

What predicts wellbeing amidst crisis? A study of promotive and protective psychological factors among Malaysians during the COVID-19 pandemic

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Abstract: Resilience promotes psychological growth and buffers against the effects of negative events, but the factors that promote optimal wellbeing beyond resilience remain poorly understood. The current study addresses this gap through a positive psychology perspective by examining how (i) promotive factors – optimism and hope, and (ii) protective factors – nostalgia and spirituality promote wellbeing. We hypothesized that both factors will be positively related to wellbeing above and beyond that predicted by resilience. A representative sample of six hundred and twenty-six ($n = 626$; M age = 32.66, $SD = 10.11$, 43.45% female) Malaysians responded to an online survey at the end of the country's second wave of the COVID-19 pandemic (June-September 2020). We conducted a series of regression analyses, controlling for resilience, socio-economic status, age, and perceptions towards government crisis management efforts. Results indicate that optimism and hope positively predicted wellbeing above and beyond that predicted by resilience. Results also showed that the only significant protective factor contributing to wellbeing is spirituality. Nostalgia did not significantly predict wellbeing beyond resilience. The findings are of theoretical relevance for wellbeing and resilience research, and practically beneficial in informing mental health interventions.

Keywords: resilience, wellbeing, hope, optimism, nostalgia, spirituality, COVID-19

1. Introduction

1.1 Resilience and its effects on wellbeing in times of crises

Research has emphasized the importance of resilience in enhancing wellbeing in the face of adversity. Masten, Cutuli, Herbers and Reed (2009, p. 118) define resilience as, “a class of phenomena characterized by patterns of positive adaptation in the context of significant adversity or risk.” Fletcher and Sarkar (2013) highlight that resilience revolves around two central concepts – adversity and positive adaptation. Resilience is also differentiated from coping in that the latter is a “temporary period of psychopathology followed by gradual restoration to healthy levels of functioning (p. 16).” Resilience, by comparison, is an individual's ability to maintain healthy levels of functioning despite adversity.

The term wellbeing itself has also been conceptualized in different ways. Dodge and colleagues (2012, p. 230) proposed wellbeing as “the balance point between an individual's resource pool and the challenges faced.” In this regard, and relevant to the context of resilience research, optimal wellbeing is associated with having the necessary psychological, social, and physical resources in light of the challenges faced. Similarly, Adler and Seligman (2016) summarized that wellbeing is a combination of both hedonic (feeling good) and eudaimonia

(functioning well) wellbeing. As such, wellbeing extends beyond affective components (c.f. subjective well-being), and also encompasses the cognitive aspect of one's functioning across different life domains. These definitions inform the conceptualization and measurement of wellbeing in the present study.

Rutter (1987) proposes that resilience contributes to individuals' wellbeing through four key mechanisms – by (i) buffering against the risk's effect, (ii) reducing the negative chain reactions from the event, (iii) establishing and maintaining self-esteem and self-efficacy, and (iv) opening up opportunities for the individual. Developments in resilience research highlight these mechanisms, distinguishing between promotive and protective factors. Yates, Tyrell and Masten (2015) classify promotive factors as those that support positive development in individuals, while protective factors are those that mitigate risks brought about by adversity. Ungar (2013) stresses the importance of understanding resilience within context. The importance of acknowledging contextual factors shaping resilience is reflected in the development of resilience measures. The Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003; Campbell-Sills & Stein, 2007) for instance, has been validated in Asian samples (Yu & Zhang, 2007; Baek, Lee, Joo, Lee & Choi, 2010), suggesting the stability and measurability of resilience across cultures, converging with Ungar's (2013) claims of shared similarity in characteristics of resilient individuals across cultures.

In short, resilience is thus crucial in both promoting positive adaptation, and in protecting against the adverse effects of adversity. We assess these relationships, examining how individuals' resilience promotes and protects individual wellbeing. Our study is contextualized within the ongoing COVID-19 health crisis, employing a representative, multi-ethnic sample of Malaysians during the pandemic. Data collection also occurred during a unique period in the country when the rate of infection was declining—but, crucially, before the rollout of the country's national vaccination program and during a state of political instability in the country. Given these points, we propose that our study contributes to the literature in two ways.

First, the representative and multi-ethnic sample allows us to examine for potential cultural differences in conceptions of resilience and promotive and protective psychological factors contributing to wellbeing within a diverse Malaysian sample. This is important given evidence from previous studies showing that while resilience measures may be constant and reproducible in terms of their psychometric structure, conceptions and antecedents of resilience may vary across cultural and ethnic lines (Maltby et al. 2016; Gunnestad, 2006). Second, we shed light on how factors beyond resilience affected Malaysians' wellbeing during a particular time in which the country was experiencing a drop in new infections, but before the introduction of the country's vaccination program in February 2021. Further compounding the sense of uncertainty during this time was the political instability caused by changes in politicians' party support. This led to the loss of a parliamentary majority, the collapse of the ruling government, and the appointment (as opposed to a democratic election) of a new Prime Minister by the King in early 2020. The context here allowed us to examine, amidst the ongoing political uncertainty and before the availability of the COVID-19 vaccine, how promotive and protective psychological factors from the positive psychology literature may predict Malaysian's wellbeing and recovery, above and beyond their general resilience.

