Mental Health and Economic Belief Updating

Ashani Abayasekara David Johnston Rachel Knott

Monash University

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Motivation

- People now have unprecedented access to economic information, but often use only a small fraction of it
- Making sound decisions requires acquiring, processing, and acting on information which can be difficult and overwhelming
- As a result, people often make suboptimal choices, even when relevant information is available
- Examples:
 - Insurance: individuals frequently choose high-premium plans with only modest deductible reductions (Handel, 2013; Bhargava et al., 2017)
 - Medication: many consumers pay more for branded drugs over equivalent generics, despite clear labeling (Bronnenberg et al., 2015)

Background

- Sational Inattention (Sims, 2003; Gabaix, 2014; Mac´kowiak et al., 2023):
 - Individuals face cognitive costs when processing information and therefore choose to focus only on select signals
 - Optimally allocate limited attention to information that is most valuable
 - This can lead to slow or incomplete responses to new information, especially in complex or noisy environments
- Mental Gaps (Bordalo et al., 2012; Schwartzstein, 2014):
 - Individuals form distorted beliefs due to simplified mental models or biased interpretations
 - Distortions persist even when information is available, as people may misunderstand or misapply it

Background

- Mental health problems may impact rational inattention and mental gaps:
 - Cognitive constraints amplified depression and anxiety can impair concentration and memory, increasing cost of processing information
 - Selective attention anxiety can cause heightened attention to perceived threats and neglect of neutral or positive signals
 - Distorted belief updating depression is associated with pessimistic biases, contributing to persistent mental gaps
 - Reduced motivation to acquire information apathy and low energy reduce information-seeking behaviour, reinforcing inattention
- Important issue given high and growing prevalence and large economic effects associated with mental ill-health

- Explore whether mental health (MH) affects how people update their perceived job security after the unemployment rate (UR) changes
- Explore several mechanisms for differential updating by MH
 - A relevant case study because unemployment is highly salient widely reported, frequently discussed, and directly tied to personal and financial security

Related literature

- O Psychology literature:
 - Depressed individuals show a lack of biased updating, changing beliefs similarly following desirable or undesirable information, unlike others (Korn et al., 2014; Hobbs et al., 2022)
- Responses to financial incentives by MH status:
 - Individuals in good MH more likely to respond when offered a higher financial incentive, but those in poor MH indifferent to increased incentives (Kung et al., 2018)
- Selief/expectation updating following information treatments:
 - Higher belief updating among individuals with greater perceived benefits (or lower costs) of information processing (Armantier et al., 2016; Cavallo et al., 2017; Armona, et al., 2019; Coibion, et al., 2020; Fuster et al. 2020; Roth & Wohlfart, 2020)

Part 1 Data

- 19 waves of HILDA Survey data (2001–2019)
- Outcome variables: job security satisfaction, perceived chance of losing job, degree of worry about future of job
- Explanatory variable: past 6-month average SA4 level UR
- Mental health: SF-36 to measure MH at beginning of sample period:
 - Average score during first 3 waves of HILDA participation Distribution
 - Poor MH: average score in 1st quintile
 - Fair MH: average score in 2nd + 3rd quintiles MH persistence
- Sample: individuals aged 25–65; employed for \geq 5 waves; non-missing MH scores in \geq 2 of first 3 waves <code>Summary stats</code>

Part 1 Methods

• Estimate relationship between UR and job security (JS) for individual *i* in region *r* (SA4) in year *t* using fixed-effects linear regression model and Poisson QMLE:

$$JS_{irt} = \alpha + \beta UR_{rt} + \gamma_i + \gamma_r + \gamma_t + \epsilon_{irt} \tag{1}$$

$$E[JS_{irt}|X] = exp(\beta UR_{rt} + \gamma_i + \gamma_r + \gamma_t)$$
(2)

- The models include individual, SA4 and year fixed-effects
- Estimate without first 3 waves (when MH is measured)
- $\bullet\,$ Estimate separately by MH status and compare estimates of $\beta\,$

