Earning Too Little And Worrying Too Much: The Role Of Income And Financial Worries On Parents’ Well-Being In Hong Kong And Bangkok

Xiaoli Gao1 · Kerry Lee1,2 · Kannika Permpoonputana3 · Adisak Plitponkarnpim3,4

Abstract

Research has shown that financial worries are key determinants of parents’ well-being. However, less is known about the relative role of income and financial worries on parents’ well-being; especially from a cross-cultural perspective. Guided by need and aspiration theories, we examined the roles of income and financial worries on happiness and distress among parents from Hong Kong (N=258) and Bangkok (N=190). Bayesian structural equation modelling revealed that greater income and lower financial worries were correlated, on a bivariate level, with higher levels of happiness and lower levels of distress in both societies. However, regressing happiness on both income and financial worries shows that income is uniquely associated with happiness in Bangkok, but not in Hong Kong. Financial worries uniquely explained variance in distress in both societies. These findings suggest that income and financial worries play different roles in parents’ psychological well-being in the two cities. To promote parents’ well-being, future policy or intervention programs should target financial worries in Hong Kong. Targeting income and financial worries are more likely to be efficacious in Bangkok.

Keywords income · financial worries · well-being · cross-culture · Bayesian

It is widely believed that parenthood brings happiness and joy to individuals (Hansen, 2012). However, most empirical evidence from Asian (Chao & Glass, 2020) and Western societies (Hansen, 2012; Stanca, 2012) suggests that having children provides no additional happiness to parents relative to non-parents. One explanation for this paradox comes from the family economic stress model, which suggests that the increased financial worry that comes with having to raise a child dampens the joy associated with parenthood (Conger et al., 2010; Stanca, 2012).

There is an increasing number of studies on the impact of financial worries or stress on parents’ well-being (Friedline et al., 2020; Ryu & Fan, 2022). Many of these studies investigated financial stress as a mediator of the effects of objective socioeconomic indicators (e.g., income) on individuals’ well-being (Conger et al., 2010; Watson et al., 2015). However, financial worry need not be related closely to income. A person with a high income but who spends beyond their means may worry just as much as someone with a lower income. The relative importance of income and financial worry is less clear when both are considered simultaneously. As we will discuss in greater detail below, need theory (Diener & Lucas, 2000; Howell & Howell, 2008) and aspiration theory (Clark et al., 2008; Graham, 2009) suggest that income and financial worry may play different roles on individuals’ well-being. In addition, the literature has largely neglected the role of parents’ worry about the future financial status of their children (e.g., children’s abilities to secure a well-paying job; Shek, 2003). Compared to non-parents, worrying about children’s abilities to secure a well-paying job or financial independence may undermine parents’ positive feelings and increase their negative feelings (Shek, 2003). Moreover, although there are some studies on the relations between financial worry and parents’ well-being, it remains unclear whether these relations differ across societies. To address these issues, the
current study examined the relations between income (indicated by gross monthly income, monthly income saved, and monthly income per capita), financial worries (both current and future financial worries), and parents’ well-being (both happiness and distress) amongst parents from Hong Kong and Bangkok.

Income, Financial Worries, And Parents’ Well-Being

The family economic stress model posits that parents’ experiences with job loss or low income, for example, can make them worry about their financial status, which in turn, has an adverse effect on family functioning (Conger et al., 2010; Friedline et al., 2020). It was also posited that financial worry, beyond socioeconomic status, has a downstream influence on child development via family functioning (Conger et al., 2010). These relations have been observed in both Western and Eastern societies (Chou et al., 2004; Conger et al., 2002; Watson et al., 2015), urban and rural families (Conger et al., 2002; Mistry et al., 2002), and older and younger adults (Bacikova-Sleskova et al., 2007; Chou et al., 2004). Although the family stress model addresses the importance of both income and financial worries, it is notable that the literature based on this model primarily investigates financial worries as a mediating pathway underlying the link between income and family functioning. Few studies have compared the relative importance of income versus financial worry on parents’ well-being, especially from a cross-cultural perspective (Ryu & Fan, 2022). Quantifying the relative importance of income versus financial worries is important because individuals with similar income levels may differ in their financial worries due to differences in spending habits or debt situations. On a practical level, findings from such studies can help to inform decisions on whether resources should be allocated to attenuate financial stress or to reduce income inequalities.

From a cross-cultural perspective, the relative roles of income and financial worries on parents’ well-being may differ due to differences in economic development and cultural background. On the one hand, income may play a more important role in parents’ well-being in poorer societies. According to need theory proposed by Diener and Lucas (2000, see also Howell & Howell 2008), the ability to fulfill individuals’ basic needs (e.g., food, shelter, or health care) is crucial to happiness. Income brings happiness in poorer societies because a low income in those societies means that basic needs are often not fulfilled. In wealthier societies, even those with lower income can satisfy their basic living needs. The benefit of additional income is less consequential in these societies. Recent meta-analytical reviews did find income a stronger predictor of happiness in poorer societies than in richer ones (Howell & Howell, 2008; Tan et al., 2020). On the other hand, aspiration theory (Clark et al., 2008; Graham, 2009) argues that well-being is affected not only by income but also by expectations regarding material possessions. People may feel frustrated if their material desires or aspirations outpace their income (Graham & Pettinato, 2002). Mistry and colleagues (Mistry & Elenbaas, 2021; Mistry & Lowe, 2006; Mistry et al., 2008) explored aspiration-related financial worry by differentiating the ability to meet the family’s needs (e.g., paying the bills) versus wants (e.g., vacation or fancy toys). They found that being able to pay monthly bills is associated with parents’ feelings of being “okay”, whereas being able to afford nonessential wants is associated with parents’ feelings of accomplishment and fulfillment.

Parents can experience financial worries not only as a reaction to their current financial situation (e.g., difficulties in paying the bills), but also worry about the future financial status of their children (Shek, 2003). This phenomenon is especially prominent in Asian cultures, where parents usually start preparing for the financial needs of their children for education, housing, wedding, and even raising their grandchildren far ahead of time (Yiu, 2019). According to a survey conducted by YouGov (2019), among 543 parents from Hong Kong, 95% worried about their children’s future financial situation, and 80% of parents were expecting to have to support their children even after they entered the workforce. With the exception of Shek (2003), who found that higher current and future financial worries were both related to poorer adolescent well-being, few studies have examined whether their roles differed. The present study examined the relative importance of income, current and future financial worries, and their relations with parents’ well-being.