We build on recent studies that have assessed the links between resilience with wellbeing, with a particular focus on positive psychology-related factors such as grit and gratitude (Bono, Reil & Hescoc, 2020), positivity resonance (Prinzing et al., 2020) and positive emotions (Israelashvili, 2021). We first establish that resilience affects respondents' levels of emotional, social, and psychological wellbeing during the COVID-19 pandemic. Assessing the benefits of

resilience in a non-Western sample is essential, given the psychological impact of the ongoing global pandemic. It should, however, be evident that resilience can help improve wellbeing during this time. We hypothesize:

Hypothesis 1: There is a positive relationship between resilience and wellbeing.

1.2 Promotive and protective wellbeing factors

The psychological study of resilience is not without its limits. Luthar, Sawyer, and Brown (2006) highlight key issues in existing resilience research that are pertinent to the current study. Of specific note is the observation that few studies have clarified or distinguished between the protective or promotive and vulnerability factors contributing to resilience. Indeed, the theme of ‘bouncing back’ as central to most definitions of resilience appears to emphasize the ‘protective’ aspect of resilience instead of a more holistic definition that also captures promotive factors. We address this limitation of resilience research by adopting a positive psychology perspective. We build on the growing interest in the role of positive psychology in helping understand resilience factors that contribute to wellbeing, recovery and growth following traumatic events.

Our study dovetails with recent publications examining novel factors shown to predict wellbeing alongside, or beyond resilience. These include spiritual fortitude (Van Tongeren et al. 2019), life purpose (Sharma & Yukhymenko-Lescroart, 2022) and vulnerability (Alschuler, Kratz, & Ehde, 2016). Our goal for this study, however, is more modest. We aim to establish the extent to which well-established constructs from the positive psychology literature predict wellbeing, and whether these constructs of interest do so beyond resilience does.

As Kim and colleagues (2018) note in their review of the international impact of positive psychology, this area is one that can inform the development of important wellbeing interventions. Our research also answers calls for research to examine how positive psychology-related variables can serve to buffer against mental illness, bolster mental health, and equip individuals with processes that strengthen their capacities for positive adaptation in the pandemic era (Waters et al., 2021). Seligman (1998) argues that the positive psychology perspective frames psychological interventions to include both the nurturance of skills, strengths, and virtues in addition to the acknowledgement of weaknesses and problems. Importantly, positive psychology does not discount the importance of protective factors to resilience – we argue that both promotive and protective factors as central to wellbeing. The overarching aim of this study is to thus examine, in light of the COVID-19 pandemic, how promotive and protective factors – above and beyond that of resilience – contribute to wellbeing. We focus on four psychological factors identified in the positive psychology literature and classify them into two categories: (i) promotive factors – those that drive future orientation and growth, and (ii) protective factors – those that allow individuals to draw from experience and understandings in contributing to their wellbeing.

1.3 Promotive factors: Factors that drive future orientation and growth

Promotive factors are differentiated from protective factors in that they are oriented toward the future, as opposed to present goals. The future-focused nature of promotive factors should thus serve as key drivers of approach-oriented behaviours, active goal setting, and ultimately, growth. The two promotive factors of interest that have considerable empirical support are optimism and hope. Both hope and optimism have been shown in the literature to be distinctive from each other (Fowler et al. 2017; Alacorn, Bowling, & Khazon, 2013) and predictive of future orientation and resilience (Di Maggio, Ginerva, Nota, & Soresi, 2016) as well as adaptability (Ginerva et al.

2016). We expound on optimism and hope's positive effects on wellbeing as promotive factors below.

1.3.1 Optimism

Scheier and Carver (1985, p. 219) define optimism as “the stable tendency to believe that good rather than bad things will happen.” This definition implies that optimism is a generalized outcome expectancy that involves perceptions about being able to move toward desirable goals and away from undesirable ones. These characteristics essentially give optimism an intrinsically future-oriented quality (Carver & Scheier, 2018). Research evidence suggests that individuals high on trait optimism are more likely to take on a more problem-solving approach and are more planful than their pessimistic counterparts (Fontaine, Manstead & Wagner, 1993). Carver and Scheier (1998) and Carver, Scheier and Segerstrom (2010) further propose that under uncontrollable circumstances, optimists are more likely to ‘control their plights.’ Compared with optimists, pessimists are likely to be more avoidant and employ denial tactics in the face of challenges, leading to an aggravation of their problems. Past studies also indicate that trait optimism is more likely to predict coping in general (Nes & Segerstrom, 2006), endurance of traumatic events (Thomas, Britt, Odle-Dusseau & Bliese, 2011), coping with terminal illnesses and chronic pain (Colby & Shifren, 2013) and dealing with health issues in later life (Ruthig, Hanson, Pedersen, Weber & Chipperfield, 2011). The implications of assessing trait optimism are also important since this factor can be conceptualized as a cultivatable strength. Work on learned optimism, specifically, suggests changing one's perceptions of goal-attainment ability is associated with more effective coping with life stresses (Nolen-Hoeksema, 2000) and superior physical health (Peterson, 2000). Trait optimism should thus be positively associated with wellbeing.

Hypothesis 2a: Controlling for resilience, optimism predicts wellbeing.

