

Integrating Mental Health into Household Economic Behaviour



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Citation: Ang, M. J.-Y., Lau, E., Wong, S. S.-L., Chew, K.-S., & Chen, Y. Y. (2026). Integrating mental health into household economic behaviour. *Theoretical and Practical Research in Economic Fields*, 17(3), 633–645. [https://doi.org/10.14505/tpref.v17.3\(39\).01](https://doi.org/10.14505/tpref.v17.3(39).01)

Article info: Received 29 March 2026;
Received in revised form 23 June 2026;
Accepted 22 July 2026;
Published 30 September 2026.

Abstract: Mental health is increasingly recognized as a factor that influences economic perceptions and behaviour. This study examines how mental health influences the expected impact on expenses allocation through economic strain, household financial satisfaction, and anticipated household financial adjustment. Data were collected from 309 Malaysian adults. The variables were measured using validated instruments, namely the DASS-21 and the Family Economic Strain Scale. Hierarchical multiple regression and partial least squares structural equation modelling were used to examine incremental prediction and sequential mediation pathways. First, the regression analysis showed that mental health variables explained only a small proportion of the variance in the expected impact on expense allocation. The inclusion of economic strain improved the model fit while anticipated household financial adjustment produced the largest increase in explained variance and emerged as the strongest predictor. Second, the structural model showed that higher depression levels were associated with greater economic strain, followed by stronger anticipated household financial adjustment and a greater expected impact on expense allocation. The findings suggest that depression influences household economic expectations indirectly through perceived economic pressure and anticipatory adjustment. The results highlight the importance of integrating mental health considerations into economic support initiatives and strengthening households' capacity for forward-looking financial planning.

Keywords: mental health; economic strain; anticipated household financial adjustment; expected impact on expense allocation; Malaysia.

JEL Classification: D91; I12.

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Introduction

Despite increasing attention to mental health and economic behaviour, limited studies have examined how mental health conditions influence household economic behaviour through interconnected mental health and economic mechanisms within a single framework. Existing studies in Malaysia mainly focus on the prevalence of mental health conditions, economic stress among selected groups or expenditure behaviour separately (Ibrahim *et al.* 2014; Mansor *et al.* 2022; Mohd Hassan *et al.* 2022). Less attention has been given to how depression, anxiety, and stress influence household economic responses and future financial expectations. In addition, previous studies often examine direct relationships between mental health and economic outcomes without considering the simultaneous roles of economic strain, household financial satisfaction, and anticipated household financial adjustment. As a result, there is still a limited understanding of how mental health conditions influence expected household expense allocation through both perception-based and forward-looking adjustment processes. Therefore, this study examines the relationships among mental health, economic strain, household financial satisfaction, anticipated household financial adjustment and expected impact on expense allocation within a unified framework. The inclusion of mediating variables enables a clearer understanding of how mental health conditions are associated with changes in household economic expectations and adjustment behaviour in Malaysia.

1. Research Background

Mental health is recognised as a major global public health issue because of its contribution to disability and its effects on daily functioning. Depressive and anxiety disorders remain among the leading causes of years lived with disability worldwide (World Health Organization, 2022). In Malaysia, national health surveys report increasing mental health symptoms among adults, especially among individuals facing socioeconomic disadvantage (Institute for Public Health, 2020). Malaysian adolescents also report notable levels of depression, anxiety, and stress, indicating a substantial mental health burden among younger populations (Ibrahim *et al.*, 2014). Higher household financial debt has been linked to poorer mental health outcomes across national contexts, including elevated stress and depressive symptoms, even after accounting for socioeconomic factors (Sweet *et al.*, 2013; Hu *et al.*, 2023). Recent longitudinal studies further suggest that mental health and economic hardship may influence each other over time, where poorer mental health contributes to greater economic hardship while adverse economic conditions increase mental distress (Scholten *et al.*, 2023; Prati, 2024).

Mental health plays an important role in economic decision making through its influence on cognitive functioning. Depression is associated with impairments in executive functioning, attention, and working memory, which reduce individuals' ability to plan and engage in goal-directed behaviour (Snyder, 2013; Rock *et al.* 2014). Mental strain and scarcity may reduce cognitive bandwidth, leading individuals to prioritize immediate demands rather than longer-term considerations when making economic decisions (Mani *et al.*, 2013). High levels of mental distress in Malaysia also reflect broader difficulties in daily functioning, possible effects on behavioural regulation in routine situations (Ibrahim *et al.*, 2014). Beyond cognitive constraints, mental distress is linked to more negative evaluations of circumstances, as stress and anxiety increase threat perception and uncertainty in decision making under risk (Haushofer and Fehr, 2014). In the economic context, financial stress and debt problems are associated with difficulties in controlling spending and managing finances, while mental strain is linked to maladaptive financial behaviours such as over-indebtedness and poor financial management (Gathergood, 2012; Sweet *et al.*, 2013). Recent evidence further indicates that financial adversity is strongly associated with depressive symptoms such as hopelessness and worry about the future, particularly among individuals experiencing financial dissatisfaction, unemployment, and difficulty meeting basic household needs (Bjørndal *et al.*, 2025).