Hong Kong and Bangkok

In this study, we examined the extent to which income and financial worries explain parents’ well-being in two societies: Hong Kong and Bangkok. As major financial centres in China and Thailand, respectively, Hong Kong and Bangkok both have large income disparities (Gini coefficient = 0.539 for Hong Kong and 0.364 for Thailand; Census and Statistics Department 2017; The World Bank, 2018). The two societies also differ in overall societal-level income and happiness. Economically, Hong Kong has a GDP 6 times higher than the whole of Thailand. However, the happiness ranking of Hong Kong (76th in 2018) is lower...
than that of Thailand (52th in 2018, Helliwell et al., 2019). Similarly, Lim et al. (2020) found that among 10 Asian societies, Thailand in general was the happiest and Hong Kong was the third least happy.

Culturally, both Hong Kong and Bangkok have a collectivist heritage. Although Hong Kong is known for its cosmopolitan culture, it is also highly influenced by Confucianism. The emphasis on achievement and accomplish-ment renders her people competitive, with a tendency to work towards surpassing others (Ng, 2002). Parents tend to be focused on raising successful and competitive children and invest a great amount of time and money to ensure that their children enter prestigious universities and obtain top jobs (Anderson & Kohler, 2013). With the large income disparity, parents tend to perceive their children’s competitiveness and ability to outpace their peers as important ingredients for a comfortable life. Coupled with the lack of an extensive social safety net, such concerns regarding competitiveness will likely exacerbate worry about children’s financial future.

In contrast, Bangkok, and Thai society in general, is highly influenced by Buddhism. Nearly 95% of her population are Buddhists (National Statistic Office, 2016). Senasu and Singhapakdi (2017), as well as Winzer and Gray (2019), suggested that the Buddhist virtue of being contented and satisfied is not only associated with greater happiness, but also serves as a coping mechanism in the face of difficulties. The last couple of decades have seen rapid economic development in Bangkok (Ouyyanont, 2019). Although this has also resulted in larger income disparities, the emphasis on contentment will likely cushion the negative feelings resulting from frustrated aspirations (Kittiprapas, 2020).

**Parents’ Well-Being: Happiness And Distress**

Well-being has been generally defined as an affective and cognitive evaluation of people’s life (Diener, 2000). High subjective well-being is usually indicated by frequent positive affect, an absence of negative affect, and global life satisfaction. Although it has been argued that well-being and positive affect are more parsimoniously explained by the absence of negative affect (Fredrickson, 1998), research also indicates that psychological well-being is not just the opposite of psychological distress (Winefield et al., 2012). Surprisingly, the majority of research on the family stress model focuses on parents’ psychological distress, such as anxiety and depression, whereas studies in the economic literature usually focus on positive indicators of well-being, such as happiness and life satisfaction. To provide a more comprehensive measure of well-being, we measured both happiness and distress in the current study.

Financial worries have consistently been found to contribute to higher distress, depression, or anxiety (Friedline et al., 2020; Ryu & Fan, 2022). Few studies have examined the link between financial worries and happiness. The extant literature points to a different pattern of relations between income and happiness versus distress (Hudson et al., 2016; Kahneman & Deaton, 2010; Kushlev et al., 2015; Yu & Chen, 2016). Kushlev et al. (2015) and Hudson et al. (2016) found that higher income had no bearing on daily happiness but was associated with daily sadness among a U.S. sample and a German sample, respectively. In contrast, Killingsworth (2021) found that higher income in their U.S. sample was associated with both elevated positive feelings (e.g., confident, good, interested, and proud) and less negative feelings (e.g., bad, bored, sad, upset). One study conducted in China revealed that higher income was associated with both higher levels of happiness and less general distress (e.g., upset, depressed, hopeless) (Yu & Chen, 2016). These studies suggest that income tends to be related to negative feelings of sadness, depression, or hopelessness. However, the link between income and happiness is more equivocal.

**The current study**

We examined the relations between income, financial worries, happiness, and distress amongst parents from Hong Kong and Bangkok. Figure 1 depicts the conceptual model for the study. This model was tested for both Hong Kong and Bangkok. Several sets of hypotheses were tested. First, we expected that income would be positively related to happiness and negatively related to distress in Hong Kong and Bangkok (Hypothesis 1a). In addition, with previous research showing that income matters more in less wealthy societies (Howell & Howell, 2008; Tan et al., 2020), we expected that the association between income and happiness would be stronger in Bangkok than in Hong Kong (Hypothesis 1b). Second, we expected that current financial worry would be related to less happiness and more distress independent of income in both Hong Kong and Bangkok (Hypothesis 2a). Given the emphasis on competition, we expected that Hong Kong parents’ worry about their children’s future to be associated with their well-being irrespective of income and current financial worry. In contrast, the emphasis on contentment was expected to result in a weaker relation between future financial worry and well-being in Bangkok (Hypothesis 2b).

---

1 Data was compared between Hong Kong and Thailand as no data was available for Bangkok.
had University degrees or above). The median household monthly income per capita was between HKD10,000 and HKD20,000 for the Hong Kong sample. This is similar to that found in the census data (~HKD10,900, Census and Statistics Department, 2019). The median monthly household income per capita was around THB3,000 for the Bangkok parents, relatively lower than the census data (between THB 10,000 and THB 15,000, National Statistic Office, 2019).

**Procedure**

The study protocol was approved by the ethics committees of the respective universities in Hong Kong and Bangkok. The information sheets and consent forms were distributed to students to take home to parents. Parents were instructed to complete a questionnaire and return them to their children’s kindergarten teachers in sealed envelopes. Parents were informed that there were no correct or wrong answers to the questions. To compensate for the time spent on the questionnaire, parents were provided, upon completion of the questionnaire, a supermarket coupon of HKD100 in Hong Kong and THB200 in Bangkok.

**Method**

**Participants**

The data was from a larger international project investigating the association between family socioeconomic status (SES) and children’s cognitive development. The data collection in Hong Kong was finished in early 2019, before the wide-spread social unrest and the outbreak of COVID-19. The data collection in Bangkok was finished by the end of February 2020, before the COVID-19 outbreak in Thailand. Both Hong Kong and Bangkok did not show societal-level economic growth or recession during this period. Parents were recruited from five kindergartens in Bangkok, with one from the lower, one from the middle, and three from the middle to higher SES districts. In Hong Kong, parents were recruited from thirteen kindergartens, with five located in the lower, four in the middle, and four in higher SES districts. The final sample consisted of 258 Hong Kong parents and 190 Bangkok parents of 5 to 6-year-olds.

