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The Cumulative Health Toll of Precarious Employment in China: Dose-Response Effects and Gender Disparity in Life Satisfaction

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Abstract

Drawing on cumulative disadvantage theory and resource conservation theory, this study uses seven waves of the China Family Panel Studies (2010–2022, N = 20,662) to examine the cumulative effects of precarious employment on life satisfaction and its mediating mechanisms. Each additional year of high-risk exposure reduces life satisfaction by 0.061 points, equivalent to 1.6% of the sample mean ($p < 0.001$), and women suffer 53% greater cumulative damage than men. Structural equation modeling reveals two independent mediation pathways: social trust accounts for 11.9% of the total effect, and family care accounts for 6.8%. These findings extend cumulative disadvantage theory from extreme events to everyday precarious employment and provide empirical evidence for early social protection policies targeting flexible workers.

Keywords: precarious employment; life satisfaction; new employment group

1 Introduction

The rise of flexible and platform-mediated employment represents one of the most profound structural transformations of contemporary labor markets. Standard employment relationships are increasingly being eroded by non-standard, fragmented, algorithm-driven work arrangements (Kalleberg 2018). Platform companies use algorithmic technologies to exert fine-grained control over labor processes, leaving workers facing income instability, lack of social security, and blurred occupational identities (Wood et al. 2019; Chen 2020; Vallas and Schor 2020). In China, more than 200 million workers were engaged in flexible or new forms of employment by early 2025 (Ministry of Human Resources and Social Security 2025). This group is often called the New Employment Group, yet large-scale longitudinal research on their subjective well-being remains limited.

The negative association between precarious employment and life satisfaction is well

documented (Benach et al. 2014; Hajat et al. 2024; Rönnblad et al. 2019), yet four gaps remain. First, cross-sectional and short-panel designs cannot distinguish contemporaneous from cumulative effects. Second, the mechanisms linking precarious employment to well-being remain unclear, especially social relationship mechanisms such as the erosion of social trust and the crowding out of family care. Third, it is unclear which resources are most vulnerable to cumulative loss and why their depletion is self-reinforcing. Fourth, gender differences have rarely been examined from a cumulative exposure perspective (Valero et al. 2021).

This study draws on cumulative disadvantage theory and resource conservation theory to address these gaps. Cumulative disadvantage theory explains why initial disadvantages are amplified over time, while resource conservation theory specifies which resources are most vulnerable to such amplification. We argue that two resources are especially susceptible in precarious employment. Social trust is a relational resource that sustains predictability and reciprocity in social exchanges. Family care is a role-based resource that provides meaning and emotional fulfillment. Both are slow to accumulate, quick to deplete, and difficult to substitute. To address these gaps, this study focuses on three interrelated questions: whether exposure to precarious employment has a cumulative effect; through which pathways precarious employment produces cumulative damage; and whether there are systematic gender and urban-rural differences in these effects.

2 Theory and Hypotheses

2.1 Precarious Employment and Cumulative Disadvantage Theory

Precarious employment is a multidimensional concept that reflects the accumulation of adverse labor market characteristics arising from workers‘ weak bargaining position relative to employers. It is concretely manifested in a lack of social insurance, excessively long working hours (more than 48 hours per week), informal employment, and the absence of a written labor contract (Kalleberg 2009, 2018). This weak bargaining position implies that the psychological contract between workers and employers is difficult to sustain. Employers generally do not provide long-term career commitments, and workers find it hard to develop stable organizational trust in their employers, thus facing persistent job insecurity and powerlessness (Rousseau 1995).

The above characteristics raise an as yet unanswered question: does the negative impact of precarious employment accumulate over time? Cumulative disadvantage theory provides a core explanatory framework. The theory posits that initial disadvantages are gradually amplified through positive feedback mechanisms, ultimately widening the gap between advantaged and disadvantaged groups (DiPrete and Eirich 2006). This theory has been widely applied in labor and health research (Burgard and Lin 2013). Accordingly, we expect that the more years of exposure to precarious employment, the lower workers' life satisfaction.