Economic strain refers to individuals' subjective perceptions of financial pressure and ongoing difficulty in meeting economic demands with available resources (Pearlin *et al.*, 1981). Mental distress influences how individuals perceive and respond to economic pressures beyond objective income levels (Conger *et al.*, 2010). Individuals with similar incomes may experience different levels of economic strain because subjective economic perceptions and mental health conditions jointly shape evaluations of financial pressure and economic vulnerability (Mirowsky and Ross, 2001; Prati, 2024). Higher levels of perceived economic strain are associated with greater financial worry, increased mental distress, and poorer subjective financial well-being, even after accounting for objective income or assets (Voydanoff, 1990; Kahn and Pearlin, 2006).

Household financial satisfaction refers to individuals' subjective evaluations of their overall financial situation and differs from objective indicators such as income or assets (Joo and Grable, 2004; Diener *et al.*, 2018). General well-being influences how individuals evaluate financial conditions (Diener *et al.*, 1999). Lower well-being and greater mental strain are associated with more negative financial evaluations even when objective conditions remain similar (Hira and Mugenda, 2000; Brown *et al.*, 2014). Financial satisfaction is also strongly correlated with perceived financial stress, current mental distress, and expectations regarding future financial security and preparedness (Netemeyer *et al.*, 2018). Financial dissatisfaction has also been linked to depressive symptoms, particularly hopelessness and excessive worry about future conditions (Bjørndal *et al.*, 2025).

Anticipated household financial adjustment refers to individuals' expectations regarding how they may change financial behaviour in response to future economic demands (Peetz and Buehler, 2009). Lower financial satisfaction and higher perceived financial stress are associated with weaker expectations of future financial security and lower confidence in managing future challenges (Joo and Grable, 2004; Netemeyer *et al.*, 2018). Individuals with lower financial well-being report greater financial stress and adopt more constrained financial management behaviours, including changes in budgeting, saving, and credit use, regardless of income level (Gutter and Copur, 2011). Mental distress has also been linked with changes in household expenditure allocation, including lower spending on education, insurance, medicines, and health practitioners, together with higher spending on alcohol and rent among psychologically distressed households (Lal *et al.*, 2026).

Expected expense allocation refers to individuals' expectations about future spending patterns, consistent with research showing that people often make forward-looking predictions about their future expenses during financial planning (Peetz and Buehler, 2009). Mental states and perceived risk shape expectation formation and

consumption-related judgments under uncertainty, as loss sensitivity and cognitive load affect attention, trade-off evaluation, and decision making (Kahneman and Tversky, 1979; Mani *et al.*, 2013). Within Prospect Theory, loss aversion implies that individuals place greater emphasis on avoiding losses than achieving gains. Under conditions of perceived vulnerability, households may prioritise essential expenditures over discretionary spending (Kahneman and Tversky, 1979; Barberis, 2013). Lower perceived financial well-being is associated with greater financial stress and more cautious spending expectations, reflecting subjective appraisal rather than objective income changes (Joo and Grable, 2004; Netemeyer *et al.*, 2018). Poorer mental health has also been associated with increased household out-of-pocket healthcare expenditure, suggesting that mental health conditions may influence household financial allocation and economic burden over time (Tamal *et al.*, 2026).

The novelty of this study lies in several important contributions to the understanding of household economic behaviour. First, the study reconceptualises mental health as a determinant of economic behaviour rather than merely a consequence of economic hardship. By positioning mental health as a driving factor, the framework explains how mental health conditions influence subjective economic perceptions and shape household financial expectations. Second, the study integrates psychological dimensions into economic analysis by examining how mental health affects household financial satisfaction, anticipated financial adjustment, and perceptions regarding expense allocation. This extends conventional household economic models that often neglect psychological influences in financial decision-making. Third, the study introduces a forward-looking perspective by emphasising anticipatory financial responses and future-oriented expectations instead of focusing solely on current financial conditions. Fourth, the research contributes empirical evidence from Malaysia, a context characterised by income stratification, rising living costs, and strong family-based financial responsibilities, thereby offering context-specific insights into the interaction between mental health and household financial behaviour. Finally, the study provides significant policy implications by demonstrating that mental health should be incorporated into economic and social policy frameworks, particularly in designing strategies aimed at improving household financial resilience and overall societal well-being.

2. Method

This study adopts a quantitative research design to examine how mental health influences household economic behaviour through economic strain, household financial satisfaction, anticipated household financial adjustment, and the expected impact on expense allocation. Data were collected in 2023 using both online and offline questionnaires to obtain responses from individuals across different regions of Malaysia. A quota sampling approach was applied, with eligibility restricted to Malaysian citizens aged 18 years and above to ensure the inclusion of adult household decision makers.