Most of the respondents were mothers (84.9% in Hong Kong and 73.5% in Bangkok) and highly educated (72.1% of the Hong Kong sample and 45.3% of the Bangkok sample had University degrees or above).
Measures

Income. We asked parents to provide three measures of household income: their gross monthly household income, the amount they saved per month, and their income per capita per month. We measured gross household income (including monthly salary bonuses and income from any other sources), using 16 categories ranging from “HKD10000 or below” to “HKD 25001 or above” in Hong Kong and using eight categories ranging from “THB3000 or below” to “THB 1000001 or above” in Bangkok. We measured the amount people saved per month using ten categories ranging from “HKD3000 or below” to “HKD 1500001 or above” in Hong Kong and using eight categories ranging from “THB1000 or below” to “THB 500001 or above” in Bangkok. The income per capita was calculated by dividing gross household income by the number of the household size. Preliminary analysis suggested that the three income-related indicators were moderately to highly correlated with each other in the two societies (0.560 < r < 0.792 in Hong Kong and 0.606 < r < 0.804 in Bangkok).

Financial worries. Current financial worry was measured using the current economic stress scale (CESS; Shek 2003). Parents were asked to respond to four questions about their perception of economic hardship and their feelings about their financial situation in the past six months (e.g., “in the past six months, has your family had adequate money to cope with the family expenses?”). A higher score represented a higher level of current stress. Cronbach’s α was 0.741 for Hong Kong and 0.834 for Bangkok. Parents were also asked to respond to eight items regarding how much they worried about their children’s future financial situations (e.g., children will be unable to find jobs). Higher scores represented higher levels of worry (FEWS; Shek 2003). Cronbach’s α was 0.911 for the Hong Kong sample and 0.921 for Bangkok.

Well-being. Happiness was measured using the short version of the Oxford Happiness Questionnaire (OHQ; Hills & Argyle 2002). OHQ is a unidimensional measure of well-being which covers all the emotional affect and cognitive life satisfaction of well-being (Hills & Argyle, 2002). Parents indicated their level of agreement with eight statements (e.g., I feel that life is rewarding) using a six-point Likert scale. Cronbach’s α was 0.799 for Hong Kong and 0.781 for Bangkok. The parents also completed a six-item version of the Kessler’s psychological distress scale (Kessler et al., 2002), in which they indicated how often they experienced various distress (e.g., sadness or hopelessness) in the past 30 days. Cronbach’s α was 0.874 for Hong Kong and 0.941 for Bangkok. For both scales, higher scores represented higher levels of happiness and distress, respectively.

Analytic Strategy

We used a Bayesian latent variable approach to analyze the data in Mplus (version 8) (Muthén & Muthén, 2018). Compared to the frequentist approach, Bayesian estimation does not have a normal distribution assumption and is more robust to its violation that may result from, for example, a smaller sample size. Additionally, it allows for the specification of informative priors. Such priors can help attenuate the impact of known model peculiarities (e.g., cross-loadings, residual covariance, or factor loading discrepancy between groups) that would otherwise be regarded as misspecifications. Furthermore, it permits the estimation of all parameters simultaneously so that unnecessary modifications, which may lead to a wrong model, can be potentially avoided (Asparouhov et al., 2015; Muthén & Asparouhov, 2013; Muthén & Asparouhov, 2012).

Data analysis was conducted in three phases. First, we evaluated the measurement models for income, current and future financial worries, happiness, and distress using Bayesian confirmatory factor analysis (BCFA). For each of the constructs, we first examined the model without priors; this is equivalent to a traditional CFA. If a model with no priors provided a poor fit to the data, inverse Wishart priors were used for the residual covariance to examine whether there were significant residual covariances (starting with d = 100). Finally, we conducted a sensitivity analysis to find the smallest variance that would produce a good fit to the data (i.e., PPP value greater than 0.05). This was done by varying the priors from 100 to 1200, with a higher d translating into a stricter prior or smaller variance (Asparouhov et al., 2015). The largest d value was used as the final prior. Based on the final model, the residual covariance was examined to decide if they were trivial or required model modification.

Second, we performed a series of Bayesian multiple-group CFA to assess whether the same measurement model could be used for both Hong Kong and Bangkok. To effectively compare the structural relations between both societies, it is necessary to ensure that the main constructs are measured similarly in the two societies. We evaluated three levels of measurement invariance: configural, metric, and scalar (Muthen & Asparouhov, 2013). For each of the constructs, we first examined the configural model, no priors were specified for the factor loadings or the item intercepts. If the configural model was found invariant, we then examined the metric model, with factor loadings specified to be equal between societies (exact metric). If the exact model was not established, we specified small priors to allow for small group differences in the factor loadings (approximate metric). The same logic applies to the item intercepts. We first specified the item intercepts to be equal between groups.
(exact scalar). If the exact scalar model was not acceptable, we specified small priors for differences in item intercepts between groups (approximate scalar).

Third, we conducted Bayesian structural equation modelling (BSEM) to test the relations between income, financial worries, and well-being. Contingent on measurement invariance, the relations were tested using multiple-group BSEM. Missing data were handled using the Gibbs sampler, which corrected for missingness under the assumption of MAR (Asparouhov & Muthén, 2010). Models were estimated using two Markov Monte Carlo chains and the Gibbs sampler (15,000 iterations). Convergence was evaluated by the potential scale reduction factor (PSR <1.10 indicates acceptable convergence) and by monitoring the posterior distribution trace plots. Model fit was assessed using the posterior predictive p-value (PPP, values below 0.05 were considered indicative of a poor fit, and around 0.5, a good fit) and the 95% confidence interval for the χ² test of differences between the estimated data against the observed data (intervals encompassing zero are indicative of a well-fitting model; Muthén & Asparouhov, 2012). Models were compared using the deviance information criterion (DIC, models with lower values preferred; Asparouhov et al., 2015).

Estimated correlations or regression coefficients were considered significant if a 95% credible interval (CI) did not contain zero (Muthén & Asparouhov, 2012).

Results

Two parents in Bangkok and 16 parents in Hong Kong did not complete parts of the questionnaire. The item-level missing percentage is below 6.2%. Little’s MCAR test indicated that the data were missing at random in Hong Kong, χ²(378) = 396.955, p = .241, and in Bangkok, χ²(244) = 267.664, p = .143. The descriptive statistics can be found in Table 1.

Measurement model and test of measurement equivalence

Table 2 shows the fit statistics for the happiness, distress, current and future financial worries, and income measures. Similar to previous studies (Hills & Argyle, 2002; Kessler et al., 2002; Shek, 2003), we found good model fit for the unidimensional model of happiness, as well as for both current and future financial worries in both societies. Following previous research (Gasiorowska, 2014), we specified a one-factor model of income using gross household income, the amount saved monthly, and monthly income per capita as indicators. The results showed that a single-factor model yielded excellent model fits in both societies. Table 3
displays the results of the Bayesian measurement invariance tests. Partial metric and partial scalar models were established for happiness, current financial worry, future financial worry, and income. For distress, an exact metric and partial scalar model was established. A more detailed report of the measurement model of variables and measurement equivalence of variables across cultures can be found in the supplementary material.