However, the cumulative effect need not be linear. From a psychological adaptation perspective, workers who are exposed to precarious employment for a long time may develop psychological strategies such as lowering expectations and passive coping, thereby to some extent slowing down the accumulation of psychological damage (Kalleberg 2018; Kalleberg and Vallas 2018). This implies that the marginal damage of precarious employment may decrease with longer exposure, meaning that the damage from early exposure is greater than that from later exposure.

While the above discussion addresses the shape of the cumulative effect, a separate question concerns its underlying mechanisms. Resource conservation theory (Hobfoll 1989, 2002) provides a complementary framework by specifying which resources are most susceptible to loss and why their depletion is self-reinforcing. Resource loss is disproportionately harmful because it triggers a downward spiral: initial loss reduces coping capacity, which accelerates further loss. In the context of precarious employment, two resources are especially susceptible to this spiral. Social trust is a relational resource that sustains predictability and reciprocity in social exchanges (Putnam 2000; Helliwell and Wang 2011). Family care is a role-based resource that provides meaning and emotional fulfillment (Su and Cheng 2025). Drawing on the core logic of resource conservation theory, this study conceptualizes social trust as a relational resource and family care as a role-based resource. Both are central to psychological adaptation and are slow to accumulate, quick to deplete, and difficult to substitute. Prior research has extensively documented material hardship (Hajat et al. 2024), yet these two resource-based mechanisms remain underexplored, particularly in non-Western contexts (Valero et al. 2021).

Hypothesis 1a: The cumulative years of exposure to precarious employment are negatively associated with life satisfaction.

Hypothesis 1b: The cumulative effect of precarious employment is nonlinear. The marginal damage to life satisfaction from early exposure is greater than that from later exposure (a diminishing damage pattern).

2.2 The Mediating Role of Social Trust

Social trust refers to individuals‘ general belief in the reliability of other people and social institutions; it is a core dimension of social capital (Putnam 2000). Research has shown a stable positive association between social trust and subjective well-being, a finding confirmed across different cultural contexts (Helliwell and Wang 2011). From a resource conservation perspective, social trust is a relational resource that is slow to build and quick to erode. So, does precarious employment indirectly damage workers’ life satisfaction by eroding social trust?

Precarious employment consumes social trust in two ways. First, economic insecurity encourages individuals to focus on their own survival and reduce investment in social cooperation, thereby eroding trust. Cross-national research shows that economic crises significantly lower interpersonal trust, especially for the most affected groups (Torrente et al. 2019). Second, in the platform economy, algorithmic management further intensifies this process. Platforms use algorithms to record, rate, restrict, and replace workers (Rosenblat and Stark 2016; Kellogg et al. 2020), weakening workers‘ autonomy and damaging their trust relationships with platforms and clients (Barratt et al. 2020). Recent research finds that algorithmic tracking and behavioral constraints increase burnout and reduce work well-being, which may further damage social trust (Liu et al. 2026). In China’s platform economy, digital control similarly exposes riders to unstable working conditions and a lack of trust (Chen 2020).

The loss of social trust is self-reinforcing. According to resource conservation theory, resource loss triggers a loss spiral: initial loss reduces one‘s capacity to cope, which in turn accelerates further loss (Hobfoll 2002). Because trust is relational, its erosion is likely to accelerate over time.

Hypothesis 2: Social trust mediates the relationship between cumulative exposure to precarious employment and life satisfaction.

2.3 The Mediating Role of Crowding Out of Family Care

In China, family care responsibilities are mainly shouldered by women, a pattern that, despite some changes during rapid social transformation, still dominates (Su and Cheng 2025). From a resource conservation perspective, caregiving is the role-based resource introduced earlier and is especially vulnerable to time pressure.

Precarious employment crowds out family care in two ways. First, precarious work arrangements typically involve unpredictable working hours and little flexibility in taking leave, making it difficult for workers to meet both job requirements and family care needs. To maintain income, many workers are forced to reduce their input into family care, a process we call "care crowding out." Second, work-family conflict has been widely confirmed as a key mechanism linking job quality to mental health (Ford et al. 2007). In a longitudinal study of Chinese immigrants, work-family conflict and subjective well-being were also found to have a reciprocal relationship (Shang et al. 2018). Providing care to children or elderly is a meaningful role practice that brings emotional satisfaction (Su and Cheng 2025). Research on platform-mediated care work further shows that relational aspects, including mutuality, reciprocity, and attentiveness, are central to workers' experiences and perceptions of decent work (Khan et al. 2024), and reducing care input means losing this positive experience.

