# Bent, But Not Broken: Locus-of-Hope and Well-Being Among Malaysians Facing Economic Challenges Amidst the COVID-19 Pandemic

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**Abstract** Hope is conceptualized as a cognitive set that has often been studied in the context of adversity. No studies, however, directly examine how locus-of-hope (LOH) influences psychological outcomes among vulnerable populations within collectivist cultural contexts. We address this gap by assessing the relationships between LOH and well-being among Malaysians facing financial struggles during the COVID-19 pandemic. We hypothesized that LOH will predict well-being but that external LOH will more strongly predict well-being than internal LOH. One-hundred and fifty-two (152) Malaysians (63 men, 89 women, average age 29.69 years old) who have (1) experienced loss of employment status (2) decrease in salary earnings or (3) earn below the lower 40% threshold of national household incomes completed a series of questionnaires assessing their LOH and well-being. Results indicate that controlling for age, perceptions of government efforts and trait optimism, LOH significantly predict well-being. Findings also show that internal LOH and LOH-family were the strongest predictors of well-being. Theoretical and practical implications are discussed in light of these findings.

**Keywords** Locus-of-hope · Hope · Well-being · Optimism

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## Introduction

Individuals have faced economic adversity as a result of the novel Coronavirus (COVID-19) pandemic. This unprecedented global health crisis has resulted in countless individuals experiencing loss of livelihoods, which, in turn, has diminished their well-being. Indeed, Netemeyer et al. (2018) found that individuals' perceived financial well-being was a strong predictor of overall well-being while Sturgeon et al. (2016) showed that financial stress is associated with higher levels of inflammatory biomarkers. Perceived financial well-being affects well-being as strongly as one's job satisfaction, physical health assessment, and how satisfied individuals are with the support in their relationships. Recent studies show that mental health struggles—depression, anxiety, and stress, have increased dramatically among Asian countries because of the COVID-19 pandemic (Wang et al., 2021). Many of these countries are classified as middle-income nations reliant on manufacturing and export. The lockdown measures imposed have led to restrictions in work routines and economic activity, leading to loss of income. Further, Prime et al. (2020) stress that the financial pressures brought about by the pandemic affect the individual directly through job loss and continued uncertainty about the economy.

While the economic repercussions of the COVID-19 recession have been the foci of recent commentaries, the factors that can help buffer against the psychological toll of such adversity remain less well-understood. Friedline and Chen (2020) argue that it is important to consider the coping strategies adopted by households in navigating the psychological pressures brought upon by the pandemic. Few studies, however, examine the psychological factors that buffer against economic stress among collectivist cultures in the Asian region amidst the pandemic. That is, limited studies assess the effects of such factors outside of Westernized, Educated, Industrialized, Rich, Democratic (WEIRD) samples. We address these two gaps by assessing how locus-of-hope (LOH) helps buffer against adverse mental health and promote elevated well-being in a sample of Malaysians who have experienced economic hardship during the COVID-19 pandemic.

## Literature Review and Theoretical Framework

### Hope

Hope is defined as a cognitive set that promotes goal-directed thinking. Hopeful individuals perceive themselves as (1) capable of finding routes to desired goals and (2) possessing the necessary motivations to use those routes (Snyder, 2002, 2002a). These two components of hope are referred to as pathways and agency thinking in hope theory (Rand & Cheavens, 2009). While some studies consider hope to be an emotion (Bruininks & Howington, 2019), Snyder et al. (2002a) initially conceptualized hope as a cognitive motivational system, associated with pleasant emotions. The positive emotions experienced from hope are thus a consequence of goal-directed thinking. The stability of two factor-structure of hope across both trait (Babyak et al., 1993) and state (Martin-Krumm et al., 2015) measures affirms the robustness of hope theory.

The psychological literature distinguishes hope from optimism in terms of conceptualization, measurement, (Alarcon et al., 2013), and outcomes (Rand, 2009; Kelberer et al., 2018). Peterson et al. (2009) highlight that while optimists also display agency thinking, the pathways component is unique to hopeful individuals. Gallagher and Lopez (2009) state that relative to optimism, hope emphasizes greater personal agency and identification of strategies for goal attainment. Scholars highlight that both pathways and agency thinking are reciprocal components that shape goal-directed thinking (Bryant & Cvengros, 2004). Importantly, both components must be present for an individual to experience hope (Snyder et al., 2002a; Snyder et al., 2002b). Hope is an important protective factor that promotes psychological resilience (Ong et al., 2018) and facilitates recovery from mental illness (Hayes et al., 2017; Werner, 2012). These findings have led to applications of hope theory for promotive (Lopez et al., 2004; Feldman & Dreher, 2012) and preventive interventions (Kwon et al., 2015).