**Income, financial worries, and well-being**

With partial invariance established for the latent constructs, we proceeded with multiple-group BSEM to compare the structural relations among the various latent variables. Happiness and distress were regressed onto income, and current and future financial worries. The BSEM revealed good model fit, $\text{PPP} = 0.130, 95\% \text{ CI} [0.076, 0.275]$, $\text{DIC} = 28746.953$. Although an inspection of the bivariate correlation matrix was supportive of Hypothesis 1a, with greater income correlated with greater happiness and lower distress in both Hong Kong and Bangkok (see Table 4), the BSEM model showed differences across the two societies. In Hong Kong, income was not a significant explanatory variable of either happiness or distress (see Fig. 2). In contrast, income remained a significant explanatory variable for happiness (but not distress) in Bangkok (see Fig. 3); a finding that supports Hypothesis 1b. In Hong Kong, current financial worry remained a significant explanatory factor of happiness and distress. However, current financial worry explained only distress but not happiness in Bangkok. This provides partial support for Hypothesis 2a. Future financial worry explained variance in happiness and distress in Hong Kong but not in Bangkok, supporting Hypothesis 2b.

We further conducted a series of Wald tests to examine if the magnitude of the significant parameters differed within and across the two societies. The results showed that the role of current financial worry on distress did not differ between Hong Kong and Bangkok, $\chi^2 (1) = 0.752, p = .386$. In Hong Kong, current and future financial worry did not differ in their relation with either happiness, $\chi^2 (1) = 0.696, p = .404$, or distress, $\chi^2 (1) = 1.593, p = .207$. In Bangkok, there were no statistically significant differences between the explanatory power of income for happiness and that of current financial worry for distress, $\chi^2 (1) = 2.436, p = .119$.

Although not directly related to our research question, to explore whether our data are consistent with prior mediation findings, we examined whether financial worries mediated the relationship between income and well-being. The results are consistent with a mediated relation. Specifically, in Hong Kong, there were significant indirect paths from income to current and future financial worries, and from the two measures of worries to happiness (standardized estimates $= 0.165, 95\% \text{ CI} [0.076, 0.275]$ for current financial worry and $0.062, 95\% \text{ CI} [0.018, 0.126]$ for future financial worry). The indirect paths to distress were also significant (standardized estimates $= -0.204, 95\% \text{ CI} [-0.314, -0.116]$ for current financial worry and $-0.074, 95\% \text{ CI} [-0.138, -0.026]$ for future financial worry). In Bangkok, only the indirect path to distress was significant (standardized estimates $= -0.417, 95\% \text{ CI} [-0.681, -0.205]$ for current financial worry and $-0.121, 95\% \text{ CI} [-0.242, -0.011]$ for future financial worry).
Bangkok samples. Consistent with previous findings (e.g.,
happiness and distress in parents from our Hong Kong and
we tested how income and financial worries are related
to needs and aspirations. In the current study, multiple
financial worry is related to only distress in Bang-
kok; with financial worry not explaining variance in either
happiness or distress.

### Cultural differences in parents’ well-being

Consistent with previous findings (Bieda et al., 2017; Casas
et al., 2014; Veenhoven, 2012), happiness demonstrated
partial metric partial scalar invariance between Hong Kong
and Bangkok. Take the item “I find beauty in some things”
for example, its loading is relatively higher in Bangkok.
This item taps into the aesthetic appreciation aspect of life,
suggesting that aesthetic appreciation is a more important
criterion for Thais than for Hong Kongers. Indeed, one important teaching of Buddhism is the
importance of being able to appreciate beauty in the present
because “the virtuous mind or character is only beautiful because it finds beautiful expression in and through the
body” (Cooper, 2017, p. 130). Despite cultural differences
in happiness, our results demonstrated full metric invariance
for distress. Unlike the celebrated lines “Happy families are
all alike; every unhappy family is unhappy in its own way”
(Tolstoy, 1878), it seems when it comes to Hong Kong and
Bangkok, unhappy people are alike, happy people are happy
in their own way. With only partial invariance established
for happiness, comparison of happiness across the two cul-
tures need to keep the difference in mind.

Although gross monthly income, income saved, and
income per capita are all important indicators of income in
both Hong Kong and Bangkok, gross monthly income is a
stronger indicator for Thais. This finding is consistent with
the argument that absolute income is more important in poor
countries because it is essential for fulfilling people’s basic
substance needs (Diener & Biswas-Diener, 2002; Diener &
Lucas, 2000; Tan et al., 2020). Given that Thailand has a
lower GDP than Hong Kong, it is reasonable that items that
describe basic living difficulties play more roles for measures
of both current financial worry (“family delayed the
payment of bills because of financial difficulty”) and future
financial worry (“My child will have to rely on welfare”).

### Discussion

Within the framework of need theory and aspiration theory,
we tested how income and financial worries are related to
happiness and distress in parents from our Hong Kong and
Bangkok samples. Consistent with previous findings (e.g.,
Killingsworth, 2021), on a bivariate level, higher income
and lower financial worries were related to greater happi-
ness and lower distress in both cultures. When both income
and financial worries were considered simultaneously, the
multiple-group BSEM indicated that income explained
variance in happiness in Bangkok but not in Hong Kong.
The explanatory power of financial worries differs in the
two cultures. Both current and future financial worries are
related to happiness and distress in Hong Kong. However,
current financial worry is related to only distress in Bang-
kok; with financial worry not explaining variance in either
happiness or distress.

