Does Perceived Job Insecurity Affect Mental Health? Evidence from the 2021 Chinese General Social Survey

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Introduction

With rising global competition, industrial shifts, and economic recessions, an increasing number of employees face concerns about layoffs. The instability and unpredictability of labor markets impose significant psychological burdens on workers, often resulting in adverse health outcomes linked to job insecurity. Understanding the relationship between job insecurity and health is crucial for informing interventions aimed at improving workers' well-being. Previous research has established a connection between perceived job insecurity and poor health outcomes. After accounting for demographic, socioeconomic, and job characteristics, as well as prior health conditions, perceived job insecurity was found associated with deteriorating health among U.S. workers (Burgard et al. 2009). Similarly, McDonough (2000), using a national sample of Canadian adults, reported that high levels of job insecurity lead to lower self-rated health, increased psychological distress, and increased use of medication for symptom relief.

This study examines the impact of perceived job insecurity on self-rated mental health using data from the 2021 Chinese General Social Survey (CGSS), a nationally representative dataset in China. Perceived job insecurity arises from subjective experiences and cannot be effectively cap-

tured by a single survey item. To address this, we use responses from multiple survey items to construct a latent variable for job insecurity, capturing its complex dynamics, as well as a latent variable for mental health. Utilizing structural equation modeling (SEM), we analyze the relationship between the latent perceived job insecurity and the latent mental well-being.

Within the context of China, we have following hypotheses:

H1: Perceived job insecurity is negatively associated with mental health.

H2: The negative relationship between perceived job insecurity and mental health is different between males and females.

H3: The negative relationship between perceived job insecurity and mental health is different between CCP members and non-CCP members.

Data and Methods

Data

The data used for this analysis is drawn from the 2021 Chinese General Social Survey (CGSS), the first nationally representative and continuous survey project conducted in mainland China. CGSS uses multi-stage stratified sampling design, selecting county-level PSUs and community-level SSUs using PPS methods, with households sampled in each SSU and one adult per household selected via the Kish grid. Its large-scale, representative sampling ensures that the findings reflect the broader Chinese population, enabling robust analyses of the variations in job insecurity and mental health across different social and economic contexts.

Measures

Job insecurity is modeled as a latent variable to capture its multidimensional nature, integrating both objective factors and subjective perceptions. Treating job insecurity as a latent construct reduces measurement error and focuses on the shared variance across these indicators, ensuring a more robust representation of the underlying concept. For objective measures, weekly work hours reflect the stability and predictability of an individual's employment. Higher values in this analysis may indicate potential irregularity or overwork, which are linked to greater job insecurity. Employment contract type captures the stability of an individual's formal employment relationship, with "No contract" representing the most insecure arrangement. The recoded variable is treated as a categorical factor to align with the conceptualization of job insecurity. For subjective measures, job autonomy reflects the degree of control individuals perceive they have over their work processes. Lower autonomy (greater control exerted by others) is associated with higher job insecurity. Work-related stress measures the frequency of stress experienced in the work environment, while job satisfaction reflects the respondent's overall contentment with their current job. In this analysis, lower satisfaction corresponds to higher levels of job insecurity. Based on the measurement above, we construct a continuous latent variable for perceived job insecurity. The larger the value holds, the higher the perceived job insecurity is.

Besides job insecurity, mental health is also treated as a continuous latent variable, measured using three self-reported indicators: feel depressed, feel happy, and health affects work/daily life. These indicators capture distinct yet interrelated dimensions of psychological well-being. The feel depressed indicator reflects the frequency of depressive symptoms, with higher values indicating fewer symptoms and better mental health. Feel happy captures overall emotional positivity, with

higher values representing greater happiness. Health affects work/daily life assesses the frequency of health-related disruptions to work or daily activities, with higher values reflecting better perceived health. The larger the latent mental health holds, the better the mental health is.

Sex and party membership are included as the group variables to explore potential differences in the relationship between perceived job insecurity and mental health across groups. In the party membership variable, individuals are divided into two groups, CCP members and non-CCP members.

Table 1 provides a comprehensive overview of the measures for job insecurity, mental health, and group variables.

Analytical approach

We use the structural equation model (SEM) to evaluate the relationship between two latent constructs: perceived job insecurity and mental health. The SEM framework allows the integration of multiple observed indicators into latent constructs, reducing measurement error and providing a robust method for understanding complex relationships.

The Weighted Least Squares Mean and Variance Adjusted (WLSMV) estimator is used for parameter estimation. WLSMV is particularly suited for handling ordinal categorical data, such as job satisfaction, work-related stress, and happiness in this study. This estimator accounts for the non-normality of categorical variables, provides robust standard errors, and adjusts chi-square values to better evaluate model fit. These features make WLSMV ideal for our models where the data includes ordinal or categorical responses.