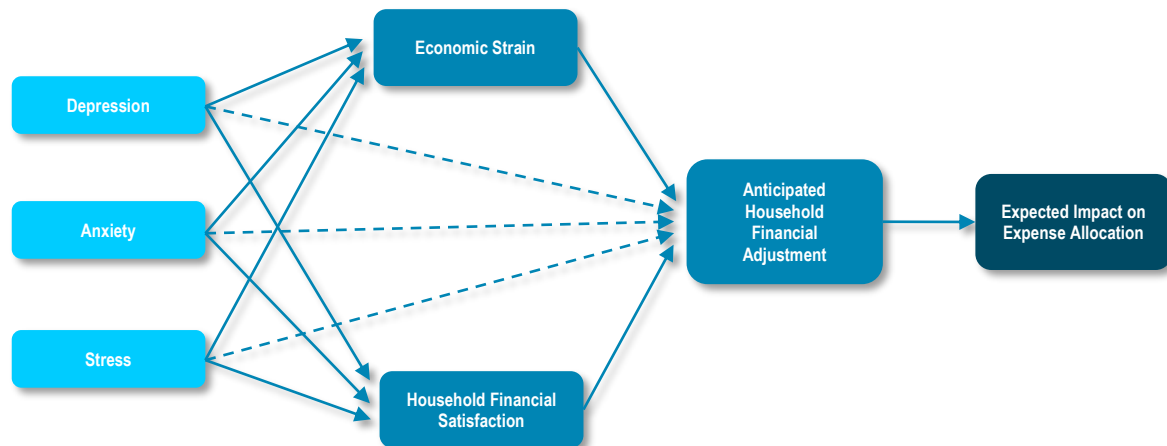
To ensure adequate statistical power, the required sample size was estimated a priori using G*Power, based on the specified significance level, effect size, and desired statistical power. The analysis indicated a minimum requirement of 302 participants. A total of 309 valid responses were obtained. Respondents were further classified into the B40, M40 and T20 income groups based on the official income classification issued by the Department of Statistics Malaysia (2020), allowing the analysis to reflect Malaysia's socioeconomic structure.

Mental health was measured using the Depression Anxiety Stress Scale (DASS-21) (Lovibond and Lovibond 1995). Economic strain was assessed using the Family Economic Strain Scale (Hilton and Devall 1997). Household financial satisfaction was measured using a single item adapted from Cantril's (1965) Self-Anchoring Scale with higher scores indicating greater perceived financial satisfaction. Anticipated household financial adjustment was measured using study-specific items capturing respondents' intentions to modify spending or financial commitments under financial pressure, rated on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Expected impact on expense allocation was measured using items assessing anticipated changes in future household spending across essential and non-essential categories, rated on a five-point Likert scale from 1 (very unlikely) to 5 (very likely) with higher scores indicating stronger expected impacts on expenditure decisions.

This study is theoretically grounded in the Family Stress Model, Stress Process Model, Behavioural Economics Theory, and Prospect Theory which together explain how mental distress interacts with economic perceptions and subsequently shapes household economic behaviour. The Family Stress Model suggests that mental health conditions and economic pressures within the household may disrupt individual functioning and influence household behavioural outcomes (Conger *et al.*, 2010). The Stress Process Model further explains that stressors may generate secondary strains that influence coping ability, subjective economic evaluations, and financial management behaviour (Pearlin *et al.* 1981). Behavioural Economics Theory supports the view that mental distress and cognitive burden may impair decision making and reduce long-term financial planning capacity (Thaler, 2016; Gathergood, 2012). Prospect Theory further explains that individuals experiencing uncertainty and mental

distress may become more sensitive to potential losses than gains which may subsequently influence household spending priorities and financial expectations (Kahneman and Tversky, 1979).

Figure 1. Conceptual Framework



The conceptual framework of this study provides an integrated basis for understanding the mechanisms linking mental health, economic strain, household financial satisfaction, anticipated household financial adjustment and expected impact on expense allocation, as illustrated in Figure 1. Within this framework, economic strain and household financial satisfaction are proposed to influence anticipated household financial adjustment. Anticipated household financial adjustment refers to the perceived likelihood that households will modify spending patterns or resource allocation in response to deteriorating mental health of the primary financial contributor. Consistent with the proposed framework, mental distress may impair decision-making by narrowing attention and encouraging short-term coping strategies over long-term financial planning (Thaler, 2016; Gathergood, 2012). Anticipated household financial adjustment is therefore expected to influence perceptions regarding future changes in expense allocation. This pathway is further supported by Prospect Theory, which suggests that heightened loss aversion under mental distress may lead households to prioritise immediate necessities while reducing discretionary or future-oriented expenditures (Kahneman and Tversky, 1979).