### Table 3 Tests of measurement invariance using Bayesian estimation

| Source                        | #   | 2.5% PP | 97.5% PP | PPP   | DIC    |
|-------------------------------|-----|---------|----------|-------|--------|
| **Happiness**                 |     |         |          |       |        |
| Configural                    | 104 | -14.028 | 63.408   | 0.109 | 9005.098 |
| Metric (exact)                | 96  | -3.593  | 75.538   | 0.038 | 9009.946 |
| Metric (approximate, \( \sigma^2 = 0.01 \)) | 104 | -12.03  | 65.847   | 0.088 | 9004.959 |
| Scalar (exact)                | 96  | 91.337  | 169.454  | 0.000 | 9098.760 |
| Scalar (approximate, \( \sigma^2 = 0.04 \)) | 104 | -8.789  | 68.271   | 0.066 | 9005.589 |
| **Distress**                  |     |         |          |       |        |
| Configural                    | 66  | -28.982 | 28.678   | 0.487 | 6101.868 |
| Metric (exact)                | 60  | -16.264 | 40.764   | 0.187 | 6109.758 |
| Scalar (exact)                | 54  | 45.111  | 101.063  | 0.000 | 6162.546 |
| Scalar (approximate, \( \sigma^2 = 0.04 \)) | 60  | -16.045 | 41.596   | 0.182 | 6109.179 |
| **Current financial worry**   |     |         |          |       |        |
| Configural                    | 24  | -22.416 | 19.313   | 0.593 | 3862.981 |
| Metric (exact)                | 20  | 47.932  | 87.752   | 0.000 | 3928.873 |
| Metric (approximate, \( \sigma^2 = 0.01 \)) | 24  | -9.360  | 36.055   | 0.132 | 3876.677 |
| Scalar (exact)                | 20  | 107.335 | 155.355  | 0.000 | 3990.958 |
| Scalar (approximate, \( \sigma^2 = 0.04 \)) | 24  | -5.841  | 40.204   | 0.074 | 3880.931 |
| **Future financial worry**    |     |         |          |       |        |
| Configural                    | 104 | -9.234  | 66.537   | 0.071 | 7563.264 |
| Metric (exact)                | 96  | 14.866  | 94.440   | 0.003 | 7580.716 |
| Metric (approximate, \( \sigma^2 = 0.02 \)) | 104 | -10.326 | 69.255   | 0.062 | 7561.963 |
| Scalar (exact)                | 96  | 91.133  | 168.662  | 0.000 | 7653.616 |
| Scalar (approximate, \( \sigma^2 = 0.12 \)) | 104 | -7.760  | 71.552   | 0.052 | 7563.215 |
| **Income**                    |     |         |          |       |        |
| Configural                    | 24  | -9.587  | 28.168   | 0.163 | 2784.778 |
| Metric (exact)                | 21  | 31.219  | 66.809   | 0.000 | 2821.777 |
| Metric (approximate, \( \sigma^2 = 0.01 \)) | 24  | -4.787  | 34.900   | 0.066 | 2789.895 |
| Scalar (exact)                | 21  | 60.634  | 99.324   | 0.000 | 2851.774 |
| Scalar (approximate, \( \sigma^2 = 0.04 \)) | 24  | -3.278  | 37.365   | 0.051 | 2791.309 |

Note: Configural = non-informative priors of factor loading and item
intercept differences between groups. Metric (exact) = factor load-
ings were exact invariant across groups. Metric (approximate) = fac-
tor loadings were approximate invariant across groups. Scalar (exact) = item
intercepts were exact invariant across groups. Scalar (approximate) = item
intercepts were approximate invariant across groups. PPP = posterior predictive p value. DIC = deviance information criterion.
Table 4  Estimated correlations between variables in Hong Kong (below diagonal) and Bangkok (above diagonal)

|                        | Gross | Saved | Per capita | Income | Current financial worry | Future financial worry | Happiness | Distress |
|------------------------|-------|-------|------------|--------|------------------------|-----------------------|-----------|----------|
| Gross                  | -     | 0.804* | 0.784*     | -      | -0.620*                | -0.470*               | 0.475*    | -0.290*  |
| Saved                  | 0.751* | -     | 0.606*     | -      | -0.663*                | -0.411*               | 0.429*    | -0.239*  |
| Per capita             | 0.792* | 0.560* | -          | -      | -0.456*                | -0.432*               | 0.365*    | -0.190*  |
| Income                 | -     | -     | -          | -      | -0.687*                | -0.501*               | 0.518*    | -0.307*  |

Current financial worry

Future financial worry

Happiness

Distress

Note. *p < .001. Statistics within brackets = 95% credible interval. Gross = Monthly gross income. Saved = Monthly saved income. Per capita = Monthly income per capita.

Fig. 2  Standardized Estimates for paths from predictors to outcomes in Hong Kong

Note. CESS = current financial worry. FEWS = future financial worry. Statistics within brackets = 95% credible interval. Non-significant paths were not shown in the figure. Indicators were included in the model but not shown in the figure.
leaving them little energy to worry about their children’s future. It should be noted that the income level of our Bangkok sample is below the general population. In contrast, the income of our Hong Kong sample is similar to the general population. It is likely that the income of the parents in our Bangkok sample needs to be substantially improved before they can even meet their current living demands. As previous research suggests, people with less financial resources tend to focus on short-term goals and ignore long-term planning (Shah et al., 2012). Another possibility is that Thai Buddhist teaching may serve as a coping strategy that renders people less affected by the worries of the future (Hanh, 2005). Similar to secular mindfulness practices, focusing on the present and being non-judgmental is understood and practised in a variety of ways within the Buddhist traditions (Kang & Whittingham, 2010). Similar to the practice of mindfulness, the Thai Buddhist beliefs that “the secret of health for both mind and body is not to mourn for the past, nor to worry about the future, not to anticipate troubles, but to live the present moment wisely and earnestly” (Buddha, n.d.). Such beliefs may render people less worried about the future and demonstrate better emotional well-being (Fisak & Von Lehe, 2012).

**Income, financial worries, and well-being**

The present study provides evidence for the differential role of income and financial worries across cultures. Consistent with need theory, which argued that income matters more in less wealthy societies than in more wealthy societies (e.g., Tan et al., 2020), our results demonstrated that the role of income in explaining parents’ well-being is overridden by financial worries in Hong Kong, echoing previous findings among elderly sample in Hong Kong which stated that only financial strain remains a significant factor of depressive symptoms after income poverty was controlled (Lee & Chou, 2019). However, in Bangkok, income remains a significant explanatory variable for parents’ happiness. The Bangkok findings also echo previous studies that found both low income and financial worries are significant predictors of depressive symptoms among caregivers (Hurwich-Reiss et al., 2019).

We found that both current and future financial worries were related to happiness and distress in Hong Kong. However, current worry only explains distress, and future worry was not a significant explanatory variable in Bangkok. One possible reason for the discrepancy between Hong Kong and Bangkok is that the parents from Bangkok may have been preoccupied with their current financial situation, leaving them little energy to worry about their children’s future. It should be noted that the income level of our Bangkok sample is below the general population. In contrast, the income of our Hong Kong sample is similar to the general population. It is likely that the income of the parents in our Bangkok sample needs to be substantially improved before they can even meet their current living demands. As previous research suggests, people with less financial resources tend to focus on short-term goals and ignore long-term planning (Shah et al., 2012). Another possibility is that Thai Buddhist teaching may serve as a coping strategy that renders people less affected by the worries of the future (Hanh, 2005). Similar to secular mindfulness practices, focusing on the present and being non-judgmental is understood and practised in a variety of ways within the Buddhist traditions (Kang & Whittingham, 2010). Similar to the practice of mindfulness, the Thai Buddhist beliefs that “the secret of health for both mind and body is not to mourn for the past, nor to worry about the future, not to anticipate troubles, but to live the present moment wisely and earnestly” (Buddha, n.d.). Such beliefs may render people less worried about the future and demonstrate better emotional well-being (Fisak & Von Lehe, 2012).