Figure 1 shows the structural equation model for perceived job insecurity and mental health. The path coefficient linking perceived job insecurity and mental health is the key coefficient for

Table 1: Overview of Survey Measures and Variable Coding

Variable	Survey Question	Response Type
Weekly Work Hours	A53a: When you are employed, how many hours do you usually work in a week, including overtime?	Continuous
Type of Work Contract	A59b: Have you signed a written labor contract with your employer for your current job?	Ordinal Categorical (3 levels)
Job Autonomy	A59g: In your current job, to what extent can you independently decide the specific methods of your work?	Ordinal Categorical (4 levels)
Work Stress	L11_c: How often do you feel significant work-related stress in your job?	Ordinal Categorical (4 levels)
Job Satisfaction	L17: Overall, how satisfied are you with your current job?	Ordinal Categorical (5 levels)
Feel Depressed	A17: In the past four weeks, how often did you feel depressed or down?	Ordinal Categorical (5 levels)
Feel Happy	A36: Overall, do you feel happy with your life?	Ordinal Categorical (5 levels)
Health Affects Work/Daily Life	A16: In the past four weeks, how often did health problems affect your work or other daily activities?	Ordinal Categorical (5 levels)
Sex	What is your gender?	Binary
Party Membership	A10: What is your current political affiliation?	Binary

H1. If the coefficient is negative and statistically significant, it would indicate that higher perceived job insecurity is associated with poorer mental health.

To explore whether the relationship between perceived job insecurity and mental health is invariant across different groups, we conduct a multiple group analysis (MGA) for two grouping variables: sex and party membership. First, we estimate the model separately for males and females without imposing any constraints to examine the relationship. Next, we test the invariance of this relationship by constraining the structural coefficient to be equal across sexes. A similar

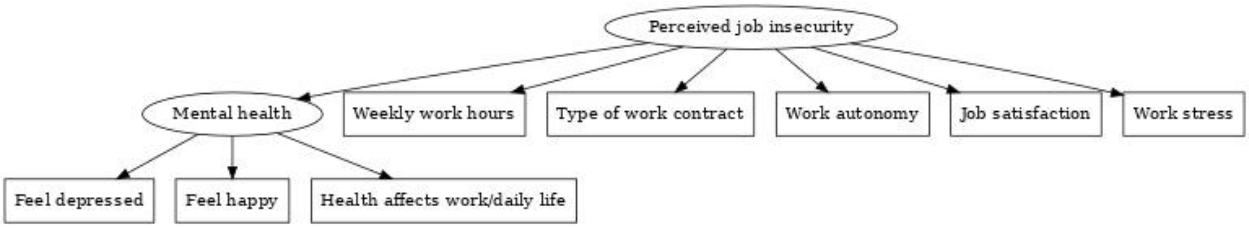

Figure 1: structural equation model for perceived job insecurity and mental health

procedure is applied to compare CCP members and non-members. If the constrained models show a significantly worse fit compared to the unconstrained models, it indicates that the relationship between perceived job insecurity and mental health varies across groups.

Survey weights are used for descriptive statistics to ensure the representativeness of the sample. However, we have not incorporated survey weights into the SEM analysis, due to the lack of a suitable package that can handle this. As for missing data, we have used pairwise deletion to handle missing values in the analysis, under the assumption that the data is missing completely at random (MCAR).

Results

Table 2 presents the weighted descriptive statistics of the variables used in the analysis. The sample consists of 993 respondents after adopting pairwise deletion for missing data. The average weekly work hours are around 49.92 hours. A small proportion of respondents have an indefinite term work contract, while the majority have a fixed-term contract. Most respondents report that they have main control over their work and are satisfied with their jobs. The majority of respondents report that they rarely or sometimes experience work stress. Regarding mental health, most respondents report that they rarely or sometimes feel depressed and often or always feel happy. The majority of respondents indicate that their health never affects their work or daily life. The sample is almost evenly split by sex, with around 86% of respondents not being members of the Chinese Communist Party.