1.3.2 Hope

Snyder (2002) conceptualizes hope as ‘goal-directed thinking’ in which an individual utilizes pathways thinking (the perceived capacity to find routes to desired goals) and agency thinking (requisite motivations to use those routes). Pathways thinking is one of the core aspects of hope and relates to the production of alternative routes when original ones are blocked (Snyder et al., 1991). Individuals high on trait hope are also those high in agency thinking – they endorse and focus their thoughts on statements that motivate action (Snyder et al. 1998). Hope theory proposes that the successful pursuit of desired goals results in positive emotions and continued goal pursuit efforts (Snyder, Rand & Sigmon, 2002). Recent work also considers hope as an emotion that arises under appraisal of situations being demanding or stressful (Bruininks & Malle, 2005). Findings from past research indicate that hope predicts lowered stress and negative emotions, which over time builds resilience (Ong, Edwards & Bergeman, 2006) and guards against dysphoria (Chang & DeSimone, 2001). Hope's positive effects on resilience are found to be consistent across studies employing clinical and non-clinical samples (Ong, Standiford & Deshpande, 2018). The promotion-oriented nature of hope has also seen this psychological strength to be associated with greater use of problem-solving abilities (Snyder et al. 2002; Chang, 1998). A meta-analysis by Alacorn and associates (2013) indicates that hope is significantly associated with positive affectivity and generalized self-efficacy, further evidencing its growth and promotion-oriented effects. Finally, a recent study by Munoz, Hanks, and Hellman (2020) suggest that hope contributes to flourishing among childhood trauma survivors beyond that of

resilience. The evidence here suggests that hope should translate to enhanced wellbeing under adversity.

Hypothesis 2b: Controlling for resilience, hope predicts wellbeing.

1.4 Protective factors: Factors that draw from past experience and understandings

In contrast with promotive factors, we refer to protective factors as those that encourage individuals to tap into, harness, and reflect on existing strengths that cultivate resilience and generate resources for wellbeing. These protective factors are distinguished from tendencies to engage in maladaptive fixations on past events or experiences (i.e. they are distinguished from ruminative tendencies or trait worry). Protective factors serve to remind individuals of existing psychological resources that can help limit the detrimental effects of adversity, ultimately contributing to enhanced wellbeing. Two constructs that have been shown through considerable research to have protective effects against adverse wellbeing outcomes are nostalgia and spirituality. In the case of nostalgia, research consistently points to its protective influence on physical and mental health (Routledge, Wildschut, Sedikides, & Juhl, 2013a), and its interaction with resilience (Zhou, Sedikides, Wildschut, & Gao, 2008). Similar claims are made on how spirituality protects against psychopathology (Barton & Miller, 2015) and contributes to resilience (Howell et al. 2018). We detail the mechanisms for how these two variables contribute to wellbeing as protective factors below.

1.4.1 Nostalgia

Nostalgia is broadly defined as the sentimental longing for the past (Pearsall, 1998). While initial conceptualizations of this emotion are associated with homesickness, recent research has identified that both positive and negative affect are apparent in nostalgic recollections (Routledge et al. 2013a). Wildschut, Sedikides, Arndt, and Routledge (2006) propose that while both positive and negative elements are experienced in nostalgic recollections, nostalgia is ultimately a positive emotion. Zhou and colleagues (2012) propose that nostalgia is ‘triggered by coldness but results in warmth.’ These authors argue that both positive and negative elements are juxtaposed to create a central theme of redemption – in that the negative patterns and memories progresses from undesirable feeling states (suffering, pain, exclusion) to a positive and desirable one (acceptance, euphoria, triumph). The findings align with work on the appraisal theme of nostalgia, in which the emotion is found to be elicited by events that are appraised as pleasant, irretrievably lost, temporally distant, and unique (Van Tilburg et al. 2019). These findings justify its inclusion as a protective factor in this study. Recent psychological research indicates that nostalgia enhances positive self-regard by affirming one’s connections with others – the emotion is always experienced in relation to social connectedness (Wildschut et al. 2006). Zhou and colleagues (2008) find that in contrast with loneliness, nostalgia increases perceived social support. Notably, in the context of crises, nostalgia serves an important influence by assisting in meaning-making. When people are pressed to find meaning, they reflect nostalgically on treasured past experiences such as family functions and personal accomplishments (Routledge, Sedikides, Wildschut & Juhl, 2013b). Routledge, Arndt, Sedikides and Wildschut (2008) showed that trait nostalgia also buffered against the effects of mortality salience – individuals high on trait nostalgia perceived life as being more meaningful, even under conditions when their existence and survival is threatened. These findings suggest that nostalgia is an important resource for individuals under situations of existential threat (Sedikides & Wildschut, 2018). As such, trait nostalgia is hypothesized to be associated with greater wellbeing during adversity.

Hypothesis 2c: Controlling for resilience, nostalgia predicts wellbeing.