The loss of family care is self-reinforcing. According to resource conservation theory, resource loss triggers a loss spiral (Hobfoll 2002). In the Chinese cultural context, failure to fulfill family responsibilities due to work may trigger role guilt and family conflict (Hu et al. 2021), further damaging life satisfaction. Su and Cheng (2025) found that the association between caregiving and life satisfaction is age-heterogeneous: at age 60, caregivers reported higher life satisfaction, but this advantage diminished with age, and spousal caregivers consistently reported lower life satisfaction.

Hypothesis 3: Family care burden mediates the relationship between cumulative exposure to precarious employment and life satisfaction.

2.4 Gender and Urban-Rural Differences

Cumulative disadvantage theory states that the amplifying effect of initial disadvantage is stronger for vulnerable groups (DiPrete and Eirich 2006). In China‘s labor market, women face a double disadvantage: gender discrimination and occupational segregation in the labor market, and a disproportionate share of family care responsibilities (Wang 2005; Qian and Li 2020). Therefore, women may suffer greater cumulative damage from precarious employment. Urban-rural differences also affect the strength of the cumulative effect. Since 2010, China’s labor force participation and employment rates have been declining, with low-education workers particularly affected (Wu and Chen 2021). Rural workers have greater difficulty than urban residents in finding alternative income sources after losing an unstable job, so they may bear a larger cumulative burden.

Hypothesis 4a: There is a gender difference in the cumulative effect of precarious employment, with women suffering greater cumulative damage than men.

Hypothesis 4b: There is an urban-rural difference in the cumulative effect of precarious employment, with rural workers suffering greater cumulative damage than urban residents.

3 Data and Methods

3.1 Data Source

This study uses seven waves of the China Family Panel Studies (CFPS) from 2010, 2012, 2014, 2016, 2018, 2020, and 2022. The CFPS is a national, multidisciplinary, large-scale social tracking survey implemented by the Institute of Social Science Survey at Peking University. The sampling design adopted multistage probability sampling, covering 25 provinces, municipalities, and autonomous regions in China, representing approximately 95% of the Chinese population. The baseline survey was completed in 2010, with follow-ups every two years (Xie and Hu 2014). This study uses the final integrated data released by CFPS in 2024.

3.2 Sample Selection

The initial sample contained 25,543 individuals. After excluding individuals younger

than 16, current students, and observations with missing values on key variables, the final analytical sample comprised 20,662 individuals (11,488 men and 9,174 women), forming an unbalanced panel. The fixed-effects model is robust to this structure (Allison 2009).

3.3 Variable Measurement

Dependent Variable. Life Satisfaction. We used the standard CFPS item qn12012: "Overall, how satisfied are you with your life?" Answers ranged from 1 (very dissatisfied) to 5 (very satisfied). This single-item measure has been widely used by the World Values Survey and the OECD guidelines, showing good criterion validity (Diener et al. 1985; OECD 2013). Recent studies have also confirmed the adequate reliability and validity of single-item life satisfaction measures in large-scale surveys (Cheung and Lucas 2014).

Core Independent Variable. Precarious Employment Index. Based on Kalleberg's (2009) framework, we constructed a precarious employment index from four equally weighted dimensions: (1) lack of social insurance (medsure_dum = 0); (2) excessive working hours (workhour > 48); (3) informal employment (jobclass codes 4 and 5, following the ILO definition); and (4) no written labor contract (worknature = 0). The four binary dimensions were summed and divided by 4, yielding a continuous variable ranging from 0 to 1, with higher values indicating greater precariousness.

Cumulative Exposure Variable. cum_epi was defined as the number of years up to the current survey wave in which the respondent was classified as being in high precarious employment (precarious employment index > 0.5). The threshold of 0.5 corresponds to risk in at least two of the four dimensions (Burgard and Lin 2013).

Mediators. Social trust was measured as the mean of three items: trust in neighbors (qn10022), trust in strangers (qn10024), and trust in local government officials (qn10025), each scored from 0 to 10. Cronbach's α was 0.81. Family care burden was a binary variable: coded 1 if the respondent had a child aged 0–15 or an elderly person aged 65 or older, otherwise 0 (Su and Cheng 2025).