### Locus-of-Hope

An important development in Snyder's hope theory is the concept of locus-of-hope (LOH, Bernardo, 2010). The LOH concept is premised on the observation that Snyder's (2002, 2002a) hope theory does not distinguish pathways and agency components as self-determined or involving external agents (Bernardo, 2010). Individuals with a high internal LOH source their motivation from within themself, whereas individuals with a high external LOH perceive significant others and external forces as agents of goal-attainment cognitions (Bernardo, 2010). In the development of the corresponding measure, the LOH scale captures four facets—(1) internal hope, and three external facets comprising, (2) external-family, (3) external-peers and (4) external-spiritual. In a recent study, Bernardo and Mendoza (2020) found evidence validating the four-factor structure of LOH in a study of Filipino respondents.

Recent research developments lend theoretical credence to the operationalization of hope in this manner. Du and King (2013) note that Snyder's (2002, 2002a) conceptualization of hope, being formulated in individualistic contexts, solely captures individual agency on route to goal attainment. Refining hope theory to account for both internal and external factors would allow for a better understanding of how goal-directed cognition can also be facilitated through close relationships. Thus, hope is not solely due to individual agency—as may be typical in individualistic cultures—but may also be facilitated by support from one's social connections. This is directly relevant in understanding hope within collectivist cultures. Bernardo et al. (2017), for instance, found that external LOH predicted family support, in turn contributing to life satisfaction in a sample of Chinese students. Du et al. (2015) found that external-family was predictive of life satisfaction among Hong Kong and Macau students. Finally, Datu and Mateo (2017) found that external-peers attenuated the effects of discrimination on respondents' subjective well-being in a sample of Filipino students.

The effects of external LOH, however, are not uniformly positive. Rather, its effects seem conditional on cultural context and samples. In two studies sampling students from Hong Kong, Macau, Malaysia, and the Philippines, Bernardo et al. (2018) found that external LOH was predictive of students' well-being and life satisfaction, but also associated with maladaptive coping. Findings from this study were nuanced, however, and showed that external-

spirituality was particularly important for students' well-being and life satisfaction for samples that valued religious beliefs. In another study, however, Bernardo and Estrellado (2017) found that external-spiritual was negatively associated with help-seeking intentions among victims of intimate partner violence. The results from this study also showed that highly-educated women were less likely to seek help and that only external-peers predicted help-seeking intentions among battered women. These studies highlight the importance of considering sample characteristics in understanding the influence of external LOH on psychological outcomes.

In summary, these studies highlight the importance of defining hope more broadly—beyond that of a cognitive set based on perceptions of individual agency alone. Past studies showed that hope in collectivist cultures is shaped by norms promoting interdependence, and that individuals from collectivist cultures tend to draw on perceived social support in their goal-attainment efforts. The development of the LOH concept over the past decade extends on the foundations established by Snyder (2002, 2002a), suggesting that this psychological resource can be drawn from external, social sources. The availability and extent of social connections to facilitate goal-directed thinking are arguably more important when individuals perceive themselves as vulnerable; subjected to challenging and demanding circumstances.

## The Influence of Hope on Vulnerable Populations and Contexts

Lewis et al. (2012) define vulnerable populations as those possessing two distinct but overlapping qualities. First, such populations are considered at risk, i.e., they are "patients with clinical conditions or risk factors that render them at risk for poor health and medical outcomes, particularly if they do not receive timely and high-quality healthcare (p. 1778)." Second, the authors state that vulnerable populations also encompass socially disadvantaged groups. Individuals within this population are "characterized by social, economic, or geographic characteristics that may directly or indirectly affect their ability to obtain high-quality care and achieve desired health outcomes (p. 1779)." Lewis et al. (2012) provided examples of individuals that fall within this second category—they may be racial minorities, those from the lower socio-economic status, or those that lack necessary social support. Limited studies examine the role of hope for such populations under challenging contexts—ones that increase their susceptibility to adverse psychological outcomes. This is surprising, given that calls for advancing hope research by sampling at-risk, vulnerable and/or marginalized populations were made by Snyder (2000) more than two decades ago.

Fortunately, there have been recent attempts showing how hope can be beneficial, if not central, in contributing to positive outcomes for vulnerable populations. Munoz et al. (2020) found that hope and resilience contributed to the psychological flourishing of childhood trauma survivors. Importantly, however, a validation study by the authors showed that resilience no longer predicts psychological flourishing with the inclusion of hope. Another study by Counted et al. (2020), sampling Columbians and South Africans, showed a positive association between hope and well-being. The review of these studies indicates two important details for the current work. First, studies of hope employing non-Western samples are rare in the literature. Second, and perhaps more crucially, factors contributing to individual vulnerability are contextual, shaped by factors ranging from early experiences, racial/ethnic identity, and, in light of the ongoing pandemic, uncontrollable external events. In the present study, we assess how hope has the potential to buffer against psychological distress and adverse mental health outcomes caused by financial stress. These two points highlight the need to better understand how hope—a psychological resource that promotes goal-directed thinking—assists vulnerable populations in demanding contexts adapt to specific, challenging circumstances.