Part 1 Results

	Poor MH	Fair MH	Difference
	(1)	(2)	(3)=(2)-(1)
A: Job security satisfaction (0-10)			
Unemployment rate	-0.000	-0.031***	-0.031
	(0.017)	(0.011)	(0.020)
Sample mean	7.421	7.799	
Observations	13,249	27,872	
Individuals	1,647	3,288	
B: Perceived chance of losing job (0-100)			
Unemployment rate	-0.004	0.031***	0.035*
	(0.015)	(0.011)	(0.016)
Sample mean	13.071	10.831	
Observations	12,336	25,943	
Individuals	1,457	2,675	
C: I worry about the future of my job (1-7)			
Unemployment rate	0.003	0.039***	0.036**
	(0.014)	(0.010)	(0.017)
Sample mean	3.572	3.122	
Observations	13,048	27,499	
Individuals	1,647	3,288	

Part 1 Robustness

- UR weakly associated with perceived job insecurity and job loss expectations for those with poor MH (consistent with theory)
- Similar results when:
 - Poor MH compared against all other quintiles (fair + good MH) Results
 - Alternative MH measures: Results
 - Always in bottom 40% in first 3 waves
 - Measured using 5-year hold-out sample
 - Depression and anxiety-focused items
 - MH9 score (MH + vitality domains of SF-36)
 - Different UR measures: 1-month, 3-month and 9-month average rates Results

Part 2 Potential mechanisms

- Why do people with poor mental health update less in response to unemployment news?
- Possibilities include:
 - Lower attention to information
 - 2 Less specific economic knowledge
 - O Different interpretation of the same information
- We designed a survey to explore these possibilities
- Conducted via Qualtrics in Nov and Dec 2023 with 6,001 Australian adults, sampled to meet quotas by gender, age, and employment status

Part 2 Data

Online survey sample by gender, age, and employment status

	Ma	ales	Females		
	25-39 years	40-65 years	25-39 years	40-65 years	
Employed full-time	907 [0.81]	1,319 [0.70]	652 [0.54]	857 [0.48]	
Employed part-time	124 [0.11]	349 [0.19]	361 [0.30]	454 [0.25]	
Nonemployed	87 [0.08]	214 [0.11]	194 [0.16]	485 [0.27]	
Total	1,118	1,882	1,207	1,796	

• 3 key components:

- Measures of attentiveness to survey questions
- 2 Tests of factual knowledge about economic conditions
- Sandomised vignettes describing hypothetical workplace scenarios
- Also collected demographic, socioeconomic, and health information Summary stats

Part 2 Data – Attentiveness

- Theory suggests attention to information declines as processing costs increase.
- If these costs are higher for individuals with MH issues, they may be less attentive to information provided
- Online surveys often use tools to detect or prevent inattention.
- Main attention check: Instructed Response Item (IRI), which asks respondents to select a specific answer from a list
- We adapt this from Stantcheva (2023), who used a similar approach in a survey on trade policy perceptions

Part 2 Data – Attentiveness

When a big news story breaks people often go online to get up-to-date details on what is going on. We want to know which websites people trust to get this information. We also want to know if people are paying attention to the survey questions. To show that you've read this much, please select theaustralian.com.au and theguardian.com as your two answers.

- news.com.au
- abc.net.au
- theaustralian.com.au
- theguardian.com
- 9news.com.au
- None of the above
- 49% of respondents answered correctly
- Passing by chance unlikely, as the 2 websites hold clearly opposing views
- IRIs offer only a snapshot of attentiveness leading to misclassification. We therefore include additional attention checks Other IRI

Part 2 Data – Attentiveness

• Estimate a probit model to test for differences by MH in likelihood of passing attention checks

- Cols (2) & (3) add extra checks to pass
- Similar results when adding cognitive skills, knowledge, and economic preferences

	Main attention check	Add	itional checks
		Other IRI	Other IRI & timing
	(1)	(2)	(3)
Std mental health score	0.048***	0.061***	0.058***
	(0.017)	(0.017)	(0.017)
Age	0.003	0.004**	0.005***
-	(0.002)	(0.002)	(0.002)
Men	-0.120***	-0.170***	-0.181***
	(0.033)	(0.032)	(0.032)
Postgraduate	0.080	0.070	0.047
-	(0.055)	(0.053)	(0.053)
Bachelors/Diploma	0.142***	0.130***	0.131***
, ·	(0.047)	(0.046)	(0.046)
Vocational gualification	-0.047	-0.050	-0.048
·	(0.051)	(0.050)	(0.050)
Employed	-0.217***	-0.234***	-0.232***
	(0.050)	(0.050)	(0.050)
Unemployed	-0.044	-0.051	-0.045
	(0.092)	(0.090)	(0.090)
Physical health condition	-0.054	-0.060 [*]	-0.058*
-	(0.036)	(0.035)	(0.035)
Sample mean	0.490	0.473	0.470
Observations	5,993	6,343	6,343