The conceptual framework adopts a parallel-sequential mediation structure. Economic strain and household financial satisfaction operate as mediating mechanisms linking mental health conditions to anticipated household financial adjustment while anticipated adjustment subsequently mediates the relationship between mental health conditions and the expected impact on expense allocation. This structure supports the view that mental health influences expected economic behaviour indirectly through changes in perceived economic strain and financial satisfaction, followed by changes in anticipated adjustment behaviour. The study's hypotheses (H1 to H7) were developed based on this integrated framework and specify both predictive and sequential mediation pathways linking mental health to expected impact on expense allocation.

Hypothesis 1 (H1): There are no significant predictive relationships between mental health, economic strain, household financial satisfaction, and anticipated household financial adjustment with the expected impact on expense allocation.

Hypothesis 2 (H2): There is a sequential mediation effect of depression on the expected impact on expense allocation through economic strain and anticipated household financial adjustment.

Hypothesis 3 (H3): There is a sequential mediation effect of depression on the expected impact on expense allocation through household financial satisfaction and anticipated household financial adjustment.

Hypothesis 4 (H4): There is a sequential mediation effect of anxiety on the expected impact on expense allocation through economic strain and anticipated household financial adjustment.

Hypothesis 5 (H5): There is a sequential mediation effect of anxiety on the expected impact on expense allocation through household financial satisfaction and anticipated household financial adjustment.

Hypothesis 6 (H6): There is a sequential mediation effect of stress on the expected impact on expense allocation through economic strain and anticipated household financial adjustment.

Hypothesis 7 (H7): There is a sequential mediation effect of stress on the expected impact on expense allocation through household financial satisfaction and anticipated household financial adjustment.

3. Research Results

The dataset consisted of 309 respondents and reflected broad demographic variation across Malaysia. Women represented 67.0% of the respondents while men represented 33.0%. In terms of age, 53.7% were between 18 and 26 years old while 46.3% were aged 27 years and above. Regarding ethnicity, 56.0% identified as Chinese, 24.9% as Malays, and 18.1% as Indigenous groups from Sabah and Sarawak. Indians accounted for 1.0% of the sample, reflecting their relatively smaller population share in Malaysia as reported by the Department of Statistics Malaysia (Department of Statistics Malaysia 2024). Educational attainment was relatively high, with 50.8% reporting a diploma or higher qualification and 49.2% holding pre-university or secondary education. The distribution of household income reflected Malaysia's national income classifications, where 35.3% belonged to the B40 category, 42.7% to the M40 category, and 22.0% to the T20 category. In terms of employment status, 67.3% of respondents were employed, while 32.7% were unemployed.

Table 1. Demographic Profile of Respondents

Demographic Factor		Frequency (N=309)	Percentage (%)
Age Group	Generation Z (18-26 years old)	166	53.7
	Older generation (27 years old and above)	143	46.3
Ethnic Group	Malay	77	24.9
	Chinese	173	56.0
	Indian	3	1.0
	Sabah and Sarawak indigenous	56	18.1
Educational Level	Pre-university and below	157	50.8
	Diploma and above	152	49.2
Household Monthly Income	B40 (below RM4,850)	109	35.3
	M40 (RM4,851 – RM10,960)	132	42.7
	T20 (RM10,961 and above)	68	22.0
Employment Status	Employed	208	67.3
	Unemployed	101	32.7

Hierarchical Multiple Regression Analysis. A hierarchical multiple regression analysis was conducted to examine the predictive role of anticipated household financial adjustment on the expected impact on expense allocation while controlling for mental health, economic strain, and household financial satisfaction. Predictors were entered sequentially across three models to assess incremental variance explained and changes in predictive strength, as summarized in Table 2. Model 1 included mental health variables, Model 2 added economic strain and household financial satisfaction and Model 3 introduced anticipated household financial adjustment. Diagnostic tests indicated no multicollinearity concerns, with tolerance values above 0.2 and variance inflation factors below 5. The Durbin-Watson statistic of 1.912 indicated independence of residuals and no autocorrelation.

Table 2. The Results of Hierarchical Multiple Regression Analysis

Model	R	R ²	Adjusted R ²	Std. Error	ΔR ²	Changes Statistics				Durbin-Watson
					ΔF	df1	df2	Sig. ΔF		
1	0.201 ^a	0.041	0.031	0.945	0.041	4.297	3	305	0.005	
2	0.269 ^b	0.073	0.057	0.932	0.032	5.232	2	303	0.006	
3	0.344 ^c	0.118	0.101	0.910	0.046	15.663	1	302	0.000	1.912

a. Predictors: (Constant), Depression, Anxiety, Stress.

b. Predictors: (Constant), Depression, Anxiety, Stress, Economic Strain, Household Financial Satisfaction.

c. Predictors: (Constant), Depression, Anxiety, Stress, Economic Strain, Household Financial Satisfaction, Anticipated Household Financial Adjustment.

d. Dependent Variable: Expected Impact on Expense Allocation.