1.4.2 Spirituality

Pargament (1999, p. 6) refers to spirituality as the “loftier side of life... a search for meaning, unity, for connectedness, transcendence, for the higher of human potential.” Zinnbauer and colleagues (1997) contrast spirituality and religiosity, differentiating the concepts based on the focus for each. Spirituality focuses on personal qualities of connection and relationship with a Higher Power, while religiosity focuses on organizational or institutional beliefs and practices. Research on the influences of spirituality on wellbeing shows that the construct is negatively related to depression among adolescents and older adults (Laird et al. 2019; Barton & Miller, 2015). Ciarrocchi, Dy-Liacco, and Deneke (2008) find that levels of spiritual commitment and meaning-making predict incremental variance in hope and optimism. Spirituality may even have beneficial impacts on physical health. Tartaro, Luecken, and Gunn (2005) find that self-reported spirituality is associated with lowered levels of cortisol response and serves as a protective effect against the neuroendocrine consequences of stress. The concept of spirituality is also of practical significance. Goldstein’s (2007) study of three-week spirituality interventions (through the cultivating of sacred moments) showed that relative to the control group, those who ‘sanctified’ cherished moments or objects reported greater levels of psychological and subjective wellbeing and stress reduction. The sanctification process here pertains to a “process through which aspects of life are perceived as having divine character or significance” (Pargament & Mahoney, 2005, p. 180). These findings overall suggest that spirituality may serve as a protective factor, shifting individuals’ focus on material possessions and wants toward meaning and greater significance in one’s life. This should then lead to reductions, or at least, buffer the experience of adversity in individuals and consequently, lead to greater wellbeing.

Hypothesis 2d: Controlling for resilience, spirituality predicts wellbeing.

2. Method

2.1 Design and context

We employed an online survey for data collection. Respondents provided self-reports of resilience, wellbeing, promotive and protective factors, as well as demographic information. Data collection took place over four months, from June to September 2020. Data were collected from a period in which the country was easing restrictions associated with the COVID-19 pandemic and reverting to a recovery period. As of 25th September 2021, and at the time of writing, Malaysia has since loosened some government-imposed restrictions.

2.2 Sample

A total of 952 Malaysians from across Peninsula and East Malaysia responded to the survey. A total of 626 complete responses was obtained, yielding a 65.75% completion rate. For the analysis, only respondents who completed up to and including the ‘Ratings of Government Efforts’ were included. Respondents’ age ranged from 19 to 65, averaging 32.66 years ($SD = 10.11$) and comprised 340 men (54.31%) and 272 (43.45%) women. Twelve (12) respondents indicated ‘prefer not to say,’ while 2 did not respond to the question about their gender. Most respondents were Malay ($n = 319$, 50.96%). There were 182 Chinese (29.12%) and 49 Indian respondents (7.83%). Mixed-race respondents comprised 4.79% ($n = 30$) while 5 respondents identified as members of an indigenous community (.80%). Thirty-nine respondents (6.23%) responded with ‘others.’ The sample overall reflects the demographic composition of Malaysia.

2.3 Procedure

Responses were collected through the assistance of a market research company. We employed this approach given the need to collect the data on time. Individuals interested in and willing to volunteer for the study first provided their informed consent before proceeding with answering the questionnaires. To incentivize participation, we offered respondents the chance to win an RM50 (approx. \$12) food voucher. Completion of the survey took approximately 20 minutes.

2.4 Measures

2.4.1 Optimism

Optimism was measured using the revised Life Orientation Test (LOT-R; Scheier, Carver & Bridges, 1994). This 6-item measure consists of items such as, "In uncertain times, I usually expect the best" and "Overall, I expect more good things to happen to me than bad." This measure adopts a 5-point Likert scale ranging from 0 = *Strongly Disagree* to 4 = *Strongly Agree* and is reported to be reliable at .78.

2.4.2 Hope

Snyder and colleagues' (1991) 12-item Adult Hope Scale was used to assess trait hope. This measure consists of items assessing the pathways and agency components and is consistent with Snyder's hope theory (2002). An example item for pathways is, "There are lots of ways around any problem" while an example item for agency is, "I meet the goals I set for myself." The measure is scaled from 1 = *Definitely False* to 4 = *Definitely True*. Snyder and colleagues (1991) report the reliability of their measure to range from .74 to .84.

2.4.3 Nostalgia

Trait nostalgia was assessed using a 10-item measure by Barrett and colleagues (2010). The measure assesses the value to which respondents place value on nostalgic experiences, along with how frequently they experience this emotion. Respondents provide their level of agreement to questions such as, "How prone are you to feeling nostalgic" on 7-point Likert scales ranging from 1 = *Not at All* to 7 = *Very Frequently*. This scale is reported as reliable at .93.

2.4.4 Spirituality

Spirituality was measured using the 12-item Spiritual Wellbeing Scale (FACIT-Sp) by Peterman, Fitchett, Brady, Hernandez and Cella (2002). Sample items from this measure include, "I am able to reach deep down into myself for comfort" and "I find strength in my faith or spiritual beliefs." The measure is assessed on a 5-point Likert scale, where 0 = *Not at All* and 4 = *Very Much*. The FACIT-Sp is reliable at .81.

2.4.5 Wellbeing

Wellbeing was assessed using the Mental Health Continuum-Short Form (MHC-SF; Lamers, Westerhof, Bohlmeijer, ten Klooster & Keyes, 2011). This measure comprises 14 items and assesses the frequency in which respondents report feeling emotional wellbeing, psychological wellbeing, and social wellbeing in the last month, capturing respondents' well-being within the context of the COVID-19 pandemic. The measure adopts a 6-point Likert scale, ranging from 1 = *Never* to 6 = *Every Day*. Lamers and colleagues (2011) consider the MHC-SF to capture positive mental health, as opposed to mental illness. We operationalize wellbeing via the MHC-SF given that the measure is developed from measures of satisfaction with life (Diener et al. 1985),

psychological wellbeing (Ryff, 1995; Ryff & Keyes, 1995) and social wellbeing (Keyes, 1998). Wellbeing is thus reflected in ratings of how happy respondents feel (emotional wellbeing), how good they are at managing the responsibilities of their daily life (psychological wellbeing) and the degree to which they feel they belonged to a community (social wellbeing). A holistic definition and measure of wellbeing thus, necessarily comprises the three factors on the MHC-SF (Keyes, 2005). Lamers and colleagues report the MHC-SF to be reliable at .89.