## The Current Study

No studies, to our knowledge, directly examine how LOH influences psychological outcomes of vulnerable populations experiencing demanding circumstances within a collectivist cultural context. We address this gap in two ways. First, we assess how hope leads to positive psychological outcomes employing a non-Western sample. Criticisms and concerns about the generalizability of findings from psychological research stem from the discipline's reliance on WEIRD samples—Westernized, Educated, Industrialized, Rich, Democratic contexts that may not be representative of universal human psychological processes (Cheon et al., 2020). This has led to calls among scholars to sample more broadly (Rad et al., 2018; Henrich et al., 2010). Hendriks et al. (2019) found that tests of randomized controlled trials of positive psychology interventions are predominantly based on WEIRD samples, accounting for 78.2% of studies published from 1998 to 2017. We address this by sampling a vulnerable, non-WEIRD population in the present study.

Second, we build on hope theory by employing Bernardo's (2010) conceptualization and measurement of LOH. Scholars have conventionally emphasized individual over collective agency toward goal attainment. Thus, previous studies employing Western samples have focused mainly on internal LOH. Fewer studies, however, examine the role of external LOH as contributors to psychological

outcomes. A review of the research in this area (Bernardo et al., 2017, 2018) indicates that external LOH may be nuanced, highly contextualized effects in the functioning and well-being of non-WEIRD populations. The strengths of the LOH measure, given evidence for robust psychometric properties from studies of non-Western samples, allow us to assess this construct's influence on psychological outcomes. We also aim to show how the three external facets of LOH—family, peers and spiritual, influence psychological outcomes in a non-Western sample in addition to that of individual agency.

## Hypotheses Development

We address the two overarching aims by assessing how LOH influences well-being among a sample of Malaysians who meet at least one of the following criteria: (i) have experienced a loss of employment status, (ii) experienced a decrease in salary earnings in the last year or are (iii) a member of the B40 community. The B40 categorization here comprise individuals from households whose monthly incomes range from below RM2,500 (approx. USD602) to RM4,849 (approx. USD1,178). This sample constitutes a vulnerable population given the economic pressures experienced amidst the COVID-19 pandemic. In particular, the financial pressures faced by Malaysians experiencing loss of salary, livelihoods, or those already with minimal household incomes have been shown to adversely affect their well-being (Lim, 2020). We detail the context and specific challenges faced by this sample in the methods section.

### Locus-of-Hope Predicts Well-Being Beyond Trait Optimism

To date, only one study has examined the influence of LOH among individuals experiencing financial stress and economic hardship. Bernardo and Resurreccion (2018) found that while financial stress impacted life satisfaction in a sample of Filipino students, this relationship was rendered non-significant when respondents had high levels of external-family. Since hope may serve to mitigate these effects and bolster well-being, there should be a positive association between hope and well-being among Malaysians experiencing economic challenges from the pandemic. We control for trait optimism in this test, based on studies showing hope as a comparatively stronger influence than optimism in buffering against posttraumatic stress (Gallagher et al., 2020) and subjective well-being (Rand et al., 2020). Doing so also strengthens our argument that LOH provides incremental benefits on well-being, beyond that of general positive expectancy tendencies. As such, Malaysians who perceive themselves as capable of

generating pathways and motivating themselves to attain desirable outcomes from both internal and external sources should thus report higher levels of well-being, despite facing challenging circumstances. Our first hypothesis is:

**Hypothesis 1** Controlling for trait optimism, locus-of-hope will positively predict well-being.

### External Locus-of-Hope Predicts Well-Being More Strongly than Internal Locus-of-Hope

With the exception of two studies (Bernardo et al., 2018; Bernardo & Estrellado, 2017), results employing the LOH measure in collectivist cultures generally find external LOH to be positively associated with desirable psychological outcomes. It seems plausible to suggest that the interdependent nature of collectivist cultures would facilitate increases in external LOH since an external locus also enhances perceived social support (Bernardo et al., 2017). To further justify our following hypotheses, we draw from studies showing how individuals who ascribe to more collectivist norms are more likely to perceive greater social support than those adhering to more individualist norms. Goodwin and Plaza (2000), for instance, found this to be the case in their comparison of Spanish (collectivist) and British (individualist) respondents. Results of this study showed that the former were more likely to perceive greater support from family and friends, leading to enhanced life satisfaction. More generally, findings from the cross-cultural psychology literature suggest that individuals who adopt more collectivist cultural norms to be more satisfied with the quality of their social support than those who adopt more individualistic norms (Triandis et al., 1988). We expect that enhanced perceptions of social support underlie why individuals with an external LOH will report greater levels of well-being.