Model		<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	Std. Error	Durbin-Watson
1	Regression	11.507	3	3.836	4.297	0.005 ^b
	Residual	272.262	305	0.893		
	Total	283.769	308			
2	Regression	20.596	5	4.119	4.742	< 0.001 ^c
	Residual	263.174	303	0.869		
	Total	183.769	308			
3	Regression	33.572	6302	5.595	6.754	< 0.001 ^d
	Residual	250.198	308	0.828		
	Total	283.769				

a. Dependent Variable: Expected Impact on Expense Allocation.

b. Predictors: (Constant), Depression, Anxiety, Stress.

c. Predictors: (Constant), Depression, Anxiety, Stress, Economic Strain, Household Financial Satisfaction.

d. Predictors: (Constant), Depression, Anxiety, Stress, Economic Strain, Household Financial Satisfaction, Anticipated Household Financial Adjustment.

In Model 1, depression, anxiety and stress were entered to examine whether mental health alone predicted expected expense allocation. The model was statistically significant, $F(3, 305) = 4.30$, $p = 0.005$, and explained 4.1% of the variance ($R^2 = 0.041$, $\Delta R^2 = 0.031$). However, none of the individual mental health variables were significant predictors. Depression showed a very small negative association with expected expense allocation, while anxiety and stress showed small positive associations, although all relationships were nonsignificant. These findings suggest that mental health variables alone had limited ability to explain respondents' expectations regarding future household expense allocation. The low R^2 and ΔR^2 values reflect weak predictive power which suggests that respondents' expectations regarding their future expense allocation were not strongly influenced by levels of depression, anxiety or stress.

Model 2 expanded the analysis by adding economic strain and household financial satisfaction to the predictors included in Model 1. The model remained statistically significant, $F(5, 303) = 4.74$, $p < 0.001$, and explained 7.3% of the variance ($R^2 = 0.073$, $\Delta R^2 = 0.057$). The increase in R^2 of 0.032 compared to Model 1 was statistically significant, indicating that the inclusion of economic strain and household financial satisfaction improved the model's explanatory power. Economic strain emerged as a significant positive predictor of expected expense allocation. Respondents with higher financial pressure were more likely to expect changes in how they would allocate expenses in the future. This suggests that perceived financial hardship played an important role in shaping expectations about future spending changes. Household financial satisfaction had a positive but nonsignificant relationship with expected expense allocation. Depression, anxiety and stress remained nonsignificant in this model. The moderate increase in R^2 and ΔR^2 illustrates that the financial perception variables improved the model, although they explained only a small proportion of the total variance. This shows that a substantial part of respondents' expectations about future expense changes remained unexplained at this stage of the analysis.

Model 3 introduced anticipated household financial adjustment to the predictors. This model produced the strongest results among the three models. Model 3 was statistically significant, $F(6, 302) = 6.75$, $p < 0.001$, and explained 11.8% of the variance ($R^2 = 0.118$, $\Delta R^2 = 0.101$). The R^2 increased by 0.045 from Model 2 and this increase was statistically significant which shows that anticipated household financial adjustment added meaningful explanatory value beyond the preceding variables. Anticipated household financial adjustment was the strongest and most influential predictor in the model. Respondents who expected to adjust their economic behaviour were more likely to anticipate changes in how they would allocate their expenses. Economic strain also remained a significant predictor, indicating that financial pressure had a consistent influence across all models. The higher R^2 and ΔR^2 values reflect a better-fitting model and stronger predictive capability. Therefore, Model 3 was the most informative model, showing that expectations about future financial adjustment provided the strongest explanation for anticipated changes in expense allocation.

Model	Standardized Coefficients		t-statistics	p-value	Collinearity Statistics	
	β	Std. Error			Tolerance	VIF
Model 1						
(Constant)		0.089	3.164	< 0.001		
Depression	-0.014	0.010	-0.121	0.904	0.246	4.072
Anxiety	0.202	0.011	1.734	0.084	0.232	4.314
Stress	0.029	0.005	0.489	0.0625	0.888	1.127
Model 2						
(Constant)		0.237	8.739	< 0.001		
Depression	-0.102	0.011	-0.878	0.381	0.227	4.409
Anxiety	0.202	0.011	1.761	0.079	0.232	4.316
Stress	0.032	0.005	0.549	0.584	0.886	1.129
Economic Strain	0.201	0.005	3.152	0.002	0.755	1.324
Household Financial Satisfaction	0.062	0.025	1.102	0.271	0.959	1.042
Model 3						
(Constant)		0.245	7.169	< 0.001		
Depression	-0.085	0.010	-0.746	0.456	0.226	4.416
Anxiety	0.196	0.011	1.746	0.082	0.232	4.317
Stress	0.036	0.005	0.632	0.528	0.885	1.130
Economic Strain	0.155	0.005	2.449	0.015	0.730	1.370
Household Financial Satisfaction	-0.027	0.026	-0.455	0.650	0.822	1.217
Anticipated Household Financial Adjustment	0.233	0.027	3.958	< 0.001	0.842	1.188

a. Dependent Variable: Expected Impact on Expense Allocation.