Table 2: Weighted descriptive statistics (N = 993)

Variable	Mean (SD) / Percent
Weekly work hours	49.92 (16.15)
Type of work contract	
Infinite term	26.0%
Fixed term	40.5%
No contract	33.5%
Work autonomy	
Completely controlled by self	13.2%
Mainly controlled by self	51.0%
Mainly controlled by others	22.5%
Completely controlled by others	13.2%
Job satisfaction	
Very satisfied	12.1%
Satisfied	50.0%
Neutral	30.7%
Dissatisfied	5.2%
Very dissatisfied	2.0%
Work stress	
Rarely	41.0%
Sometimes	32.9%
Often	17.7%
Always	8.3%
Feel depressed	
Always	0.8%
Often	3.7%
Sometimes	20.5%
Rarely	28.6%
Never	46.4%
Feel happy	
Never	0.7%
Rarely	3.1%
Sometimes	13.1%
Often	61.2%
Always	21.8%
Health affects work/daily life	
Always	0.2%
Often	1.8%
Sometimes	9.9%
Rarely	24.7%

Never	63.4%
Sex	
Female	45.4%
Male	54.6%
Party membership	
CCP	13.1%
Non-CCP	86.9%

Table 3 presents the results of the SEM examining the relationship between perceived job insecurity and mental health with the WLSMV estimation. The model exhibits a Comparative Fit Index (CFI) of 0.94 and a Root Mean Square Error of Approximation (RMSEA) of 0.07, both of which are considered acceptable. For the measurement models, all factor loadings for the latent variable mental health are significant at the 0.01 level, while three out of four factor loadings are significant for the latent variable perceived job insecurity at the 0.1 level. The analysis reveals that perceived job insecurity negatively affects mental health, with a coefficient of -0.11 at the 0.01 significance level. In essence, higher perceived job insecurity correlates with poorer mental health, thereby supporting H1.

Table 3: Structural equation model results for the relationship between perceived job insecurity and mental health

	Estimate	Std. Err.	z	p
		Factor Loadings		
Perceived job insecurity				
Weekly work hours	1.00^{+}			
Type of work contract	-0.01	0.01	-0.49	0.624
Work autonomy	0.02	0.01	1.88	0.060
Job satisfaction	0.14	0.02	6.75	0.000
Work stress	0.13	0.02	6.85	0.000
Mental health				
Feel depressed	1.00^{+}			
Feel happy	0.64	0.06	11.65	0.000
Health affects work/daily life	0.93	0.08	12.32	0.000
		Regression Slopes		
Mental health				
Perceived job insecurity	-0.11	0.02	-6.60	0.000

		Fit Indices	
χ^2(df)	102.92		
CFI	0.94		
TLI	0.91		
RMSEA	0.07		
Scaled χ^2(df)	130.71(19)		0.000

$^{+}$Fixed parameter

Table 4 illustrates the results of the SEM that separately evaluates males and females without constraints. This model has a CFI of 0.93 and an RMSEA of 0.07, suggesting an acceptable fit. The findings indicate that perceived job insecurity adversely impacts mental health for both genders. However, the effect is more pronounced for females with a coefficient of -0.15, compared to males with a coefficient of -0.10. To assess whether the relationship between perceived job insecurity and mental health is invariant between males and females, a constrained model equalizing the structural coefficient is tested. Table 5 details the results of the constrained model, which maintains the same CFI of 0.93 and RMSEA of 0.07 as the unconstrained model. The scaled chi-squared difference test between the constrained and unconstrained models has a p-value of 0.291, indicating that the constrained model is not significantly worse than the unconstrained model. Consequently, we cannot reject the null hypothesis that the relationship between perceived job insecurity and mental health is invariant, thereby failing to support H2.

Table 4: Perceived job insecurity and mental health among different sex categories without constraints

	Female		Male	
	Estimate	Std. Err.	Estimate	Std. Err.
		Factor Loadings		
Perceived job insecurity				
Weekly work hours	1.00^{+}		1.00^{+}	
Type of work contract	0.03	0.02	-0.02	0.02
Work autonomy	0.00	0.02	0.03^{**}	0.01
Job satisfaction	0.18^{***}	0.05	0.13^{***}	0.03
Work stress	0.17^{***}	0.04	0.14^{***}	0.03
Mental health				
Feel depressed	1.00^{+}		1.00^{+}	
Feel happy	0.59^{***}	0.07	0.66^{***}	0.08

Health affects work/daily life	0.93^{***}	0.11	0.88^{***}	0.09
		Regression Slopes		
Mental health				
Perceived job insecurity	-0.15^{***}	0.04	-0.10^{***}	0.02
		Fit Indices		
χ^2(df)	125.32			
CFI	0.93			
TLI	0.90			
RMSEA	0.07			
Scaled χ^2(df)	$156.47(38)^{***}$			

$^{+}$Fixed parameter

* p<0.1, ** p<0.05, ***p<0.01

Table 5: Perceived job insecurity and mental health among different sex categories with constraints