It is important to note, however, that we are distinguishing external LOH, shaped by perceived social support, from actual coping. The current study does not assess collectivist coping. In fact, contrary to assumptions that individuals from collectivist cultures are more likely to seek social support because their self-concept is related to others, some studies show that this is not the case (Kim et al., 2008; Taylor et al., 2004). This is primarily due to the expected negative emotional repercussions from self-disclosure of personal challenges in close relationships. What we instead expect to find is that external LOH, shaped by *perceived* availability of social support from family, peers, and spiritual guidance, will be more predictive of well-being than internal LOH for respondents in a collectivist culture. Our second hypothesis is:

**Hypotheses 2** Controlling for trait optimism, external locus-of-hope (family, peers, spiritual) will be a stronger predictor of well-being than internal locus-of-hope.

## Method

### Sample

Two hundred and nineteen (219) respondents attempted the survey after they received the invitation link. All respondents read the informed consent form, and, after having understood their rights as a study participant, provided their consent to voluntarily participate in the study. Of this total, 18 responses were removed for not meeting the participant criteria. A further 49 responses were removed for not completing the survey. The final data set comprised 152 completed responses (63 men, 89 women). Respondents were 29.69 years old on average. In terms of sampling criteria, we limited our sample to Malaysians who have at least one of the following criteria: (1) have experienced a loss of employment status, (2) experienced a decrease in salary earnings in the last year or are (3) a member of the B40 community. The B40 classification here is based on the system of demarcating households through their median income. According to the Department of Statistics Malaysia's (DOSM) Household Income and Basic Amenities survey in 2019 (updated as of July 2020), members of the B40 community are individuals whose monthly household incomes range from below RM2,500 (approx. USD600) to RM4,849 (approx. USD1166). Approximately 2.91 million households in Malaysia fit these income groups. By comparison, the median national household income is RM6,561 (approx. USD1577; higher in urban communities). A breakdown of the sample reveals that out of the 152 usable responses, 49 respondents reported a loss of employment, 53 reported a decrease in salary earnings and 107 identified themselves as a member of the B40 community. Since these categories are not mutually exclusive, we assessed for systematic differences between these groups in the analyses.

Reports also indicate that income inequality, as measured by the Gini coefficient, has risen in both urban and rural households in the country from 2016 to 2019 (Department of Statistics Malaysia, 2019).

### Measures

#### Locus-of-Hope

We assessed locus-of-hope using Bernardo's (2010) 40-item Locus-of-Hope measure. The measure is scaled from 1 = *Definitely False* to 4 = *Definitely True* and comprises 4 sub-scales: (1) internal hope, (2) external-family, (3) external-peers and (4) external-spiritual. A sample item for the internal hope facet is, "I can think of many ways for me to get out of a problem." A sample item for the external-family facet is, "I am confident that my family will support me in the goals that are important to me." A sample item for the external-peers facet is, "My friends always support me in the pursuit of my life goals." A sample item for the eternal-spiritual facet is, "I will attain my life goals by trusting God(s)/The Universe." Bernardo (2010) reports all sub-scales for this measure to be reliable at .80 and greater.

#### Trait Optimism

Trait optimism is assessed using the 10-item revised Life Orientation Test (LOT-R) by Scheier et al. (1994). The LOT-R comprises 6 items assessing trait optimism and 4 filler items and is scaled from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. A sample item is, "In uncertain times, I usually expect the best." Scheier et al. (1994) report this measure to be reliable at .82.

#### Well-Being

Well-being is assessed using the 14-item Mental Health Continuum-Short Form (MHC-SF) measure by Lamers et al. (2011). Items on this measure correspond to three facets of well-being—life satisfaction (i.e., emotional well-being), psychological well-being, and social well-being. The measure assesses the frequency to which respondents report feelings associated with well-being in the past month and is scaled from 1 = *Never* to 6 = *Everyday*. The MHC-SF comprises three facets: emotional well-being ("Satisfied with life"), social well-being ("I had something important to contribute to society") and psychological well-being ("That my life had a sense of direction and meaning to it"). Lamers et al. (2011) report this measure to be reliable at .89.