2.5 Control variables

2.5.1 Resilience

Resilience was assessed using the 10-item Connor-Davidson Resilience Scale (CD-RISC; Campbell-Sills & Stein, 2007). This measure of resilience is reported to be reliable at $\alpha = .85$ and is scaled from 0 = *Not True at All* to 4 = *True Nearly All the Time*. The CD-RISC comprises items such as, "I am someone who can stay focused under pressure."

2.5.2 Age

We assessed for possible age differences in light of evidence from socioemotional selectivity theory, which suggests that individuals in the later years of their lives tend to focus less on negative emotions and engage more deeply with the positive aspects of their lives (Carstensen, 1998). Reed and Carstensen (2012) also show that older individuals have a positivity bias in recalling positive material more quickly than negative material.

2.5.3 Gender

We assessed gender differences in the present study. Evidence indicates, for instance, that men score higher on optimism than women (Helweg-Larsen, Harding & Klein, 2011). Maselko and Kubzansky (2006) find that women generally report higher levels of spirituality than men.

2.5.4 Socioeconomic Status (SES)

Heinonen and colleagues (2006) find socio-economic status to influence dispositional optimism and pessimism. The extent to which individuals may be able to draw on the necessary psychological strengths to build resilience, and their overall subjective assessments of their wellbeing, may therefore be dependent on their SES. SES was assessed using Kilpatrick and Cantril's (1960) self-anchoring scale, which is the number selected by respondents on a visual representation of a ladder. The number selected corresponds to the individual's self-reported socioeconomic status and implies that the respondent is of a higher SES and standing when a higher number is selected. The assessment of SES is crucial, given evidence that economically disadvantaged individuals are more susceptible to COVID-19 risk factors as a result of poor housing conditions, limited opportunities to work from home, unstable employment and income, and having limited access to healthcare services (Patel et al., 2020).

2.5.5 Ratings of government efforts in managing the outbreak

Given the political instability and change in ruling government in early 2020, respondents' perceptions of government efforts were also considered. A 4-item researcher-generated measure was used to assess respondents' ratings on their national government's efforts toward managing the COVID-19 outbreak. Respondents were asked, "Please rate the Malaysian government's efforts toward managing the pandemic situation in terms of (i) containment and infection control (e.g. movement control order, lockdowns, testing), (ii) communicating updates (e.g., health

directives and responses), (iii) maintaining public safety (e.g. patrols, inspections, tracing apps, business SOPs) and (iv) providing mental health support (e.g., providing counselling or psychological support). We scaled this measure on a 5-point Likert scale, ranging from 1 = *Highly Dissatisfied* and 5 = *Highly Satisfied*.

3. Results

3.1 Descriptive statistics, scale reliability and pairwise comparisons

Descriptive statistics, scale reliabilities and pairwise comparisons for all variables in the study are presented in Table 1. All measures were reliable at $\alpha = .74$ and higher. Given significant correlations between age, SES, and perceptions of government efforts with the MHC-SF, we controlled for these variables in the hypothesis tests. Results showed that there were significant differences between the Malay and Chinese ethnic sub-groups on nostalgia ($M_{\text{Malay}} = 4.78$, $SD_{\text{Malay}} = 1.31$; $M_{\text{Chinese}} = 4.29$, $SD_{\text{Chinese}} = 1.27$, $F = 3.97$, $p < .01$, $\eta^2 = .03$) and spirituality ($M_{\text{Malay}} = 3.57$, $SD_{\text{Malay}} = .76$; $M_{\text{Chinese}} = 3.12$, $SD_{\text{Chinese}} = .65$, $F = 7.35$, $p < .01$, $\eta^2 = .06$). There were also between-group differences between these two ethnic groups on scores on the MHC-SF ($M_{\text{Malay}} = 4.06$, $SD_{\text{Malay}} = 1.13$; $M_{\text{Chinese}} = 3.67$, $SD_{\text{Chinese}} = 1.06$, $F = 3.23$, $p < .01$, $\eta^2 = .03$). Given the small-moderate effect sizes of these differences, we opted not to control for ethnicity in the analyses¹. Our rationale is also informed by the overarching goal of assessing for similarities across ethnic groups, focusing on how focal variables, instead of these minor systematic differences, shape resilience and wellbeing outcomes. Independent samples t-tests show that there were no significant gender differences across any of the focal variables in the study.