Echoing previous research (e.g., Watson et al., 2015), we also find an indirect path between income, financial worries,
and distress in Hong Kong and Bangkok. Prior research primarily focused on parents’ current financial worry. This study contributes to the family stress model by showing that in addition to current financial worry, future financial worry is a unique mediator that contributes to explaining variation in distress. These findings suggested that multiple underlying psychological processes, particularly the perception of future income sufficiency for children, need to be considered when examining questions related to whether “money can alleviate parents’ distress”.

**Implications**

One implication of these findings is that interventions that target financial worries, such as training on financial knowledge and management skills, may help promote parents’ well-being. Clinicians and social workers may help parents who experience extreme financial worries to reframe their perceptions and develop positive feelings about their financial situations. For parents in Bangkok, apart from financial worries, income is also closely related to well-being. Policies that further increase income may be effective (e.g., programs that target large unconditional cash transfers may be helpful; Haushofer & Shapiro 2016). It should be noted that in 2020, the COVID-19 pandemic and its related restrictions have caused economic challenges for families globally. Although levels of distress and worries may have risen because of COVID-19, it is unclear whether and how this impacted the relationship between income or financial worries and well-being. Future studies may want to examine this issue by manipulating the contexts under which these relations are examined.

**Limitations**

Several limitations need to be noted. Diener et al. (2013) argued that subjective well-being is not only associated with income but also benefits from societal level advantages, such as having a better safety net or better infrastructure. Hong Kong and Bangkok have different welfare regimes (Park & Jung, 2007). The better social welfare available in Hong Kong (Dominko & Verbič, 2021; Kwon, 2009) may have ameliorated the impact of having a lower income. Our current data do not allow us to disambiguate the role of income versus societal welfare regimes. Our data mainly came from mothers. Although we did not find significant differences in financial worries between fathers and mothers in our samples, Shek (2003) found that mothers displayed more worries about children’s future than fathers did. Future research may consider sampling both mothers and fathers equally. Because our data is cross-sectional, causal relations cannot be drawn. It is possible that happier people are more likely to build up resources for their future, such as learning new skills and strengthening stronger social relationships. These resources will likely lead to higher income (Diener et al., 2010). Moreover, we did not measure the impact of family policy, nor individual differences in competitiveness, contentment, or religiosity (Hastings & Rooser, 2020), which may have explained some of the differences we found across the Bangkok and Hong Kong samples. Additionally, it should be noted that our sample size is relatively small. Findings should be replicated in the future with large nationally representative data.

**Conclusion**

Our findings add to need theory and aspiration theory by illustrating the different roles of income and financial worries in parents’ well-being in different cultures. Income is a unique explanatory variable in our Bangkok, but not in our Hong Kong sample. Furthermore, our findings contribute to the existing literature by identifying the unique explanatory roles of current versus future financial worries. Parents are exposed to stressors related to having to worry about their children’s financial future, which may undermine their positive feelings and increase negative feelings. Although prior research has extensively examined financial worries within families, very few have investigated parents’ financial worries about children’s future. Our findings suggest that future financial worries about children might only be stressful for parents of kindergarten-aged children from Hong Kong but not Bangkok.

**References**

Anderson, T., & Kohler, H. P. (2013). Education fever and the East Asian fertility puzzle. *Asian population studies*, 9(2), 196–215. https://doi.org/10.1080/17441730.2013.797293

Asparouhov, T., & Muthén, B. (2016). *Bayesian analysis using Mplus: Technical implementation*. Retrieved from http://www.statmodel.com/download/Bayes3.pdf

Asparouhov, T., Muthén, B., & Morin, A. J. S. (2015). Bayesian structural equation modeling with cross-loadings and residual covariances: Comments on Stromeyer et al. *Journal of Management*, 41(6), 1561–1577. https://doi.org/10.1177/0149206315591075

Backikova-Sleskova, M., Van Dijk, J. P., Geckova, A. M., Nagyova, I., Salonna, F., Reijneveld, S. A., & Groothoff, J. W. (2007). The impact of unemployment on school leavers’ perception of health. Mediating effect of financial situation and social contacts? *International Journal of Public Health*, 52(3), 180–187. https://doi.org/10.1007/s00038-007-6071-4

Bieda, A., Hirschfeld, G., Schönfeld, P., Braitlovskaja, J., Zhang, X. C., & Margraf, J. (2017). Universal happiness? Cross-cultural measurement invariance of scales assessing positive mental
health. Psychological Assessment, 29(4), 408–421. https://doi.org/10.1037/pas0000035

Casas, F., Tilouine, H., & Figuer, C. (2014). The subjective well-being of adolescents from two different cultures: Applying three versions of the PWI in Algeria and Spain. Social Indicators Research, 115(2), 637–651. https://doi.org/10.1007/s11205-012-0229-z

Census and Statistics Department. (2017). Thematic report: Household income distribution in Hong Kong. Issue: Census and Statistics Department.

Census and Statistics Department (2019). Table E034: Median monthly domestic household income of economically active households by household size (excluding foreign domestic helpers). https://www.censat.gov.hk/statst/sub/sp150.jsp?productCode=D525003Bfiles/6763/sp150_tc.html

Chao, S. Y., & Glass, J. (2020). Parental happiness and social policy in Asia. Asian population studies, 16(2), 123–144. https://doi.org/10.1080/17441730.2020.1757848

Chou, K. L., Chi, I., & Chow, N. W. S. (2004). Sources of income and depression in elderly Hong Kong Chinese: mediating and moderating effects of social support and financial strain. Aging & Mental Health, 8(3), 212–221. https://doi.org/10.1080/13607860410001669741

Clark, A. E., Frijters, P., & Shields, M. A. (2008). Relative income, happiness, and utility: An explanation for the easterlin paradox and other puzzles. Journal of Economic Literature, 46(1), 95–144. https://doi.org/10.1257/jel.46.1.95

Conger, R. D., Conger, K. J., & Martin, M. J. (2010). Socioeconomic status, family processes, and individual development. Journal of Marriage and Family, 72(3), 685–704. https://doi.org/10.1177/0022443609358495

Cong, R. D., Wallace, L. E., Sun, Y., Simons, R. L., Mcloyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. Developmental Psychology, 38(2), 179–193. https://doi.org/10.1037.0012-1649.38.2.179

Cooper, D. E. (2017). Buddhism, beauty and virtue. In K. M. Higgins, S. Maira, & S. Sikka (Eds.), Artistic Visions and the Promise of Beauty (16 vol., pp. 125–137). Springer International Publishing. https://doi.org/10.1007/978-3-319-43893-1_9

Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. American Psychologist, 55(1), 34–43. https://doi.org/10.1037.0003-066X.55.1.34

Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? A literature review and guide to needed research. Social Indicators Research, 57(2), 119–169. https://www.jstor.org/stable/27526987

Diener, E., & Lucas, R. E. (2000). Explaining differences in societal levels of happiness: Relative standards, need fulfillment, culture, and evaluation theory. Journal of Happiness Studies, 1(1), 41–78. https://doi.org/10.1023/A:1010076127199

Diener, E., Ng, W., Harter, J., & Arora, R. (2010). Wealth and happiness across the world: material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. Journal of Personality and Social Psychology, 99(1), 52–61. https://doi.org/10.1037.0022-3514.99.1.52

Diener, E., Tay, L., & Oishi, S. (2013). Rising income and the subjective well-being of nations. Journal of Personality and Social Psychology, 104(2), 267–276. https://doi.org/10.1037/a0030487

Dominko, M., & Verbič, M. (2021). The effect of income and wealth on subjective well-being in the context of different welfare state regimes. Journal of Happiness Studies, 22(1), 181–206. https://doi.org/10.1007/s10902-020-00225-9.

Fisak, B., & Von Lehe, A. C. (2012). The relation between the five facets of mindfulness and worry in a non-clinical sample. Mindfulness, 3(1), 15–21. https://doi.org/10.1007/s12671-011-0075-0

Fredrickson, B. L. (1998). What good are positive emotions? Review of General Psychology, 2(3), 300–319. https://doi.org/10.1037.1089-2680.2.3.300

Friedline, T., Chen, Z., & Morrow, S. P. (2020). Families’ financial stress & well-being: The importance of the economy and economic environments. Journal of Family and Economic Issues,42(1), 34-51. https://doi.org/10.1007/s10834-020-00694-9

Gastorowska, A. (2014). The relationship between subjective and subjective wealth is moderated by financial control and mediated by money anxiety. Journal of Economic Psychology, 43, 64–74. https://doi.org/10.1016/j.joep.2014.04.007

Graham, C. (2009). Happiness Around the World: The paradox of happy peasants and miserable millionaires. Oxford University Press.

Graham, C., & Pettinato, S. (2002). Frustrated achievers: Winners, losers and subjective well-being in new market economies. Journal of Development Studies, 38(4), 100–140. https://doi.org/10.1080/00220380412331322431

Han, T. N. (2005). Happiness: Essential Mindfulness Practices. Paralax Press. https://books.google.com.hk/books?id=OriKuyrPVoC

Hansen, T. (2012). Parenthood and happiness: A review of folk theories versus empirical evidence. Social Indicators Research, 108(1), 29–64. https://doi.org/10.1007/s11205-011-9865-y

Hastings, O. P., & Roesser, K. K. (2020). Happiness in hard times: Does religion buffer the negative effect of unemployment on happiness? Social Forces, 99(2), 447–473. https://doi.org/10.1093/sf/soaa018

Haushofer, J., & Shaprio, J. (2016). The short-term impact of unconditional cash transfers to the poor: Experimental evidence from Kenya. The Quarterly Journal of Economics, 131(4), 1973–2042. https://doi.org/10.1093/qje/qjw025

Helliwell, J. F., Huang, H., & Wang, S. (2019). Changing world happiness. World Happiness Report, 2019, 11–46

Hills, P., & Argyle, M. (2002). The Oxford Happiness Questionnaire: A compact scale for the measurement of psychological well-being. Personality and Individual Differences, 33(7), 1073–1082. https://doi.org/10.1016/S0191-8869(01)00213-6

Howell, R. T., & Howell, C. J. (2008). The relation of economic status to subjective well-being in developing countries: A meta-analysis. Psychological Bulletin, 134(4), 536–560. https://doi.org/10.1037.0033-2909.134.4.536

Hudson, N. W., Lucas, R. E., Donnellan, M. B., & Kushlev, K. (2016). Income reliably predicts daily sadness, but not happiness: A replication and extension of Kushlev, Dunn, and Lucas (2015). Social Psychological and Personality Science, 7(8), 828–836. https://doi.org/10.1177/1948550616657599

Hurwich-Reiss, E., Watamura, S. E., Raver, C. C., Berlin, L., Blair, C., Constantino, J. N., Hallam, R. A., Han, M., Hustted, J. T., Harden, B. J., Sarche, M., Vu, J. A., & The, B. T. S. C. P. s. (2019). Beyond income: Expanding our empirical toolkit to better predict caregiver well-being. Journal of Child and Family Studies, 28(3), 753–764. https://doi.org/10.1007/s10826-018-01304-5

Kahnewman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. Proceedings of the National Academy of Sciences, 107(38), 16489–16493. https://doi.org/10.1073/pnas.1011492107

Kang, C., & Whittingham, K. (2010). Mindfulness: A Dialogue between Buddhism and Clinical Psychology. Mindfulness, 1(3), 161–173. https://doi.org/10.1007/s12671-010-0018-1

Kessler, R. C., Andrews, G., Colpe, L. J., Hiripi, E., Mroczek, D. K., Normand, S. L. T., Walters, E. E., & Zaslavsky, A. M. (2002). Short screening scales to monitor population prevalences and trends in non-specific psychological distress. Psychological medicine, 32(6), 959–976. https://doi.org/10.1017/S0033291702006074

Killingsworth, M. A. (2021). Experienced well-being rises with income, even above $75,000 per year. Proceedings of the
National Academy of Sciences, 118(4), e2016976118. https://doi.org/10.1073/pnas.2016976118

Kittiprapas, S. (2020). Happiness determinants in a Buddhist community: Where Inner Happiness Matters. *Thammasat Review of Economic and Social Policy*, 6(1), 84–134. https://doi.org/10.14456/tresp.v6i1.249267

Kushlev, K., Dunn, E. W., & Lucas, R. E. (2015). Higher income is associated with less daily sadness but not more daily happiness. *Social Psychological and Personality Science, 6*(5), 483–489. https://doi.org/10.1177/1948550614568161

Kwon, H. J. (2009). The reform of the developmental welfare state in East Asia. *International Journal of Social Welfare, 18*, S12–S21. https://doi.org/10.1002/ijs.529.x

Lee, S., & Chou, K. (2019). Assessing the relative contribution of social exclusion, income-poverty, and financial strain on depressive symptoms among older people in Hong Kong. *Aging & Mental Health, 23*(11), 1487–1495. https://doi.org/10.1080/13607863.2018.1506740

Lim, H. E., Shaw, D., Liao, P. S., & Duan, H. (2020). The effects of income on happiness in East and South Asia: Societal values matter? *Journal of Happiness Studies, 21*(2), 391–415. https://doi.org/10.1007/s10902-019-00088-9

Mistry, R. S., & Elenbaas, L. (2021). It’s all in the family: Parents’ economic worries and youth’s perceptions of financial stress and educational outcomes. *Journal of Youth and Adolescence, 50*(4), 724-739. https://doi.org/10.1007/s10964-021-01393-4

Mistry, R. S., & Lowe, E. D. (2006). What earnings and income buy — “the basics” plus “a little extra”: Implications for family and child well-being. In H. Yoshikawa, T. S. Weisner, & E. D. Lowe (Eds.), *Making it work: Low-wage employment, family life, and child development* (pp. 173–205). New York: Russell Sage Foundation.