Determinants of attention to survey questions

Part 2 Data – Knowledge

- Tested knowledge of current unemployment, interest, and inflation rates
- Followed suggested practices to discourage looking up answers:
 - Clear instructions emphasised importance of using own knowledge
 - Measured response times to flag possible cheating

The next few questions aim to measure your knowledge of some economic issues and your expectations about the future. **Please answer these based on your current knowledge, without looking up any answers.** We are simply trying to understand what you know or do not know about some selected topics, and wrong answers are just as valuable as right ones. You can also select the option "Uncertain/Don't know" if you are unsure.

Part 2 Data – Knowledge

What is Australia's <u>current unemployment rate</u> (%) in the most recent month? (Please answer based on your current knowledge, without looking up the answer. You can select the option "Uncertain/Don't know" if you are unsure).



What is the <u>current official interest rate</u> (%) as determined by the Reserve Bank of Australia (RBA)? (Please answer based on your current knowledge, without looking up the answer. You can select the option "Uncertain/Don't know" if you are unsure).



What is Australia's <u>current consumer price inflation rate</u> (%), as measured by the Consumer Price Index (CPI), in the most recent quarter? (Please answer based on your current knowledge, without looking up the answer. You can select the option "Uncertain/Don't know" if you are unsure).



Part 2 Results – Knowledge

	Correct	unemployment rate	Number of questions answered correctly
	Full sample	Excluding slowest 25%	
	(1)	(2)	(3)
Std mental health score	0.041**	0.061***	0.059***
	(0.019)	(0.022)	(0.016)
Age	0.014***	0.017***	0.018***
	(0.002)	(0.002)	(0.002)
Men	0.437***	0.489***	0.470***
	(0.036)	(0.043)	(0.030)
Postgraduate	0.265***	0.227***	0.350***
	(0.061)	(0.073)	(0.050)
Bachelors/Diploma	0.153***	0.121*	0.245***
	(0.053)	(0.063)	(0.044)
Vocational qualification	-0.008	0.013	0.003
	(0.057)	(0.069)	(0.047)
Economics/Management post-school	0.181***	0.177***	0.242***
	(0.043)	(0.051)	(0.037)
Employed	0.047	0.127*	0.044
	(0.055)	(0.068)	(0.045)
Unemployed	-0.062	0.048	-0.104
	(0.106)	(0.129)	(0.090)
Physical health condition	-0.011	-0.011	-0.020
	(0.039)	(0.047)	(0.032)
Sample mean	0.271	0.232	0.759
Observations	5,992	4,493	5,992

Determinants of economic knowledge



Part 2 Data – Vignettes

- Test whether MH differences in perceptions persist after directly providing UR information through vignettes
- Various features describing a hypothetical person:

Attribute	Values
Name	Mix of 40 male and 40 female names of different ethnicities
Age	25–65 years
Tenure	6 months, 1 year, 3 years, 10 years
Contract type	Permanent or casual
Local UR Hiring/retrenchment	2% lower, $1%$ lower, no change, $2%$ higher, $4%$ higher, $6%$ higher 2–20 people or no staff changes

- Each vignette draws random values for each attribute, independent of other attribute values
- Respondents asked to evaluate job security of 8 randomly assigned vignettes

Andrea is 55 years old and has been employed with the same company for 3 years on a permanent contract. The current unemployment rate where Andrea lives is 4%, 1% lower than usual. Her company has recently added 3 new people to its existing staff of 100.

How secure do you think Andrea's job is?