	Female		Male	
	Estimate	Std. Err.	Estimate	Std. Err.
		Factor Loadings		
Perceived job insecurity				
Weekly work hours	1.00^{+}		1.00^{+}	
Type of work contract	0.02	0.02	-0.03	0.02
Work autonomy	0.00	0.02	0.04^{**}	0.02
Job satisfaction	0.16^{***}	0.03	0.15^{***}	0.03
Work stress	0.15^{***}	0.03	0.15^{***}	0.03
Mental health				
Feel depressed	1.00^{+}		1.00^{+}	
Feel happy	0.60^{***}	0.07	0.65^{***}	0.08
Health affects work/daily life	0.95^{***}	0.11	0.86^{***}	0.09
		Regression Slopes		
Mental health				
Perceived job insecurity	-0.12^{***}	0.02	-0.12^{***}	0.02
		Fit Indices		
χ^2(df)	126.87			
CFI	0.93			
TLI	0.90			
RMSEA	0.07			
Scaled χ^2(df)	$154.09(39)^{***}$			

$^{+}$Fixed parameter

* p<0.1, ** p<0.05, ***p<0.01

The relationship between perceived job insecurity and mental health is further analyzed among CCP and non-CCP members. Table 6 provides the results of the SEM for the two groups without

any constraints. The model reports a CFI of 0.93 and an RMSEA of 0.07, signifying a good fit. The analysis shows that perceived job insecurity has a significantly negative effect on mental health for both CCP and non-CCP residents. However, the negative impact is stronger for non-CCP members with a coefficient of -0.12, compared to CCP members with a coefficient of -0.05. To determine whether this relationship is invariant between CCP and non-CCP members, a constrained model equalizing the structural coefficient is estimated. Table 7 presents the results of the constrained model, which also maintains the same CFI of 0.93 and RMSEA of 0.07 as the unconstrained model. However, the scaled chi-squared difference test indicates that the constrained model is significantly worse than the unconstrained model, with a p-value less than 0.01, suggesting that the relationship is not invariant between CCP members and non-CCP members. Therefore, we reject the null hypothesis and support H3.

Table 6: Perceived job insecurity and mental health of CCP Members Vs. Non-Members without constraints

	Non-CCP		CCP	
	Estimate	Std. Err.	Estimate	Std. Err.
		Factor Loadings		
Perceived job insecurity				
Weekly work hours	1.00^{+}		1.00^{+}	
Type of work contract	0.00	0.01	-0.03	0.02
Work autonomy	0.02	0.01	-0.03^{*}	0.01
Job satisfaction	0.15^{***}	0.03	0.12^{***}	0.02
Work stress	0.14^{***}	0.03	0.13^{***}	0.02
Mental health				
Feel depressed	1.00^{+}		1.00^{+}	
Feel happy	0.69^{***}	0.06	0.25^{**}	0.10
Health affects work/daily life	0.94^{***}	0.08	0.73^{***}	0.21
		Regression Slopes		
Mental health				
Perceived job insecurity	-0.12^{***}	0.02	-0.05^{***}	0.01
		Fit Indices		
χ^2(df)	135.64			
CFI	0.93			
TLI	0.90			
RMSEA	0.07			
Scaled χ^2(df)	$154.83(38)^{***}$			

$^{+}$Fixed parameter
* p<0.1, ** p<0.05, ***p<0.01

Table 7: Perceived job insecurity and mental health of CCP Members Vs. Non-CCP Members with constraints

	Non-CCP		CCP	
	Estimate	Std. Err.	Estimate	Std. Err.
		Factor Loadings		
Perceived job insecurity				
Weekly work hours	1.00^{+}		1.00^{+}	
Type of work contract	0.00	0.01	−0.04	0.02
Work autonomy	0.02	0.01	−0.03	0.02
Job satisfaction	0.13^{***}	0.02	0.15^{***}	0.03
Work stress	0.12^{***}	0.02	0.16^{***}	0.02
Mental health				
Feel depressed	1.00^{+}		1.00^{+}	
Feel happy	0.71^{***}	0.06	0.23^{**}	0.09
Health affects work/daily life	0.98^{***}	0.08	0.63^{***}	0.17
		Regression Slopes		
Mental health				
Perceived job insecurity	-0.09^{***}	0.01	-0.09^{***}	0.01
		Fit Indices		
χ^2(df)	143.75			
CFI	0.93			
TLI	0.90			
RMSEA	0.07			
Scaled χ^2(df)	$162.85(39)^{***}$			

$^{+}$Fixed parameter
* p<0.1, ** p<0.05, ***p<0.01

Further steps

- we haven't used survey weights for SEM analysis, but we are still trying to find the package that can handle this
- we will continue enhancing current writing and analysis

Appendix

See more infomation on GitHub: https://github.com/petertbz/SurvMeth687Project

References

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