#### Rating of Overall Efforts in Managing the COVID-19 Outbreak

We assessed respondents' perceptions of how well the overall COVID-19 situation is being managed by the Malaysian federal government. This was done using a 5-item researcher-generated measure. This measure assesses how favorably respondents view relevant the government's management of the ongoing pandemic in terms of (1) containment and infection control, (2) communicating updates, (3) maintaining public safety, (4) providing mental health support and (5) providing financial aid and assistance on a 5-point Likert scale, where 1 = *Highly*

**Table 1** Summary confirmatory factor analyses output for locus-of-hope measure

| Model | $X^2$ | Df | $X^2$/df | p | TLI | CFI | SRMR | RMSEA [90% CI] |
|---|---|---|---|---|---|---|---|---|
| 1-Factor | 2077.84 | 464 | 4.48 | .00 | .48 | .51 | .21 | .15 [.14, .16] |
| 2-Factor | 1898.65 | 463 | 4.10 | .00 | .54 | .57 | .20 | .14 [.14, .15] |
| 4-Factor | 861.19 | 458 | 1.88 | .00 | .87 | .88 | .07 | .07 [.07, .08] |

1-factor model: All 32 locus-of-hope items comprising one factor

2-factor model: 8 internal locus-of-hope items comprising one factor, 24 external locus-of-hope items comprising another factor

4-factor model: 8 internal locus-of-hope items comprising one factor, 8 items each comprising external-family, external-peers and external-spiritual respectively

*Dissatisfied* and 5 = *Highly Satisfied*. The items are reliable at .88 (Tee et al., 2021).

### Demographics and Qualifier Questions

We assessed for age, gender, and ethnicity of respondents. Respondents were asked to indicate if they have (1) experienced a loss of employment status within the last year, whether they have (2) experienced a decrease in salary/monthly earnings within the last year and (3) their monthly household income. We purposively selected a wide range of these characteristics to assess as objective indicators of financial stress in this study (Sinclair & Cheung, 2016). Given that the three characteristics are not mutually exclusive, this also allowed us to examine possible nuances in the sample.

### Procedure

We administered an online survey comprising the variables of interest via a convenience and snowball sample. Data collection took place from 2nd July to 6th August 2021. All analyses were conducted using JASP version 0.14.

### Results

#### Confirmatory Factor Analysis

We assessed the structural validity of the Locus-of-Hope (Bernardo, 2010) measure by subjecting the measure to confirmatory factor analysis (CFA). Table 1 depicts the results of this analysis, suggesting the superiority of the 4-factor solution over the alternative measurement models. That said, the 4-factor model depicts modest, instead of good levels of fit, following guidelines set by Hu and Bentler (1999), which recommends that TLI and CFI be at least .90. Results from the analysis, however, are within the range of fit indices found when CFA was conducted on the

same measure in previous studies (see Bernardo, 2010, Study 2; Bernardo & Resurreccion, 2018; Bernardo, 2015).

The modest fit of the LOH measure may raise some concerns regarding the structural validity of the measure. As such, we conducted a follow-up exploratory factor analysis (EFA), allowing for correlation between factors and setting the analysis to extract 4 factors. We found a parsimonious structure from the LOH measure with no cross-loadings in the factor solution. Further, all items loaded onto distinct factors, with factor loadings at .42 and greater. In essence, we followed suggestions for conducting exploratory structural equation modeling (ESEM; Morin et al., 2016) to address concerns about the study's measurement model and to provide complementary evidence considering the strict cut-off criterion imposed by CFA approaches (Asparouhov & Muthén, 2009).

#### Bivariate Correlations, Scale Reliability and Controls

Bivariate correlations and scale reliabilities for all measures are presented in Table 2. We assessed for the simple linear relationships between all variables in the study to decide which variables should be controlled for in the hypothesis tests. Table 2 indicates that age is significantly correlated with trait optimism ($r = .28$, $p < .001$) and well-being ($r = .19$, $p < .05$). Further, perceptions of government efforts in managing the pandemic are correlated with well-being at $r = .39$, $p < .001$. A between-groups comparisons test indicates a significant mean difference between ethnic groups on ratings of external-spirituality, $F = 16.57$ (4, 149), $p < .01$, $\eta^2 = .31$. Between-groups comparisons, however, indicate no significant difference in the level of well-being depending on gender, ethnicity, or respondent income categories, $F = 1.14$ (2, 151), $p = .32$, $\eta^2 = .02$. We thus controlled for age and perceptions of government efforts in the subsequent hypothesis tests. All measures were found to be reliable at $\alpha \geq .74$.