Control Variables. We included age, gender (male = 1), years of education, marital

status (married or cohabiting = 1), urban residence (urban = 1), and log household per capita income (linincome). All regression models included year and province fixed effects, with standard errors clustered at the province level (29 provinces).

3.4 Analytical Strategy

We adopted a progressive modeling strategy. First, we estimated a baseline model with province and year fixed effects. Second, we introduced a lagged dependent variable to control for state dependence. Third, we replaced the contemporaneous index with cum_epi and added its squared term to test nonlinearity. Fourth, we estimated structural equation models to examine the two mediation pathways, reporting standardized indirect effects with bootstrap confidence intervals (500 replications) and evaluating model fit with CFI, RMSEA, and SRMR (Kline 2023). Fifth, we repeated the cumulative exposure model by gender, urban-rural residence, and education. Sixth, we conducted four robustness checks: an alternative dependent variable (self-rated health), an alternative precarious employment definition (two dimensions), a placebo test, and re-analysis excluding the 2020 wave.

All analyses were performed using R version 4.3.2, relying mainly on the fixest package for high-dimensional fixed-effects regression, lavaan for structural equation modeling, and car for variance inflation factor tests.

4 Results

4.1 Descriptive Statistics

Table 1 presents descriptive statistics by gender. The mean precarious employment index was 0.217 for men and 0.175 for women ($p < 0.001$). Life satisfaction differed little between genders (3.81 for men and 3.77 for women). In terms of cumulative exposure, the overall sample averaged 0.26 years of high-risk exposure, with men (0.30 years) higher than women (0.22 years). These descriptive characteristics are broadly consistent with the gender division of labor in China‘s labor market (Wang 2005; Qian and Li 2020).

Table 1. Sample descriptive statistics by gender

Variable	Men (*N*=11,488)	Women (*N*=9,174)	t/χ^2	*p*
Life satisfaction (1-5)	3.81 (1.02)	3.77 (1.04)	2.54	0.130

Precarious employment index (0-1)	0.217 (0.251)	0.175 (0.234)	13.42	0.001
Cumulative exposure years (*cum_epi*)	0.30 (0.65)	0.22 (0.58)	11.07	0.001
Age	52.4 (16.3)	50.2 (16.0)	9.87	0.001
Years of education (*educ*)	2.03 (1.42)	1.90 (1.38)	6.78	0.001
Married (%)	89.4	86.9	430.6	0.001
Urban (%)	52.2	49.7	12.9	0.001
Log household per capita income (*lnincome*)	2.41 (0.52)	2.38 (0.51)	4.18	0.001
Social trust (0-10)	5.21 (2.14)	5.18 (2.11)	1.01	0.313
With care burden (%)	38.2	41.5	23.5	0.001

Note: Means with standard deviations in parentheses for continuous variables; percentages for categorical variables. Tests: t-test for continuous, chi-square for categorical.

4.2 Baseline Regression and Contemporaneous Effects

Table 2 presents the baseline regression results and group heterogeneity. The coefficient of the precarious employment index was −0.171 ($p < 0.001$), and the effect was larger for women (−0.227) than for men (−0.132; $p = 0.034$). By urban-rural residence, the coefficient was −0.175 for rural residents and −0.146 for urban residents, though the difference was not significant ($p = 0.37$).

Table 2. Baseline regressions and group heterogeneity

Variable	Model 1 (Full sample)	Model 2 (Men)	Model 3 (Women)	Model 4 (Urban)	Model 5 (Rural)
Precarious employment index	–0.171*** (0.030)	–0.132** (0.041)	–0.227*** (0.043)	–0.146** (0.046)	–0.175*** (0.038)
Age	0.010*** (0.001)	0.012*** (0.002)	0.007*** (0.001)	0.011*** (0.001)	0.009*** (0.001)
Gender	0.029 (0.018)	—	—	0.004 (0.027)	0.049** (0.018)
Education (*educ*)	–0.014 (0.009)	–0.011 (0.012)	–0.019 (0.010)	–0.012 (0.012)	–0.014 (0.011)
Married (*mar*)	0.227*** (0.014)	0.252*** (0.041)	0.188*** (0.051)	0.251*** (0.037)	0.199*** (0.045)
Urban	0.004 (0.033)	–0.016 (0.024)	0.034 (0.020)	—	—
Log income (*lnincome*)	0.594*** (0.095)	0.691*** (0.130)	0.460*** (0.067)	0.626*** (0.128)	0.573*** (0.115)
N	24,181	14,178	10,003	11,270	12,907
R^2	0.096	0.122	0.082	0.1	0.105