Mistry, R. S., Lowe, E. D., Benner, A. D., & Chien, N. (2008). Expanding the family economic stress model: Insights from a mixed-methods approach. *Journal of Marriage and Family, 70*(1), 196–209. https://doi.org/10.1111/j.1477-3405.2007.00471.x

Mistry, R. S., Vandewater, E. A., Huston, A. C., & Mcloyd, V. C. (2002). Economic well-being and children’s social adjustment: The role of family process in an ethnically diverse low-income sample. *Child Development, 73*(3), 935–951. https://doi.org/10.1111/1467-8624.00448

Muthén, B., & Asparouhov, T. (2013). BSEM measurement invariance analysis. *Mplus Web Notes 17*. https://www.statmodel.com/examples/webnotes/webnote17.pdf

Muthén, B., & Asparouhov, T. (2012). Bayesian structural equation modeling: A more flexible representation of substantive theory. *Psychological Methods, 17*(3), 313–335. https://doi.org/10.1037/a0026802

Muthén, L. K., & Muthén, B. (2018). *Mplus: Statistical Analysis With Latent Variables. User’s Guide* (8 ed.). Muthén & Muthén

National Statistical Office (2016). *The 2015–2016 Population and Housing Census: Executive summary*. http://web.nso.go.th/en/survey/popchan/data/2015-2016-Executive%20Summary.pdf

National Statistical Office (2019). *The 2019 Household Socio-Economic Survey - Bangkok*. http://www.nso.go.th/sites/2014en/Survey/social/household/household/2019/FullReport_HSES.pdf

Ng, Y. K. (2002). East-Asian happiness gap. *Pacific Economic Review, 7*(1), 51–63. https://doi.org/10.1111/1468-0106.00149

Ouyyanont, P. (2019). Thai economic growth: Retrospect and prospect. In J. M. Michael, C. Terence, & H. Shu Xun Mark (Eds.), *After the coup: The national council for peace and order era and the future of Thailand* (pp. 335-355). ISEAS - Yusof Ishak Institute. https://doi.org/10.1355/9789814843058-014

Park, C. U., & Jung, D. (2007, October). *The Asian welfare regimes revisited: The preliminary typologies based on welfare legislation and expenditure*. Paper presented at the Fourth International Conference on Restructuring Care Responsibility. http://www.welfareasia.org/4thconference/papers/Park_The%20Asian%20Welfare%20Regimes%20Revisited.pdf

Ryu, S., & Fan, L. (2022). The relationship between financial worries and psychological distress among U.S. adults. *Journal of Family and Economic Issues, 43*(1), 1-18. https://doi.org/10.1007/s10834-022-09820-9

Senasu, K., & Singhapakdi, A. (2017). Determinants of happiness in Thailand: The moderating role of religiousness. *Journal of Human Behavior in the Social Environment, 27*(4), 270–290. https://doi.org/10.1080/10911359.2017.1279580

Shah, A. K., Muilainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science, 338*(6107), 682–685. https://doi.org/10.1126/science.1222426

Shek, T. L. L. (2003). Economic stress, psychological well-being and problem behavior in Chinese adolescents with economic disadvantage. *Journal of Youth and Adolescence, 32*(4), 259–266. https://doi.org/10.1023/A:1023080826557

Stanca, L. (2012). Suffer the little children: Measuring the effects of parenthood on well-being worldwide. *Journal of Economic Behavior & Organization, 81*(3), 742–750. https://doi.org/10.1016/j.jebo.2010.12.019

Tan, J. J. X., Kraus, M. W., Carpenter, N. C., & Adler, N. E. (2020). The association between objective and subjective socioeconomic status and subjective well-being: A meta-analytic review. *Psychological Bulletin, 146*(11), 970–1020. https://doi.org/10.1037/bul0000258

The World Bank (2018). Gini Index (World Bank estimate) - Thailand. https://data.worldbank.org/indicator/SI.POV.GINI?locations=TH&order=desc

Tolstoy, L. (1878). *Anna Karenina*. Bobbs-Merrill

Veenhoven, R. (2012). Cross-national differences in happiness: Cultural measurement bias or effect of culture? *International Journal of Wellbeing, 2*(4), 333–353. https://doi.org/10.5502/ijw.v2i4.4

Watson, S. J., Barber, B. L., & Dziurawiec, S. (2015). The role of economic and financial strain in Australian university students’ psychological well-being. *Journal of Family and Economic Issues, 36*(3), 421–433. https://doi.org/10.1007/s10834-014-9404-5

Winefield, H. R., Gill, T. K., Taylor, A. W., & Pilkington, R. M. (2012). Psychological well-being and psychological distress: Is it necessary to measure both? *Psychology of Well-Being: Theory Research and Practice, 2*(3), 1–14. https://doi.org/10.1186/2211-1522-2-3

Winzer, L., & Gray, R. S. (2019). The role of Buddhist practices in happiness and health in Thailand: A structural equation model. *Journal of Happiness studies, 20*(2), 411–425. https://doi.org/10.1007/s10902-017-9953-z

Yiu, E. (2019, April 9). Hong Kong’s middle class saving for children’s weddings, homes. *South China Morning Post*. https://www.scmp.com/business/banking-finance/article/3005356/hong-kongs-middle-class-saving-childrens-wedding-and-homesfiles/7975/hong-kongs-middle-class-saving-childrens-wedding-and-homes.html

YouGov (2019). Visa survey: Hong Kong parents worry about how their children will manage their own finances – expecting to bankroll them after adulthood. https://www.visa.com.hk/en_HK/about-visa/pressroom/press-releases/visa-survey-hong-kong-parents-worry-about-how-their-children-will-manage-their-own-finances-expecting-to-bankroll-them-after-adulthood.html

Yu, Z., & Chen, L. (2016). Income and well-being: Relative income and absolute income weaken negative emotion, but only relative income improves positive emotion. *Frontiers in Psychology, 7*(1), 1–6. https://doi.org/10.3389/fpsyg.2016.02012

Publisher’s Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.