Lowe	st security	/						ł	Highest se	ecurity
0	1	2	3	4	5	6	7	8	9	10

Part 2 Method – Vignettes

• Fixed-effects linear regression model, accounting for vignette-invariant individual-specific factors:

$$JS_{iv} = \alpha + \beta_1 UR_{iv} + X'_{iv}\beta_2 + \gamma_i + \gamma_v + \epsilon_{iv}$$
(3)

 JS_{iv} : Job security rating of individual *i* wrt vignette *v*

- UR_{iv} : Unemployment rate specified in vignette v evaluated by individual i
- X_{iv} : Vector of other vignette characteristics presented to individual i
- γ_i : Individual fixed-effects
- γ_v : Vignette-order fixed-effects
 - Estimate regressions separately by MH groups (similar to HILDA analysis)

Part 2 Results - Vignettes

	Full sample with fair MH	Full sample Full sample A ith fair MH with poor MH		Inattentive sample with poor MH
	(1)	(2)	(3)	(4)
Unemployment rate	-0.124***	-0.101***	-0.124***	-0.082***
	(0.005)	(0.008)	(0.011)	(0.011)
Sample mean	5.895	5.662	5.730	5.602
Observations	20,784	9,952	4,688	5,264
Individuals	2,598	1,244	586	658

- Larger negative effect of UR among those with fair MH (Cols 1 & 2)
- $\bullet\,$ When information is provided and attention is high, response magnitudes do not differ by MH (Cols 1 & 3)
- But among the inattentive, mental health differences in perception updating persist (Cols 1 & 4)
- Highlights attention as a key mechanism explaining belief updating differences 💷

Conclusion

- We examine whether job security perceptions respond differently to UR changes by MH status
- Using HILDA data, we find a clear MH gradient: individuals in poor MH do not adjust their perceptions in response to UR changes, unlike others
- Survey evidence points to inattention as a key mechanism:
 - Those with poor MH are less attentive to both survey content and economic conditions
 - Differences in updating disappear when unemployment information is directly provided *and* attended to
- Results are consistent with theories of Rational Inattention and Mental Gaps
- Highlights how mental health disparities can shape economic decision-making and labour market behaviour

Thank you!

ashani.abayasekara1@monash.edu

Appendix: Summary statistics of HILDA sample

	Obs.	Mean	Std. dev.	Min	Max
A. Demographic and employment variables					
Age	63,935	44.94	9.64	28	65
Male	63,935	0.488	0.5	0	1
Bachelor's & above	63,935	0.362	0.481	0	1
Private sector	63,935	0.671	0.47	0	1
Permanent contract	63,935	0.782	0.413	0	1
Job tenure	63,935	11.48	10.23	0.019	53
B. Job security perceptions & UR					
Job security satisfaction	63,935	7.939	1.987	0	10
% chance of losing current job	63,935	10.20	19.55	0	100
I worry about the future of my job	63,935	3.03	1.79	1	7
Past 6-month UR	63,935	5.34	1.64	0.95	15.67
C. Mental health (avg values of 1st 3 waves)					
PCA MH score	24,864	0.044	1.394	-6.59	2.57
MH9 score	24,864	69.01	13.43	10.37	100
Share always in bottom 40%	24,864	0.21	0.407	0	1

Appendix: Sample means by MH status

	Poor MH	Fair MH	Mean difference	Good MH	Mean difference
	Q1	Q2&Q3	[(1)-(2)]	Q4&Q5	[(1)-(4)]
	(1)	(2)	(3)	(4)	(5)
A: Mental health					
Mental health score	-2.202	-0.05	-2.152***	1.24	-3.441***
B. Job security perceptions					
Job security satisfaction	7.421	7.799	-0.377***	8.192	-0.771***
% change of losing current job	13.07	10.83	2.240***	8.514	4.558***
I worry about the future of my job	3.572	3.122	0.450***	2.691	0.881***
C. Job characteristics					
Private sector	0.701	0.689	0.013**	0.688	0.013*
Permanent contract	0.737	0.780	-0.043**	0.795	-0.059***
Tenure	10.381	11.303	-0.923***	12.040	-1.658***

HILDA Survey MH score distribution



Appendix: Poor and fair MH shares overtime



Appendix: Poor vs better MH

	Poor MH (Q1)	Better MH (Q2–Q5)
A: Job security satisfaction (0-10)		
Unemployment rate	-0.000	-0.027***
	(0.017)	(0.007)
Observations	13,249	56,265
Individuals	1,647	6,641
B: Perceived chance of losing job (0-100)		
Unemployment rate	-0.004	0.021**
	(0.015)	(0.008)
Observations	12,336	52,644
Individuals	1,457	5,111
C: I worry about the future of my job (1-7)		
Unemployment rate	0.003	0.027***
	(0.014)	(0.007)
Observations	13,048	55,599
Individuals	1,647	6,641