Note: Unstandardized regression coefficients with province-clustered standard errors in parentheses. All models include year and province fixed effects. Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Models 2 and 3 omit gender; Models 4 and 5 omit urban

(indicated by "—"). R^2 is adjusted R^2.

4.3 State Dependence and Cumulative Exposure

Table 3 reports the results of the state dependence and cumulative exposure models. The coefficient of the lagged life satisfaction term was 0.333 ($p < 0.001$), indicating significant state dependence. After controlling for state dependence, the coefficient of the precarious employment index was −0.052 ($p = 0.073$). Each additional year of high-risk exposure reduced life satisfaction by 0.061 points ($p < 0.001$), equivalent to 1.6% of the sample mean. The quadratic term was positive but only marginally significant ($p = 0.079$), suggesting diminishing marginal damage.

Table 3. State dependence and cumulative exposure models

Variable	Model 6 (Lagged DV)	Model 7 (Linear cumulative)	Model 8 (Quadratic cumulative)
Lagged life satisfaction	0.333*** (0.011)	—	—
Precarious employment index	–0.052 (0.028)	—	—
cum_epi	—	–0.061*** (0.015)	–0.099*** (0.023)
cum_epi ²	—	—	0.016 (0.009)
Age	0.007*** (0.001)	0.010*** (0.001)	0.010*** (0.001)
Gender	0.049** (0.015)	0.032 (0.018)	0.033 (0.018)
Education (*educ*)	–0.027*** (0.008)	–0.019 (0.010)	–0.019 (0.009)
Married (*mar*)	0.151*** (0.022)	0.218*** (0.017)	0.218*** (0.017)
Urban	0.022 (0.022)	0.012 (0.032)	0.012 (0.032)
Log income (*lnincome*)	0.374*** (0.078)	0.503*** (0.093)	0.505*** (0.094)
N	13,621	20,599	20,599
R^2	0.184	0.101	0.101

Note: Unstandardized regression coefficients with province-clustered standard errors in parentheses. All models include year and province fixed effects. Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. R^2 is adjusted R^2.

Figure 1 illustrates the dose-response relationship. The linear fit shows that each additional year of high-risk exposure reduces life satisfaction by 0.061 points. The quadratic fit exhibits a slight concavity, but the quadratic term is only marginally significant ($p = 0.079$).