**Table 2** Bivariate correlations and scale reliabilities

|  | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age | 29.02 | 8.68 | | | | | | | | | | | | | |
| 2. Gender | 1.66 | .48 | −.07 | | | | | | | | | | | | |
| 3. Ethnicity | 1.62 | .83 | −.06 | −.14 | | | | | | | | | | | |
| 4. Salary Decrease | 1.66 | .48 | −.26** | .19* | −.28*** | | | | | | | | | | |
| 5. Income Category | 1.37 | .60 | .47*** | −.15 | .17* | −.37*** | | | | | | | | | |
| 6. Perceptions of Gov't Efforts | 2.05 | 1.00 | −.05 | −.12 | .16* | −.20* | −.08 | (.91) | | | | | | | |
| 7. Locus-of-Hope (Overall) | 2.93 | .38 | .20* | .02 | −.21** | .02 | .08 | .18* | (.92) | | | | | | |
| 8. Locus-of-Hope-Internal | 3.01 | .35 | .11 | −.04 | .11 | −.11 | .08 | .33*** | .54*** | (.76) | | | | | |
| 9. Locus-of-Hope- External-Spiritual | 3.02 | .82 | .26** | −.02 | −.36*** | .09 | .11 | −.05 | .73*** | .06 | (.97) | | | | |
| 10. Locus-of-Hope- External-Family | 3.02 | .47 | .14 | .05 | −.12 | .07 | .01 | .09 | .80*** | .50*** | .38*** | (.89) | | | |
| 11. Locus-of-Hope- External-Peers | 2.69 | .51 | −.03 | .06 | −.01 | −.08 | .03 | .31*** | .68*** | .37*** | .18* | .51*** | (.88) | | |
| 12. Trait Optimism | 3.21 | .48 | .28*** | −.09 | .03 | −.24** | .30*** | .25** | .16 | .30*** | .10 | .09 | .01 | (.74) | |
| 13. Well-being | 3.92 | .79 | .19* | −.08 | .05 | −.03 | .10 | .39*** | .45*** | .60*** | .13 | .48*** | .27*** | .32*** | (.91) |

N = 152

*p < .05, **p < .01, ***p < .001

## Hypothesis Tests

### Hypothesis 1: Controlling for Trait Optimism, Locus-of-Hope Positively Predicts Well-Being

We tested this hypothesis employing a hierarchical regression. We entered age and perceptions of government efforts along with trait optimism in the first step of the model. We then entered LOH in the second step of the model. Results of this analysis indicate that, in Step 1, trait optimism predicted well-being ($\beta$ = .19, $p$ <.05; 95% CI [.07, .58]. Controlling for trait optimism in Step 2 of the model, however, indicates that LOH provides incremental variance to the overall regression model. Specifically, while trait optimism still predicts well-being in Step 2 of the model ($\beta$ = .17, $p$ < .05; 95% CI [.05, .53], LOH is shown to be a more influential predictor of well-being ($\beta$ = .36, $p$ < .001; 95% CI [.46, 1.03], whilst controlling for age and perceptions of government efforts. Inclusion of the LOH variable provides an additional 11.6% variance to the regression model. Results are presented in Table 3 and provide support for Hypothesis 1.

### Hypothesis 2: Controlling for Trait Optimism, External Locus-of-Hope (Family, Peers, Spiritual) Will be Stronger Predictors of Well-Being than Internal Locus-of-Hope

We conducted a similar set of tests for the second hypothesis. In this analysis, we used scores from the facets of the LOH scale, as opposed to the omnibus score. Results presented in Table 4 indicate that controlling for age, perceptions of government efforts, and trait optimism, both internal hope and external-family, were positively, and significantly predictive of well-being. Both these facets of LOH were comparable in weight, with internal hope predicting positive well-being at $\beta$ = .35, $p$ < .001 95% CI [.46, 1.15] and external-family at $\beta$ = .31, $p$ < .001, 95% CI [.24, .78]. The results, however, do not support Hypothesis 2. Rather, results show that both internal hope and external-family were most strongly predictive of well-being. Results from this analysis, however, show that with the inclusion of the four facets of LOH, trait optimism no longer predicts well-being ($\beta$ = .10, $p$ = .125, 95% CI [-.05, .39]. Further, inclusion of the LOH variables provides incremental variance explained—the overall regression model explains an additional 22.5% of the total variance compared to the model with trait optimism alone.

### Supplementary Analyses

We conducted follow-up analyses to explore the separate $R^2$ contributions of each dimension of external LOH over and above the contributions of internal LOH on well-being.

**Table 3** Hierarchical regression test for Hypothesis 1

| Step 1: Control Variables and Trait Optimism | $\beta$ [95% CI] | SE |
|---|---|---|
| Age | .15* [.00, .02] | .00 |
| Perceptions of Gov't Efforts | .35*** [.16, .39] | .06 |
| Trait Optimism | .19* [.07, .58] | .13 |
| Adjusted R² | .228*** | |
| F | 14.74*** | |

| Step 2: Locus-of-Hope (Overall) | $\beta$ [95% CI] | SE |
|---|---|---|
| Age | .09 (n.s.) [.00, .02] | .00 |
| Perceptions of Gov't Efforts | .29*** [.12, .34] | .06 |
| Trait Optimism | .17* [.05, .53] | .12 |
| Locus-of-Hope | .36*** [.46, 1.03] | .15 |
| Adjusted R² | .326*** | |
| $\Delta R^2$ | .116 | |
| F | 19.50*** | |
| $\Delta F$ | 26.31*** | |

DV = Well-being

*p < .05, ***p < .001

These analyses reveal that inclusion of the external-family added an additional 5.1% of variance explained in well-being over and above internal LOH. External-family was significantly associated with well-being at $\beta = .26$, $p < .01$,

95% CI [.21, .67], while controlling for internal LOH. Neither external-peers nor external-spirituality added a significant amount of variance. External-peers was not a significant predictor of well-being ($\beta = .04$, $p = .61$, 95% CI [-.16, .27] beyond that of internal LOH. External-spirituality was also not a significant addition to the regression model ($\beta = .08$, $p = .23$, 95% CI [-.05, .20] with the inclusion of internal LOH. Inclusion of external-peers or external-spirituality in the regression model did not return a significant R² change ($p = .23$ or lower) to the regression model.