Table 1. Descriptive statistics, reliabilities and pairwise correlations.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	32.66	10.11	—													
2. Gender	1.58	0.53	-.17***	—												
3. Ethnicity	1.94	1.36	-.04	.15***	—											
4. Socio-Economic Status	5.74	2.11	.13**	-.09*	-.08*	—										
5. Perception of Govt. Efforts	3.69	0.95	.05	.06	.00	.13**	(.88)									
6. Resilience	3.37	0.74	.08	-.02	.09*	.17***	.29***	(.92)								
7. Optimism	2.67	0.45	.12**	.05	-.01	.17***	.14***	.28***	(.74)							
8. Hope	2.89	0.53	.11**	.01	.05	.29***	.34***	.55***	.39***	(.87)						
9. Nostalgia	4.63	1.35	-.09*	.02	.00	.06	.24***	.23***	.01	.24***	(.91)					
10. Spirituality	3.44	0.76	.15***	-.01	-.03	.29***	.37***	.45***	.33***	.55***	.30***	(.89)				
11. Wellbeing	3.91	1.19	.18***	-.02	-.06	.43***	.36***	.46***	.40***	.57***	.15***	.68***	(.96)			
12. Emotional Wellbeing	4.14	1.24	.15***	.03	-.05	.37***	.37***	.46***	.38***	.54***	.16***	.63***	.87***	(.92)		
13. Social Wellbeing	3.58	1.32	.18***	-.06	-.07	.42***	.33***	.39***	.32***	.48***	.14***	.61***	.93***	.75***	(.91)	
14. Psychological Wellbeing	4.06	1.27	.16***	-.01	-.04	.39***	.33***	.43***	.42***	.57***	.13***	.66***	.95***	.77***	.80***	(.94)

Note. $N = 626$; * $p < .05$; ** $p < .01$; *** $p < .001$

¹ We assessed the influence of ethnicity in the regression analyses and found that this variable does not predict any of the focal our outcome variables once all other control variables were included in the regression model.

3.2 Hypothesis tests

3.2.1 Hypothesis 1: There is a positive relationship between resilience and wellbeing

Controlling for respondent age, socioeconomic status, and perceptions towards government efforts in managing the pandemic, resilience significantly and positively predicts the overall wellbeing, $\beta = .33, p < .01$; 95% CI [.42, .63]. The overall regression model fit is $R^2 = .38, F(4, 617) = 97.20, p < .01$. This supports Hypothesis 1. The inclusion of resilience explains an additional 9.5% of the variance on top of age, SES, and perceptions of government efforts.

Table 2. Results of hierarchical regression analysis for Hypotheses 1

<i>DV = Wellbeing</i>		
Step 1: Control variables	β [95% CI]	SE
Age	.11*** [.01, .02]	.00
SES	.37*** [.12, .25]	.02
Gov Efforts	.31*** [.30, .47]	.04
Adjusted R ²	.29**	
F	84.96***	
Step 2: Resilience	β [95% CI]	SE
Age	.10** [.00, .02]	.00
SES	.33*** [.15, .22]	.02
Gov Efforts	.22*** [.20, .36]	.04
Resilience	.33*** [.42, .63]	.05
Adjusted R ²	.38***	
ΔR^2	.095	
F	97.20**	
ΔF	95.12***	

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

3.2.2 Hypothesis 2a and 2b tests: Controlling for resilience, there is a positive relationship between promotive factors (optimism and hope) and wellbeing

We conducted hierarchical regressions for each of the two promotive factors in this study. In step 1, we entered age, SES, perceptions of government efforts and resilience in the regression model. In step 2, we entered the promotive factor variable, optimism and hope. We ran separate tests for each variable.

Optimism. Results indicate that optimism significantly predicts wellbeing, $\beta = .24, p < .01$; 95% CI [.46, .79], beyond that of resilience. The overall regression model fit is $R^2 = .43, F(5, 616) = 95.76, p < .01$. The model explains 43.3% of the total variance, of which 5.1% is attributed to the inclusion of the optimism variable.

Hope. Results indicate that hope significantly predicts wellbeing, $\beta = .33, p < .01$; 95% CI [.59, .92] beyond that of resilience. The overall regression model fit is $R^2 = .45, F(5, 616) = 103.67, p < .01$. The model explains 45.3% of the total variance, of which 7.0% is attributed to the inclusion of the hope variable.

Results from the regression analyses indicate that after controlling for age, SES, and perceptions of government efforts, optimism, and hope, contributes to wellbeing beyond that explained by resilience. Resilience, nonetheless, remains a significant influence in the model even with the inclusion of these promotive factors. The results support Hypothesis 2a and 2b and are presented in Table 3.

Table 3. Results of hierarchical regression analyses 2a and 2b (optimism and hope).

Step 1: Control variables and resilience		β [95% CI]	SE		
Age		.10	.00		
SES		.32	.02		
Gov Efforts		.22	.04		
Resilience		.33	.05		
Adjusted R^2			.38***		
F			97.20***		
Step 2: Promotive factor variable		β [95% CI]	SE	β [95% CI]	SE
Age		.08** [.00, .02]	.00	.08** [.00, .02]	.00
SES		.30*** [.14, .20]	.02	.27*** [.11, .19]	.02
Gov Efforts		.21*** [.18, .34]	.04	.16*** [.12, .28]	.04
Resilience		.27*** [.32, .53]	.05	.17*** [.16, .40]	.06
Optimism		.24*** [.46, .79]	.09	-	-
Hope		-	-	.33*** [.59, .92]	.08
Adjusted R^2		.43***		.45***	
ΔR^2		.051		.070	
F		95.76***		103.67***	
ΔF		55.59***		79.86***	

Note. DV = Wellbeing (MHC-SF); * $p < .05$; ** $p < .01$; *** $p < .001$

3.2.3 Hypothesis 2c and 2d tests: Controlling for resilience, there is a positive relationship between protective factors (nostalgia and spirituality) and wellbeing

We conducted a similar set of analyses to test for Hypotheses 2c and 2d. In step 1, we entered age, SES, perceptions of government efforts, and resilience in the regression model. In step 2, we entered the protective factor variable – nostalgia and spirituality.