Parallel Sequential Mediation Analysis Using PLS-SEM. Partial least squares structural equation modelling was used to examine the direct and indirect pathways linking mental health to the expected impact on expense allocation through economic perceptions and adjustment processes. The analysis included parallel mediation through economic strain and household financial satisfaction as well as sequential mediation through anticipated household financial adjustment. The measurement model demonstrated strong reliability and validity. Composite reliability values ranged from 0.929 to 0.958 which reflected high internal consistency across all multi-item constructs. Average variance extracted (AVE) values ranged from 0.637 to 0.770 which supported adequate convergent validity. Most indicators showed loadings above the recommended threshold of 0.700.

During the model refinement process, several low-loading items were removed to improve construct quality. Deleted items included A1 from the anxiety construct and ES6 and ES13 from the economic strain construct because their loadings fell below acceptable standards. After these deletions, all remaining indicators loaded satisfactorily on their respective constructs which indicates that the constructs were adequately measured. Household financial satisfaction was measured by a single item and therefore internal reliability estimates were not applicable. Discriminant validity was assessed using the heterotrait-monotrait ratio (HTMT). All HTMT values were below the recommended threshold of 0.85 except for depression and anxiety which showed a strong correlation that was conceptually expected due to their close theoretical relationship. Overall, the measurement results support the adequacy of the reflective constructs for structural model evaluation.

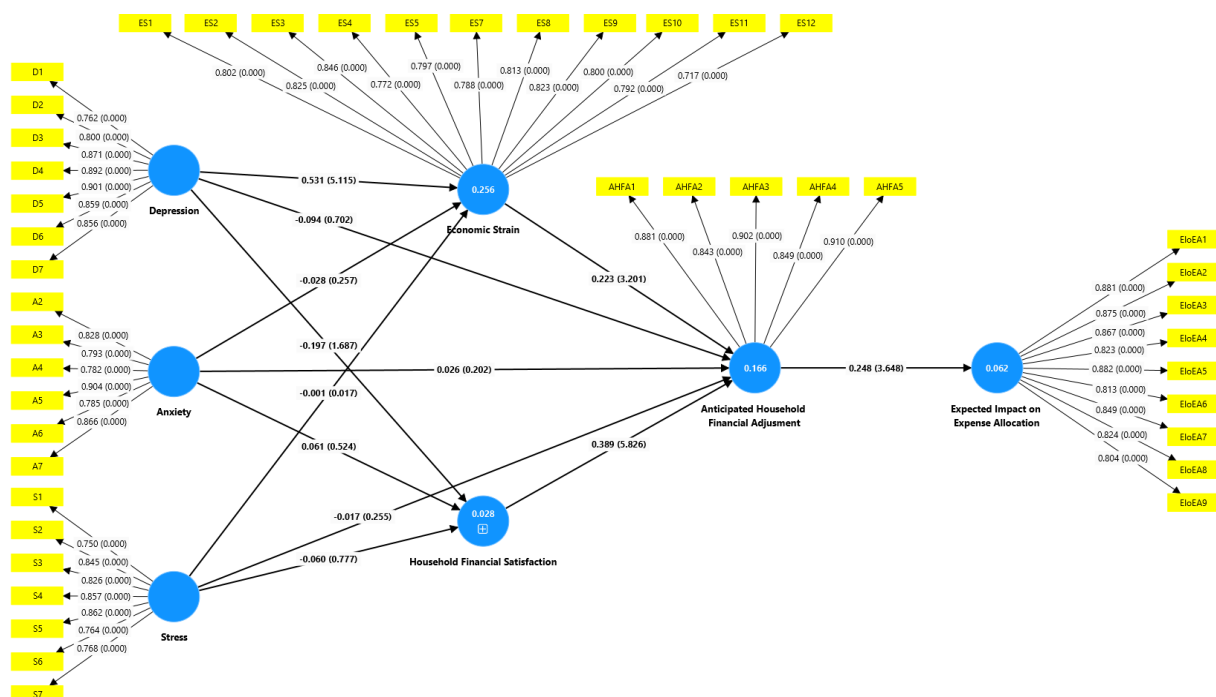
Table 3. Hypothesis Testing Indirect Effects

Hypothesis	Relationship	Std Beta	t-values	p-values	f ²	BCI 95% CI (LL-UL)
H2	D → ES → AHFA → EloEA	0.029	2.063	0.039	0.001	0.010-0.066
H3	D → HFS → AHFA → EloEA	-0.019	1.420	0.156	0.000	-0.054-0.001
H4	A → ES → AHFA → EloEA	-0.002	0.227	0.820	0.000	-0.016-0.012
H5	A → HFS → AHFA → EloEA	0.006	0.483	0.629	0.000	-0.014-0.035
H6	S → ES → AHFA → EloEA	0.000	0.015	0.988	0.000	-0.009-0.006
H7	S → HFS → AHFA → EloEA	-0.006	0.692	0.489	0.000	-0.020-0.014

Source: 95% confidence interval with a bootstrapping of 10,000. D – Depression, A – Anxiety, S – Stress, ES – Economic Strain, HFS – Household Financial Satisfaction, AHFA – Anticipated Household Financial Adjustment, EloEA – Expected Impact on Expense Allocation.