Appendix: Different MH measures

	Job security satisfaction		Perceived ri	sk of job loss	Worry about future of job		
	Poor MH	Fair MH	Poor MH	Fair MH	Poor MH	Fair MH	
	(1)	(2)	(3)	(4)	(5)	(6)	
A. MH9 average score							
Unemployment rate	-0.011	-0.023**	0.004	0.032***	0.004	0.036***	
	(0.017)	(0.010)	(0.015)	(0.011)	(0.015)	(0.010)	
Observations	13,716	27,634	12,751	25,792	13,504	27,292	
Number of persons	1,670	3,305	1,458	2,707	1,670	3,305	
B. Share always in bottom 40%							
Unemployment rate	-0.007	-0.025***	0.001	0.019**	0.023	0.022***	
	(0.016)	(0.007)	(0.014)	(0.008)	(0.014)	(0.007)	
Observations	14,167	55,347	13,139	51,841	13,932	54,715	
Number of persons	1,737	6,551	1,534	5,034	1,737	6,551	
C. 5-year hold-out sample							
Unemployment rate	-0.002	-0.020	-0.014	0.037***	0.010	0.042***	
	(0.019)	(0.013)	(0.017)	(0.013)	(0.016)	(0.011)	
Observations	10,288	21,839	9,497	20,132	10,137	21,525	
Number of persons	1,559	3,099	1,237	2,258	1,558	3,093	

Appendix: Different MH measures

	Depre	Depressed Anxiou		ous
	No	Yes	No	Yes
	(1)	(2)	(3)	(4)
A. Job security satisfaction				
Unemployment rate	-0.020***	-0.028	-0.024***	-0.015
	(0.006)	(0.019)	(0.007)	(0.012)
Observations	69,358	11,819	58,361	22,816
Individuals	8,518	1,515	7,130	2,903
B: Percent chance of losing job (0-100)				
Unemployment rate	0.017**	0.004	0.018**	0.009
	(0.008)	(0.017)	(0.008)	(0.013)
Observations	45,254	8,277	38,025	15,506
Individuals	5,546	1,067	4,623	1,990
C: I worry about the future of my job (1-7)				
Unemployment rate	0.021***	0.010	0.026***	0.006
	(0.006)	(0.016)	(0.006)	(0.011)
Observations	67,934	11,487	57,222	22,199
Individuals	8,482	1,510	7,098	2,894

Appendix: Different UR measures

	Job security satisfaction Perceived ris		sk of job loss	Worry abou	t future of job	
	Poor MH	Fair MH	Poor MH	Fair MH	Poor MH	Fair MH
	(1)	(2)	(3)	(4)	(5)	(6)
A. 1-month past average UR						
Unemployment rate	-0.003	-0.012	0.003	0.017**	0.003	0.020***
	(0.012)	(0.007)	(0.010)	(0.008)	(0.010)	(0.007)
B. 3-month past average UR						
Unemployment rate	0.000	-0.019**	0.002	0.025***	-0.002	0.031***
	(0.015)	(0.009)	(0.013)	(0.009)	(0.013)	(0.009)
C. 9-month past average UR						
Unemployment rate	-0.001	-0.037***	-0.011	0.035***	0.003	0.044***
	(0.018)	(0.012)	(0.016)	(0.012)	(0.016)	(0.011)
D. UR categories						
$3\% < UR \le 6\%$	0.147*	-0.094*	-0.112	0.033	0.051	0.032
	(0.083)	(0.051)	(0.071)	(0.060)	(0.079)	(0.049)
$6\% < UR \le 9\%$	0.169*	-0.170***	-0.157**	0.115*	0.002	0.135**
	(0.094)	(0.059)	(0.080)	(0.068)	(0.086)	(0.056)
UR>9%	0.132	-0.092	-0.216	0.026	-0.040	0.189*
	(0.165)	(0.099)	(0.149)	(0.118)	(0.142)	(0.097)
Observations	13,249	27,872	12,336	25,943	13,048	27,499
Individuals	1,647	3,288	1,457	2,675	1,647	3,288