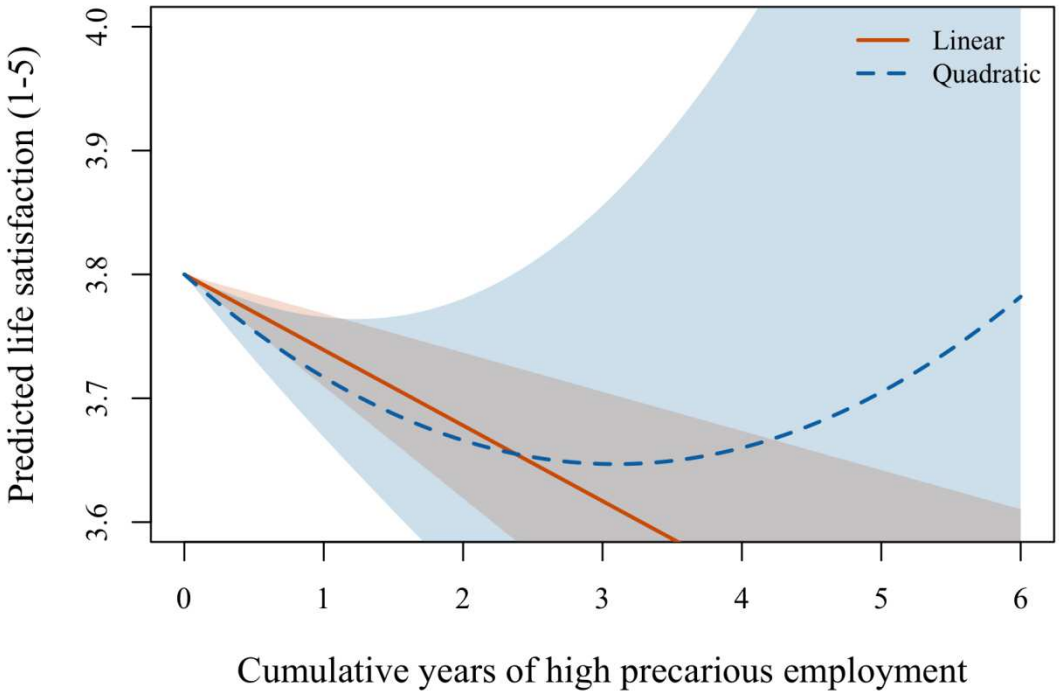


Figure 1. Cumulative effect of precarious employment on life satisfaction: linear and quadratic predictions.

Note: Solid line: linear prediction (coefficient = −0.061, p < 0.001); dashed line: quadratic prediction (first-order = −0.099, p < 0.001; second-order = 0.016, p = 0.079).

4.4 Gender and Urban-Rural Heterogeneity

Table 4 presents the cumulative exposure model estimates by gender and urban-rural residence. The cumulative coefficient was −0.078 for women and −0.051 for men, meaning that women suffered 53% greater cumulative damage than men (p = 0.027). For urban-rural residence, the coefficient was −0.067 for rural residents and −0.050 for urban residents, a 34% difference that did not reach statistical significance (p = 0.126). Figure 2 presents a forest plot summarizing the cumulative exposure coefficients across subgroups.

Table 4. Heterogeneity in cumulative exposure effects

Variable	Men	Women	Urban	Rural
cum_epi	–0.051** (0.012)	–0.078** (0.030)	–0.050* (0.019)	–0.067** (0.016)
Age	0.012*** (0.002)	0.007*** (0.001)	0.011*** (0.002)	0.009*** (0.001)
Married (*mar*)	0.248*** (0.048)	0.170*** (0.051)	0.249*** (0.044)	0.200*** (0.039)
Log	0.578*** (0.056)	0.406*** (0.065)	0.617*** (0.108)	0.568*** (0.096)

income (*lnincome*)				
N	11,455	9,144	10,622	9,977
R^2	0.122	0.082	0.1	0.105

Note: Unstandardized regression coefficients with province-clustered standard errors in parentheses. All models include year and province fixed effects and the respective grouping variables (education, urban, or gender). Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001. R^2 is adjusted R^2.

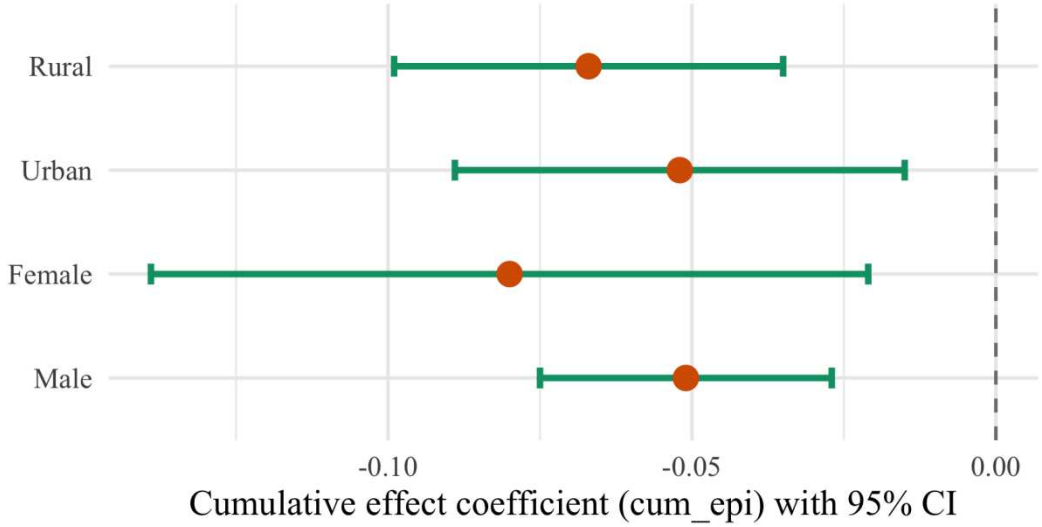


Figure 2. Forest plot of cumulative exposure coefficients (cum_epi) across subgroups.

