yost-Dubrow & Dunham, 2018) that suggest that gratitude and well-being are positively correlated with financial income.

Limitation and Future Research

There are a few limitations that should be identified in this research. Particularly, this research is entirely based on adults' perspectives. Moreover, the interpretation of this study needs to be handled with caution. As the cause and effect of this study were explained based on a statistical model, a gratitude intervention program would be deemed helpful to further examine the relationships. This research also used a convenience sampling method to find participants as it is difficult to get a sampling frame during the pandemic. Future studies may consider recruiting different samples to examine the robustness of the results. Other limitations are that this study only concentrated on a relatively small sample, although the samples are taken from various parts of Malaysia including Sabah and Sarawak, therefore, the generalization of these results to all Malaysian adults should be applied with caution. To have a better understanding of how gratitude and resilience can affect well-being, it is better to use a longitudinal type of study in obtaining data in the future. This is because the cross-sectional type of study restricts the variables' causal relationship identification. By using a longitudinal type of study, we will be able to directly inspect the underlying relationship and development of gratitude and resilience; and see how it affects participants' well-being over time..

The findings of this study offer several crucial inferences to an adult's well-being. In terms of theoretical contribution, the results highlight the importance of gratitude in helping to improve well-being. Adults who have higher gratitude tend to cultivate resilience and subsequently well-being. When adults are grateful, they are more likely to be more optimistic and become more resilient in their life. Additionally, this research also contributes to the pool of knowledge regarding the role of gratitude, resilience, and well-being among Malaysian adults. Although the amount of research on the topic of positive psychology in Malaysia has multiplied in the past five years, the study on gratitude, resilience and well-being among adults in Malaysia is still relatively low (Low & Abdullah, 2013; Noor et al., 2018).

For the practical implications, the results of this study show that gratitude and resilience are crucial to the well-being of adults. Adults' positive emotions are useful to promote well-being especially when the community is facing difficulties caused by the COVID-19 pandemic. Therefore, government should promote these positive emotions by providing gratitude interventions for individuals that face mental health challenges. Besides, parents should



perhaps also cultivate gratitude and resilience in their children from a young age. This is because resilience and gratitude are important tool to maintain well-being and to face future calamity. Positive psychology is also an important subject that should be made compulsory at high school and university levels.

Conclusion

This research indicates that gratitude and resilience can facilitate the formation and attainment of well-being among Malaysian adults. Furthermore, gratitude is positively and indirectly associated with well-being through resilience. The discovery not only provides further back up to the positive outcome of gratitude and resilience on Malaysian's adults' well-being but also provide details into the causal effects of this association. This discovery sheds light on the need for persistent promotion and for the development of positive values such as resilience and gratitude among adults in supporting their well-being. This study also suggested the significance of the Broaden-and-build theory on Malaysian adults.

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Competing Interests

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