Appendix: Part 1 Robustness

- Differences in worker characteristics or job types could potentially explain weaker updating among those with poor MH
 - E.g. If people with poor MH tend to have more secure jobs, their job insecurity may be less sensitive to UR changes, even without impaired attention or processing
- Individuals with poor MH tend to be younger, female and lower educated, with casual, low tenure, and private sector jobs (see Table)
- But, people with these characteristics and job types tend to have stronger relationships, not weaker
- Unlikely that zero coefficient for poor MH group is driven by 'selection effects'

Appendix: Part 1 Robustness

UR effects on job security satisfaction by job and demographic characteristics

	Sample means (Shares in each subgroup)		Unemployme for sub	ent estimate groups
	Poor MH	Fair MH		
	(1)	(2)	(3)	(4)
A: Job characteristics				
Private sector	0.701	0.689	-0.028**	(0.011)
Public sector	0.299	0.311	-0.003	(0.015)
Permanent contract	0.737	0.780	-0.021**	(0.010)
Fixed-term/casual contract	0.263	0.220	-0.028	(0.023)
High job tenure	0.534	0.610	-0.020*	(0.012)
Low job tenure	0.466	0.390	-0.020	(0.014)
B: Demographic characteristics				
Men	0.411	0.452	-0.040***	(0.013)
Women	0.589	0.548	-0.003	(0.012)
25–34 years old	0.178	0.171	-0.044*	(0.023)
35–49 years old	0.470	0.466	-0.018	(0.013)
50–65 years old	0.352	0.363	-0.009	(0.016)
Bachelor's degree and above	0.349	0.356	-0.016	(0.018)
Diploma and below	0.651	0.644	-0.023**	(0.011)

Summary statistics: Survey sample

	Obs	Mean	Std. Dev.	Min	Max
	(1)	(2)	(3)	(4)	(5)
A: Demographic variables					
Age	6,001	45.20	11.14	25	65
Men	6,001	0.500	0.500	0	1
Bachelor's degree and above	5,998	0.451	0.498	0	1
B: Employment					
Employed	6,001	0.820	0.385	0	1
Private sector	4,915	0.742	0.437	0	1
Permanent contract	4,571	0.691	0.462	0	1
Job tenure	4,917	8.598	8.971	0	50
Own job security satisfaction	4,918	7.441	2.184	0	10
Job security ratings of vignettes	48,008	5.886	2.310	0	10
C: Mental health					
MH9 score	6,001	60.09	20.01	0	100
SF-12v2 mental health score	5,996	39.72	13.29	0	69.47

Online survey MH9 score distribution



Appendix: Part 2 Data - Knowledge



- Create outcome variables reflecting 'correct' answers, allowing for a 0.5pp margin of error
- Also estimate an ordered probit model where the outcome variable represents the number of questions answered correctly

Back

Additional attention checks: Vignette instructions

To answer this section, <u>please read the instructions below carefully</u>. The time taken to read and answer these questions will be monitored. Responding without spending adequate time may result in your responses being flagged for low quality and you may be screened out.

We will now ask you to evaluate the **job security** of hypothetical people based on short descriptions of their work situation. We will present various features describing their contract type, the length of time they have worked for their company, the current situation at their company in terms of staff hiring or retrenchment, and the unemployment rate in the area where they live.

We will vary these features across the hypothetical people, presenting **eight different scenarios** for you to evaluate. Please evaluate each person's job security on a scale of 0-10. The more secure you think each person's job is, the higher the number you should pick. The less secure, the lower the number.

To indicate your rating on the slider, simply click/select a number. If you need to change your selection, you can drag the curser to any number of your choice after the initial click/selection.

• Spent < time than 75th percentile on reading instructions and < 5th percentile on evaluating 1st vignette

Additional attention checks: Second IRI

How much of the time during the past 4 weeks:

			A good bit of the		A little of the	
	All of the time	Most of the time	time	Some of the time	time	None of the time
Did you feel full of life?	0	0	0	0	0	0
Have you been a nervous person?	0	0	0	0	0	0
Have you felt so down in the dumps that nothing could cheer you up?	0	0	0	0	0	0
Have you felt calm and peaceful?	0	0	0	0	0	0
Did you have a lot of energy?	0	0	0	0	0	0
Have you felt down?	0	0	0	0	0	0
Did you feel worn out?	0	0	0	0	0	0
Have you been a happy person?	0	0	0	0	0	0
Did you feel tired?	0	0	0	0	0	0
For this row, just select "Most of the time"	0	0	0	0	0	0