The mediation analysis further explained how mental health influenced the expected impact on expense allocation through economic perceptions and adjustment processes. The sequential indirect effect from depression to expected impact on expense allocation through economic strain and anticipated household financial adjustment was statistically significant ($\beta = 0.029$, $t = 2.063$, $p = 0.039$, 95% CI [0.010, 0.066], $f^2 = 0.001$). These results show that depressive symptoms influenced expectations about future expense allocation only when perceived financial pressure and anticipated household financial adjustment operated together as linked mechanisms. In contrast, the sequential indirect pathway from depression to the expected impact on expense allocation through household financial satisfaction and anticipated household financial adjustment was not statistically significant ($\beta = -0.019$, $t = 1.420$, $p = 0.156$, 95% CI [-0.054, 0.001], $f^2 < 0.001$). These findings indicate that household financial satisfaction did not function as a meaningful mechanism linking depression to financial expectations.

Figure 2. Path Analysis Result



All indirect effects involving anxiety and stress were also not statistically significant. The sequential pathway from anxiety to the expected impact on expense allocation through economic strain ($\beta = -0.002$, $t = 0.227$, $p = 0.820$, 95% CI [-0.016, 0.012], $f^2 < 0.001$) or household financial satisfaction ($\beta = 0.006$, $t = 0.483$, $p = 0.629$, 95% CI [-0.014, 0.035], $f^2 < 0.001$) and anticipated household financial adjustment was also not statistically significant. These findings reflect the lack of meaningful associations between anxiety and the mediating variables, which limited the development of indirect effects. Similarly, the sequential pathway from stress to the expected impact on

expense allocation through economic strain ($\beta = 0.000$, $t = 0.015$, $p = 0.998$, 95% CI [-0.009, 0.006], $f^2 < 0.001$) or household financial satisfaction ($\beta = -0.006$, $t = 0.692$, $p = 0.489$, 95% CI [-0.020, 0.014], $f^2 < 0.001$) and anticipated household financial adjustment was also not statistically significant. These results indicate that stress did not meaningfully influence the mediating variables and therefore did not affect financial expectations indirectly.

As a result, the mediation analysis showed that depression was the only mental health construct with a significant indirect effect, occurring through economic strain and anticipated household financial adjustment. All other indirect pathways were not statistically significant which indicates that these variables did not meaningfully engage the mediating mechanisms. The findings highlight the importance of economic pressure and anticipatory financial adjustment in linking mental health to expectations about future expense allocation.

4. Discussions

As shown in Table 2, the hierarchical regression result reveal a clear progression across the three models. Mental health variables explained only a small proportion of the variance in the expected impact on expense allocation and did not emerge as significant predictors. The inclusion of economic strain improved the explanatory power of the model and remained statistically significant across subsequent models. The largest improvement occurred after the introduction of anticipated household economic adjustment which emerged as the strongest and most meaningful predictor. This pattern suggests that expectations regarding changes in household spending are shaped mainly by economic pressure and forward-looking economic adjustment rather than by mental health indicators alone.

This result is consistent with the view that individuals engage in forward-looking economic thinking when forming expectations about household budgeting. Peetz *et al.* (2009) demonstrated that individuals regularly form informal expectations about future spending. These expectations are used in present economic decisions, although they are often biased and may underestimate actual expenditures. Schanbacher *et al.* (2024) reported that individuals with a stronger connection to their future selves are more likely to make financial decisions that align with long-term planning. These choices may involve reducing current expenditure or reallocating resources to prepare for future needs. This proactive orientation toward anticipated change is consistent with the present finding that anticipated adjustment strongly influences budgeting expectations.

Economic strain also played an important role in shaping expectations of adjustment. Respondents reporting higher economic strain were more likely to expect changes in their economic behaviour. McNair *et al.* (2024) found that financial pressure along with mental health variables significantly influences spending and borrowing behaviour, particularly during periods of financial instability. Similarly, Hamilton *et al.* (2019) observed that individuals experiencing financial constraints tend to shift spending from discretionary items to necessities. In contrast, household economic satisfaction did not function as a significant predictor of anticipated adjustment. This finding aligns with evidence showing that expectations about future economic change have a stronger influence on planning behaviour than evaluations of current satisfaction (West and Cull, 2020). Furthermore, although mental health variables did not directly predict anticipated changes in expense allocation, previous studies have shown that poor mental health can impair decision-making processes and reduce the cognitive resources available for financial planning (Ridley *et al.*, 2020). This suggested that mental health may influence economic expectations indirectly through increased economic strain or reduced cognitive capacity.