Note: Points: coefficient estimates; error bars: 95% confidence intervals. Dashed line: null effect.

4.5 Mediating Mechanisms

Table 5 presents the mediation pathway estimates from the structural equation model. The model simultaneously estimated the two pathways. Model fit was good: CFI = 0.998, RMSEA = 0.015, SRMR = 0.003. Social trust accounted for 11.9% of the total effect (−0.177), and family care accounted for 6.8%. The two pathways together explained 18.7% of the total effect. Figure 3 presents the path coefficients from the structural equation model.

Table 5. Structural equation model: mediation pathway estimates

Path	Coefficient	SE	95% CI	*p*
Precarious employment → Social trust	–0.205	0.052	[–0.307, –0.103]	<0.001
Social trust → Life satisfaction	0.12	0.005	[0.111, 0.129]	<0.001

Precarious employment → Care burden	–0.150	0.016	[–0.180, –0.119]	<0.001
Care burden → Life satisfaction	0.058	0.015	[0.029, 0.087]	<0.001
Precarious employment → Life satisfaction (direct)	–0.104	0.032	[–0.167, –0.041]	0.001
Indirect via social trust	–0.021	0.006	[–0.037, –0.012]	<0.001
Indirect via care burden	–0.012	0.002	[–0.017, –0.007]	<0.001
Total indirect	–0.034	0.007	[–0.046, –0.020]	<0.001
Total effect	–0.177	0.033	[–0.202, –0.074]	<0.001

Note: Unstandardized coefficients. Model fit: CFI = 0.998, RMSEA = 0.015, SRMR = 0.003. Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001.

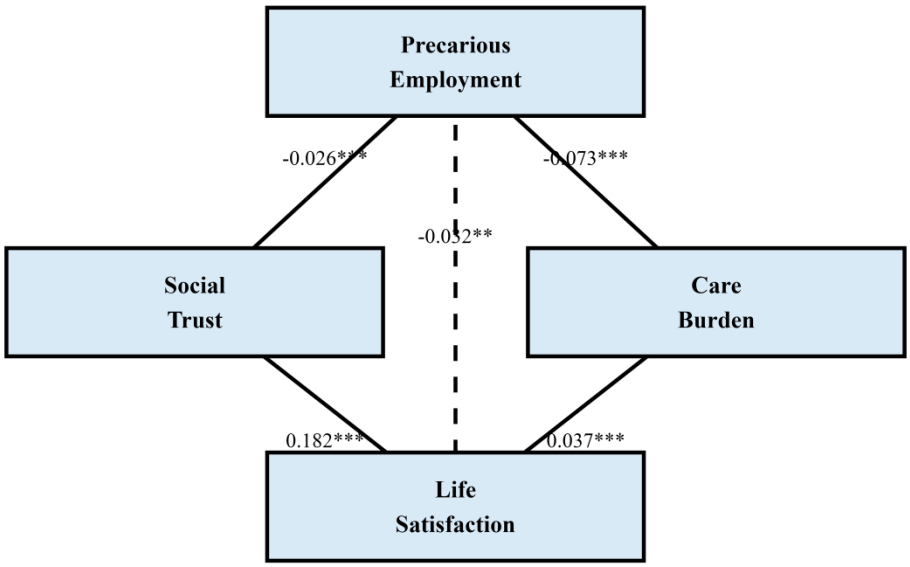


Figure 3 Path coefficients from the structural equation model.

Note: Unstandardized coefficients. Dashed line: direct effect. ***p < 0.001; **p < 0.01.

4.6 Robustness Checks

All robustness checks produced results consistent with the main findings. When self-rated health was used as an alternative dependent variable, the coefficient was −0.173 (p < 0.001). With the two-dimension index, the coefficient was −0.123 (p < 0.001). The placebo test produced a non-significant coefficient (0.030, p = 0.295). After excluding the 2020 wave, the cum_epi coefficient was −0.058 (p = 0.008). Multicollinearity tests showed all variance inflation factors between 1.02 and 1.28.