• Excluded respondents who:

- Selected a response other than "Most of the time" in the last row
- Exhibited straight-lining behaviour

Appendix: Relationship between attention checks

Table 1: Relationship between main survey attention checks and other attention/quality checks

	(1)	(2)
Health matrix IRI	-1.675***	
	(0.189)	
Time to read instructions		-1.184***
		(0.130)
Sample mean	0.022	0.026
Observations	6,358	6,420

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Appendix: Mental health and economic knowledge

	Inflation rate	Interest rate
	(1)	(2)
Std mental health score	0.043**	0.065***
	(0.021)	(0.018)
Age	0.010***	0.019***
•	(0.002)	(0.002)
Men	0.467***	0.322***
	(0.041)	(0.035)
Postgraduate	0.339***	0.296***
•	(0.068)	(0.059)
Bachelors/Diploma	0.233***	0.242***
, ·	(0.061)	(0.052)
Vocational qualification	-0.055	0.036
	(0.068)	(0.056)
Economics/Management post-school	0.219***	0.225***
,	(0.047)	(0.042)
Employed	0.054	0.005
	(0.063)	(0.053)
Unemployed	-0.112	-0.105
	(0.126)	(0.101)
Physical health condition	0.000	-0.021
	(0.044)	(0.038)
Sample mean	0.162	0.326
Observations	5,992	5,992

Determinants of knowledge of inflation and interest rates



Appendix: Vignette characteristics and job security ratings

	Full sample with fair MH	Full sample with poor MH	Attentive sample with poor MH	Inattentive sample with poor MH
	(1)	(2)	(3)	(4)
Unemployment rate	-0.124***	-0.101***	-0.124***	-0.082***
	(0.005)	(0.008)	(0.011)	(0.011)
Retrenched	-0.150***	-0.149***	-0.154***	-0.144***
	(0.003)	(0.004)	(0.005)	(0.006)
Hired	0.023***	0.012***	0.021***	0.004
	(0.002)	(0.004)	(0.005)	(0.005)
Tenure	0.100***	0.115***	0.127***	0.105***
	(0.004)	(0.006)	(0.009)	(0.009)
Permanent contract	1.162***	1.188***	1.367***	1.035***
	(0.032)	(0.047)	(0.065)	(0.066)
Male name	-0.036*	0.016	0.005	0.023
	(0.022)	(0.032)	(0.042)	(0.047)
Age	-0.017***	-0.018***	-0.019***	-0.016***
	(0.001)	(0.002)	(0.003)	(0.003)
Sample mean	5.895	5.662	5.730	5.602
Observations	20,784	9,952	4,688	5,264
Individuals	2,598	1,244	586	658

Effects of vignette characteristics on job security ratings

Appendix: Different MH measures

	Poor MH	Better MH	Poor MH	Better MH
	Condition exists	No condition	Treatment	No treatment
	(1)	(2)	(3)	(4)
Unemployment rate (% changes)	-0.109***	-0.123***	-0.111***	-0.120***
	(0.005)	(0.004)	(0.007)	(0.004)
Retrenched (0 or 2-20 ppl)	-0.154***	-0.147***	-0.150***	-0.150***
	(0.003)	(0.002)	(0.004)	(0.002)
Hired (0 or 2-20 ppl)	0.017***	0.025***	0.020***	0.023***
	(0.003)	(0.002)	(0.003)	(0.002)
Tenure (0.5, 1, 3 or 10 years)	0.114***	0.098***	0.114***	0.102***
	(0.004)	(0.004)	(0.006)	(0.003)
Permanent contract	1.184***	1.116***	1.230***	1.119***
	(0.034)	(0.027)	(0.045)	(0.024)
Male name	0.003	-0.001	-0.024	0.006
	(0.024)	(0.019)	(0.031)	(0.017)
Age (25-65 yrs)	-0.018***	-0.017***	-0.017***	-0.018***
	(0.001)	(0.001)	(0.002)	(0.001)
Observations	18,616	28,184	10,472	36,128
Individuals	2,327	3,523	1,309	4,516

Effects of vignette characteristics on job security ratings