The partial least squares structural equation modelling results reported in Table 3 and Figure 2 provide further insight into the mechanisms underlying the relationships observed in the hierarchical regression analysis. While mental health variables did not show direct effects on the expected impact on expense allocation, the structural model revealed that depression was significantly associated with economic strain, which in turn influenced anticipated household economic adjustment. This pathway indicates that the influence of mental health on economic expectations indirectly through perceptions of economic pressure rather than through direct effects on spending expectations.

Depression was the only mental health construct that played a significant role in shaping how individuals perceived and planned economic decisions within the household context. Depression predicted higher levels of economic strain and this strain preceded both anticipated household financial adjustments and expected impact on expense allocation. This finding aligns with established descriptions of depression involving negative expectations, heightened concern about resource adequacy and more pessimistic appraisal of circumstances (Beck, 2008). These processes can increase perceived strain even when objective economic conditions remain stable. The Family Stress Model explains interactions between economic strain and mental health within household systems (Conger and Conger, 2002; Masarik and Conger, 2017; Neppl *et al.*, 2015). Although the model commonly positions economic strain as preceding mental health difficulties, the present findings align with the present findings support the reverse direction, in which depression increases perceptions of strain. Guan *et al.* (2022) and Ettman *et al.*

(2023) reported similar findings showing that depressive symptoms increased perceived economic difficulty. Studies with lower-income households shows similar sequential pathways where economic strain preceded economic adjustment and shaped future expectations (Prawitz *et al.*, 2013). The present findings are consistent with this literature and show that depression influenced expected impact on expense allocation through economic strain and anticipated household financial adjustment.

Anxiety and stress did not show statistically significant relationships with economic strain, household financial satisfaction or anticipated household financial adjustment. Guan *et al.* (2022) reported inconsistent associations between anxiety and economic behaviour, with findings differing across situations and domains. Anxiety often involves diffuse or abstract uncertainty rather than specific economic concerns, which may limit its influence on structured economic decisions. Stress generally reflects a short-term state of overload and is less associated with stable evaluative processes. During periods of economic instability, economic strain and income loss have been found to relate more strongly to depressive symptoms than to anxiety (Hertz-Palmor *et al.*, 2021). Experimental studies have also shown that stress does not consistently affect valuation or risk-related decisions (Porcelli and Delgado, 2017). Research in workplace settings similarly found that economic stress was not consistently associated with key outcomes after demographic and income factors were controlled for (Kim and Garman, 2003). These findings are consistent with the present study, in which anxiety and stress did not significantly influence respondents' economic perceptions or expectations.

Conclusions

Given these insights, household financial satisfaction did not function as a mediator. It appears to reflect a relatively stable evaluation of individual's economic condition rather than a mechanism that is sensitive to short-term changes in mental health. In contrast, economic strain reflected a more immediate evaluation of individuals' situations and was the main mechanism through which mental health influenced expectations. The findings suggest a pathway in which depression increases economic strain, which then leads to anticipated household financial adjustment and expected impact on expense allocation, while anxiety and stress did not operate through this pathway. These results indicate that mental health does not influence economic behaviour uniformly, but through specific mental-economic mechanisms.

The findings position mental health, particularly depression, as an upstream condition associated with higher economic strain and subsequent anticipated household financial adjustment. This pattern extends household stress perspectives by suggesting that mental health can precede and amplify perceived economic pressure, rather than functioning only as a consequence of economic hardship. From a practical perspective, the results suggest that efforts to enhance household economic resilience may benefit from integrating mental health support within economic assistance and welfare systems. This integration may help address perceived economic vulnerability and psychological needs simultaneously. The findings also highlight the importance of targeted support for economically vulnerable households and interventions that strengthen proactive adjustment capacity, including support for essential expenditure management and long-term economic planning.

Several considerations suggest caution in interpreting these findings. Mental health was measured using depression, anxiety and stress, which may not capture the full range of psychological resources or protective factors influencing economic perceptions and adjustment behaviour. The Malaysian context may also influence responses through stigma and household norms. These factors may affect reporting and subjective evaluations such as household financial satisfaction. In addition, the explanatory power of the models was modest. This reflects the complexity of household economic behaviour and the influence of factors beyond those included in the analytical framework. Future research may strengthen understanding by incorporating broader mental health capacities, behavioural characteristics and economic factors.

Declarations

Acknowledgments: The authors would like to acknowledge the financial support from the High Impact Research Grant (UNI/F05/VC-HIRG/85521/P13-03/2022) and the Faculty of Economics and Business, Universiti Malaysia Sarawak. The research was part of the first author's thesis.

Credit Authorship Contribution Statement

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Declaration of Competing Interest: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Declaration of Use of Generative AI and AI-assisted Technologies: The authors declare that they have not used generative AI and AI-assisted technologies during the preparation of this paper.

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