## Discussion

### Summary of Results

Results from the present study can be summarized in two key statements. First, LOH is a reliable and important predictor of well-being, above and beyond that of trait optimism, among Malaysians facing economic challenges from the COVID-19 pandemic. Second, results show that among the four facets of LOH, internal hope and external-family were the strongest predictors of well-being during these trying circumstances. The results provide support for Hypothesis 1, but not Hypothesis 2. The findings nonetheless highlight the complex nature of individuals'

**Table 4** Hierarchical regression test for Hypothesis 2

| Step 1: Control Variables and Trait Optimism | $\beta$ [95% CI] | SE |
|---|---|---|
| Age | .15* [.00, .02] | .00 |
| Perceptions of Gov't Efforts | .35*** [.16, .39] | .06 |
| Trait Optimism | .19* [.07, .58] | .13 |
| Adjusted R² | .212*** | |
| F | 14.74*** | |

| Step 2: Locus of Hope—Specific Factors | $\beta$ [95% CI] | SE |
|---|---|---|
| Age | .09 (n.s.) [.00, .02] | .00 |
| Perceptions of Gov't Efforts | .25*** [.09, .30] | .05 |
| Trait Optimism | .10 (n.s.) [−.05, .39] | .11 |
| Locus-of-Hope—Internal | .35*** [.46, 1.15] | .17 |
| Locus-of-Hope—External-Spiritual | −.01 (n.s.) [−.14, .12] | .07 |
| Locus of Hope—External-Family | .31*** [.24, .78] | .14 |
| Locus of Hope—External-Peers | −.09 (n.s.) [−.37, .09] | .12 |
| Adjusted R² | .458*** | |
| $\Delta R^2$ | .225 | |
| F | 19.45*** | |
| $\Delta F$ | 17.97*** | |

DV = Well-being

*p < .05, ***p < .001

sense of hope, which varies on the conditions individuals find themselves in. We show that, where financial stress and economic uncertainty are concerned, it is not enough to simply hold positive expectations of the future (i.e., have high trait optimism). Rather, the ability to generate pathways and agency to attain desirable outcomes is essential for well-being during these challenging circumstances. Further, our findings show that while generating the wills and ways to meet goals during these difficult times, individuals who rely on their internal capabilities and perceive their goals as attainable through family support are more likely to report higher levels of well-being—more so than those who anchor their hopes on peers or spiritual guidance.

The unexpected findings from the test of the second hypothesis warrant further explanation. The findings that individuals who score high on external-family are more likely to benefit from elevated levels of well-being are consistent with several past studies (Bernardo et al., 2017; Du et al., 2015). We suspect that this may have occurred given the circumstances and conditions during data collection. Data were collected when the country was under strict lockdown measures, with prohibitions against inter-district and inter-state travel across the country. The significant effect found for external-family with well-being maybe because of the immediate presence of, and direct contact that respondents still had with their family members (spouses, parents, or siblings), many of whom may reside within the same household. In contrast, the lack of perceived support for goals from peers, due to movement and meeting restrictions, may have resulted in this facet of LOH having a non-significant effect on respondents' well-being. Contrary to Hypothesis 2, we also found internal LOH to still remain a significant predictor of well-being; its magnitude of effect comparable to external-family. We suspect that part of the reason for why internal LOH remains a significant predictor of well-being to be attributed to processes and mechanisms not assessed in the current study. It may well be the case, for instance, that adverse situations like the pandemic have, instead of diminishing well-being, instead promoted greater self-sufficiency and learned resourcefulness in the participants (Mao et al, 2021). Research centering on post-traumatic growth from the pandemic also indicates that it is possible that beliefs during times of adversity can be shaped by hope. Vazquez et al. (2021), for example, showed how beliefs about how the world is fundamentally good and identification with humanity spurred greater recovery and growth during the pandemic. These other psychological factors—learned resourcefulness, or positive core beliefs of the world, may have played their role as antecedents, shaping a stronger internal LOH among the participants.