Nostalgia. Nostalgia was not positively associated with wellbeing, $\beta = .01$, (*n.s.*); 95% CI [-.05, .07]. The overall regression model fit is $R^2 = .38$, $F(5, 616) = 77.67$, $p < .01$. The model explains 38.2% of the total variance, but a non-significant, trivial amount is attributed to the inclusion of the nostalgia variable.

Spirituality. Spirituality is positively associated with wellbeing, $\beta = .50$, $p < .01$; 95% CI [.69, .89]. The overall regression model fit is $R^2 = .56$, $F(5, 616) = 157.82$, $p < .01$. The model explains 55.8% of the total variance, of which 17.5% is attributed to the inclusion of the spirituality variable.

Results from the regression analyses indicate that controlling for age, SES, and resilience, only spirituality led to increased wellbeing. Nostalgia was not significantly associated with wellbeing. The results are perhaps surprising given that nostalgia has been shown in previous research to

increase wellbeing. Resilience still predicts wellbeing when nostalgia and spirituality are included in the regression model. Results are presented in Table 4. The results do not support Hypothesis 2c but support Hypothesis 2d.

Table 4. Results of hierarchical regression analyses 2c and 2d (nostalgia and spirituality).

Step 1: Control variables and resilience		β [95% CI]	SE		
Age		.01* [.00, .02]	.00		
SES		.33*** [.15, .22]	.02		
Govt Efforts		.22*** [.19, .36]	.28		
Resilience		.33*** [.42, .63]	.05		
Adjusted R ²			.38***		
F			97.203		
Step 2: Protective factor variable		β [95% CI]	SE	β [95% CI]	SE
Age		.01* [.00, .02]	.00	.05 [.00, .00]	.00
SES		.33*** [.15, .22]	.02	.23*** [.01, .16]	.02
Govt Efforts		.22*** [.19, .36]	.04	.10*** [.05, .20]	.04
Resilience		.32*** [.41, .63]	.06	.16*** [.16, .35]	.06
Nostalgia		.01 [-.05, .07]	.03	-	-
Spirituality		-	-	.50*** [.69, .89]	.05
Adjusted R ²		.38***		.56***	
ΔR^2		.00		.175	
F		77.67***		157.82***	
ΔF		.09		245.94***	

Note. DV = Wellbeing (MHC-SF); * $p < .05$; ** $p < .01$; *** $p < .001$

4. Discussion

4.1 Summary of results and key findings

In this study, we examined promotive and protective psychological factors – beyond resilience, that contribute to enhanced wellbeing during the COVID-19 pandemic. Our study was based on a representative sample of Malaysians, who responded to an online survey assessing resilience, optimism and hope as promotive factors and nostalgia and spirituality as protective factors. We assessed these variables' effects on wellbeing. Results from the regression analyses indicate that controlling for age, SES, and perceptions of governmental efforts, resilience predicts wellbeing, supporting Hypothesis 1. Results also indicate that SES and resilience are both comparable in their magnitude of effect on wellbeing, consistent with previous research on the importance of resilience as a predictor of wellbeing.

Results from the regression analyses and test for Hypothesis 2a and 2b indicate that optimism and hope were significant in predicting higher wellbeing. Both optimism and hope, therefore, predict higher levels of emotional, psychological, and social wellbeing. Results also indicate that controlling for resilience and socio-demographic variables, hope more strongly predicted wellbeing than optimism. We ran a similar set of tests for Hypothesis 2c and 2d and found spirituality, but not nostalgia, to be a significant protective factor contributing to elevated wellbeing. The results may be attributable to the religiosity of respondents; with the majority of Malaysians (96.6%) professing to have a religious faith (CIA World Factbook, 2021). We acknowledge that religiosity and spirituality are not synonymous (Zinnbauer et al. 1997) but

given the correlations between these constructs from previous studies, it seems plausible that responses reflected participants relying on religious and spiritual practices to help them cope with adversity during this time, which protected their wellbeing.

Results revealed that nostalgia was not significantly predictive of wellbeing, contrary to established understandings that nostalgia serves to generate an existential resource that contributes to wellbeing. Recently, Newman and Sach (2020) found that nostalgia exacerbated feelings of loneliness, and this led to decrements in emotional wellbeing. Studies have found high levels of loneliness related to the COVID-19 pandemic (Fiorillo et al., 2020; Grossman, Hoffman, Palgi & Shrira, 2021), which could be due to the prolonged physical isolation during quarantine. Lykes and Kimmelmeier (2014) suggest that feelings of loneliness are likely higher in collectivistic societies, where sensitivity to social exclusion is stronger than in individualistic ones. Newman and colleagues (2020) showed that the daily experience of nostalgia was rated as being less pleasant than nostalgic recollections generated on request during experimental conditions. This explanation makes sense in light of the context. Given the regulations imposed by the government that have effectively restricted social events among respondents, those who were more nostalgic might have recalled – and subsequently, reminded of the limited opportunities for social interactions during this time. These daily, unprompted nostalgic recollections of past social events may have instead increased feelings of loneliness, detachment, or isolation, leading to no observable positive effect on respondents' wellbeing.