Also interesting to note is the non-significant effect of external-spirituality on well-being. Past studies have shown that this facet of LOH can yield either positive (Bernardo et al., 2018) or negative effects (Bernardo & Estrellado, 2017). More generally, studies also indicate that satisfaction with one's spirituality and religiosity increase with age (Wills, 2009), and in how spirituality serves as a buffer in healthy functioning in late-life (Thauvoye et al., 2018). The results of the present study, however, show there to be no significant relationship between the external-spiritual dimension with well-being. The considerably young average age of respondents ($M_{age}$ = 29.69 years) might explain this non-significant relationship. Younger adults may be less reliant on their spirituality as a resource for helping them navigate the financial stressors resulting from the pandemic.

Collectively, the non-significant association between this facet of LOH with well-being suggests that where financial stress is concerned, respondents' sense of hope is more strongly anchored toward personal capabilities and immediate family members than on peers or spiritual guidance. This claim resonates with recent research examining the nuanced way in which social support affects well-being amidst lockdown restrictions. Szkody et al. (2021), for instance, finds that perceived, but not received social support, to interact with self-isolation and worry in predicting psychological health. We suspect that the more immediate, present, endogenous proxies for hope derived from self and family were more predictive of well-being than distant, exogenous anchors from peers or spiritual beliefs. The presence of available support, be it internal, or external, might have been associated with perceived availability that led internal hope and external-family to be the only predictors of well-being in the current study. Recent studies do indicate the importance of social connectedness as a contributor to resilience and well-being (Sibley et al., 2020). Our study adds to this body of literature indicating that it is also important to differentiate between perceptions of social connectedness and availability of support, more so among residents in nations under strict lockdown measures.

### Limitations and Directions for Further Research

Results of the present study should be interpreted in light of the circumstances in which the data were collected. First, the data are reflective of respondents' well-being when the country was experiencing a peak number of new infections and daily death rates. It thus provides a snapshot of how LOH shapes their well-being, instead of a more dynamic model that could depict variations and fluctuations in the focal variables over time. The cross-sectional design of the study also limits us from forming causal claims between

variables—a limitation that could be addressed with a follow-up study or one that adopts a longitudinal or field experiment design.

Second, while the focus of our study was on LOH, other goal-directed constructs, and approach-oriented traits (such as courage) may have also influenced well-being during this time. Waters et al. (2021), for instance, highlight the effectiveness of interventions that cultivate self-compassion and recognition of character strengths to also benefit well-being during the pandemic. Our study contributes to the idea that hope, as a cognitive set that encourages goal-directed thinking is crucial for well-being, though its relative importance should also be considered in light of other beneficial traits identified within the positive psychology literature.

## Theoretical and Practical Implications

The limitations of the current study notwithstanding, our study contributes to the positive psychology literature by showing that LOH is an essential psychological resource for well-being under conditions of stress and personal challenge (Counted et al., 2020). We advance research by providing complementary evidence for the relevance of, and applicability of the Locus-of-Hope measure for collectivist contexts. To the best of our knowledge, our study is the first to assess how LOH affects well-being among Malaysians. These findings contribute to research on LOH and dispositional hope among Asian respondents during the pandemic (e.g., Bernardo & Mendoza, 2020; Zhang et al., 2021). More generally, the findings also contribute to the broader conceptualization of, and role of hope to the positive psychology literature. Given the consistent predictive potential of internal LOH on well-being, results of this study also showed that individual agency prompting pathways and agency thinking remains an important psychological resource for individuals facing economic challenges. The results dovetail with recent research showing how hope buffers against financial stress (Frankham et al., 2020; Thompson et al., 2017).

Results of the study provide practical suggestions for clinical and well-being interventions based on LOH. Evidence shows the efficacy of hope interventions in contributing to enhanced well-being (Feldman & Dreher, 2012). Hope-cultivating strategies, however, can be adopted outside of therapeutic interventions (Lopez et al., 2004) and serve to provide well-being benefits to individuals facing financial challenges during this time. For Malaysians, the realization that they have the necessary internal capacities, and the support of family can buffer against adverse psychological effects brought about by financial stress during the pandemic. Recognition of these two facets of LOH can provide a timely, and much-needed reminder to Malaysians that while they may be bent, they are far from broken in facing the challenges brought upon by these extraordinary times.

**Declarations**

**Conflict of interest** The authors declare that there is no conflict of interest.

**Consent to Participate** Consent to participate in this study was attained by requesting that participants voluntarily click 'I agree' to the informed consent statement on the online survey instrument. The informed consent statement reads, "I understand the requirements of this study and am aware of my rights as a participant in this study. By selecting "I agree" below, I am formally acknowledging my willingness to participate in this study and indicating my understanding of the material on this informed consent form."

**Consent for Publication** The authors approve of this submission and, conditional upon the decision made by the editorial board from the peer-review process, consent to the publication of the current work. The work has not been, nor has it been submitted to other journals in consideration for publication.

**Ethical Standards** This study was reviewed and approved by the Ethics Review Board (ERB), Department of Psychology, HELP University on 30th June 2021. ERB approval code: E202106/S009.

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