4.2 Limitations and suggestions for future research

Our findings should also be interpreted in light of limitations imposed on by our method and design. First, the cross-sectional design of our study restricts us from drawing inferences of causality. As such, it is equally possible that the promotive and protective factors examined in this study are themselves consequences instead of predictors of resilience or wellbeing. Results from the bivariate correlations indicate that resilience and all promotive and protective factors were significantly associated with resilience and in the expected direction of influence. To this end, the results do show that factors drawn from the positive psychology literature do contribute to elevated wellbeing alongside that of resilience. Further research can nonetheless examine how other positive psychology constructs such as mindfulness and self-compassion can assist in building resilience toward promoting wellbeing during crises (Wong & Yeung, 2017; Neff & McGehee, 2010). Future studies should also consider factors that contribute to meaningful and healthy relationships (Reis & Gable, 2003). It is firmly established by the resilience literature, for instance, that social support is an important factor in buffering against stress and adversity (Lee et al., 2013). Perhaps this is more so within a collectivist society. Future studies might examine the relative contributions of individual factors and social support towards resilience and wellbeing.

Second, while we employed a representative sample, controlling for socio-demographic factors, and ruled out extraneous variables that may have influenced the results, it is crucial to note that the data is still representative of only one specific time during the pandemic in Malaysia. The data collected reflects responses amidst the initial loosening of restrictions, and the results should be interpreted given these circumstances. It is important to stress that since October 2020, cases of the novel coronavirus spiked again, leading to the third wave of the pandemic in the country. We are not aware of other studies assessing comparable psychological variables at the onset of the third wave of the pandemic in the country. It is, however, reasonable to expect that resilience, levels of wellbeing, and the role of promotive and protective factors would vary during this time. Studies adopting longitudinal designs, for instance, have shown

levels of mental health to fluctuate during the pandemic (Planchuelo-Gómez et al. 2020; Robinson & Daly, 2020). Further studies can thus adopt approaches that allow for the assessment of how promotive and protective factors change alongside resilience and wellbeing across time.

4.3 Theoretical implications

These limitations notwithstanding, our study contributes to research on resilience and wellbeing from a positive psychology perspective. We examine constructs from the positive psychology literature – hope, optimism, nostalgia, and spirituality and assess their roles in shaping resilience. The findings here answer calls for resilience and wellbeing research to acknowledge, account for, and assess for the influence of context and culture, and how this dynamic system of adaptability is helped or hindered by the environment (Yates et al., 2015). While not the main foci of the study, we showed how resilience among Malaysians is strongly influenced by their SES, and how promotive and protective factors are influenced by perceptions of the governments' efforts in mitigating the effects of the pandemic.

We also add to the literature by providing initial evidence for how positive psychology constructs can be conceptualized and understood as promotive or protective factors against adversity (Luthar, Lyman & Crossman, 2014). Notably from our findings, we showed that not all promotive or protective factors have universally positive effects on wellbeing. For instance, the finding that spirituality, but not nostalgia as contributors to wellbeing, highlight the need to understand protective factors in context. For instance, spirituality may be a more important protective factor among more religiously oriented cultures. In a recent case study of Vietnam, Small and Blanc (2020) highlighted how the concept of “tam giao” – a coexistence of religious and philosophical Taoism, Buddhism, and Confucianism – can help build resilience through promoting transparency, communication, and mitigating stigmatization (p. 1). The principle here also alludes to the importance of collectivism and interdependence, suggesting that factors contributing to resilience in Asian contexts vary from those identified and employing Western samples. Our findings contribute to culturally-nuanced understandings of resilience theory and the development of culturally-sensitive models of wellbeing.

4.4 Practical implications

Findings from this study can contribute to the design of positive psychology interventions that encourage the cultivation of promotive and protective resources that increase wellbeing. Results suggest that mental health interventions that revolve around the cultivation of optimism, hope, and spirituality may be particularly effective in building, or at the very least, complementing interventions designed to increase resilience and improve wellbeing among Malaysians during the pandemic or future crises. These may take the form of personalized therapeutic interventions or mental health initiatives directed towards the community at large. Meta-analytic evidence shows positive psychology interventions are effective in enhancing wellbeing (Bolier et al. 2013; Sin & Lyubomirsky, 2009). A recent meta-analysis by Carr and colleagues (2020) sampling across 41 countries showed that positive psychology interventions had small to medium effects on wellbeing and buffered against the adverse mental health outcomes. The authors also highlight that the interventions were especially effective for clinical participants in non-Western countries. Considering evidence from these meta-analyses, findings from the current study suggest that mental health interventions aimed at cultivating hope, optimism, and spirituality can be effective complements to government-led health initiatives and policies to help Malaysians weather the adversity brought upon by the pandemic.

5. Conclusion

In this study, we examined how promotive and protective psychological factors predict wellbeing during the COVID-19 pandemic. We tested our hypotheses employing a representative sample of Malaysians during the country's initial (and short-lived) recovery phase, before the third wave of infections. Our study showed that beyond resilience, and controlling for socio-demographic factors, that hope, optimism, and spirituality contribute to wellbeing. Findings from our study contribute to the refinement of resilience theory from a positive psychology perspective and in the development of context- and culturally-sensitive models of wellbeing.

Conflict of interest statement

The authors report no conflicts of interest.

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