5 Discussion

5.1 Theoretical Implications of Cumulative Disadvantage and Nonlinearity

The core finding is a significant dose-response relationship between cumulative exposure to precarious employment and life satisfaction. Each additional year of high-risk exposure reduces life satisfaction by 0.061 points. This supports Hypothesis 1a and provides longitudinal evidence from a Chinese working population for cumulative disadvantage theory (DiPrete and Eirich 2006; Burgard and Lin 2013). Whereas the theory was originally developed to explain the solidification of social inequality, this paper expands its applicability from extreme events such as unemployment and disability to everyday precarious employment, showing that resource loss can accumulate even without complete job loss.

The positive but only marginally significant quadratic term indicates diminishing marginal damage. Resource loss is most disruptive when it first occurs (Hobfoll 1989, 2002). Over time, workers may lower their expectations and adapt to precarious conditions, slowing further damage (Kalleberg 2018; Kalleberg and Vallas 2018). Alternatively, the diminishing marginal damage may reflect selective attrition. China's institutional context may strengthen the negative effect of early exposure, because social security is closely tied to employment status and entering precarious employment can trigger a "cliff effect." In European countries where social protection is less tightly coupled to employment, this impact is relatively muted (Carr and Chung 2014).

5.2 Mechanisms and Theoretical Extensions of the Dual Mediation

The results support Hypotheses 2 and 3, revealing two independent mediation pathways. Social trust accounted for 11.9% of the total effect, and family care accounted for 6.8%. The trust pathway operates mainly in the work domain. Algorithmic management has replaced traditional interpersonal management, making it impossible for workers to establish a trusting relationship with any specific person (Kellogg et al. 2020; Barratt et al. 2020). Drawing on psychological contract theory (Rousseau 1995), this study argues that when the psychological contract is violated, negative emotions may generalize into a decline in general social trust (Liu et al. 2026). The care pathway connects work and family domains. Prior research has shown that platform workers' experiences vary substantially depending on their degree of economic dependence on platform income (Schor et al. 2020). Drawing on the resource depletion logic of the job demands-resources model, this study argues

that stressors in the work domain consume time and psychological resources, reducing investment in the family domain (Bakker and Demerouti 2017). In Chinese culture, failure to fulfill family responsibilities may trigger role guilt and family conflict (Hu et al. 2021). Su and Cheng (2025) found that the association between caregiving and life satisfaction is age-heterogeneous.

Trust is a more central resource than care because it conditions access to a wider range of other resources, which may explain why it mediates a larger share of the cumulative effect. However, the low contribution of the care pathway may also be partly due to measurement crudeness, as the binary indicator cannot capture care intensity, time, or quality.

5.3 Multiple Roots of Gender Differences

The cumulative coefficient for women was −0.078, significantly larger than the −0.051 for men, a relative difference of 53%, supporting Hypothesis 4a. Women face a double disadvantage: gender discrimination and occupational segregation in the labor market, and a disproportionate share of family care responsibilities (Wang 2005; Qian and Li 2020). Because women begin with fewer resources and face greater demands on those resources, each additional year of precarious employment depletes their reserves more rapidly.

Although the total effect was larger for women, the social trust mediation pathway was stronger for men, though this difference was not formally tested. Men may rely more on external trust networks, whereas women may rely more on family internal relationships (Su and Cheng 2025). Traditional gender role beliefs further reduce women's labor force participation and wages (Zhang and Wang 2020). Valero et al. (2021) point out that existing research generally lacks a gender perspective.

Regarding urban-rural differences, the cumulative coefficient was −0.067 for rural residents and −0.050 for urban residents, a 34% difference that did not reach statistical significance. Rural workers may face greater resource constraints (Wu and Chen 2021).

5.4 Limitations, Future Directions, and Policy Implications

This study has several limitations. First, causal identification remains limited: although lagged dependent variable and cumulative exposure models were used, quasi-experimental designs could not be employed. Future research could exploit local policy changes as natural experiments. Second, selection bias may be present: workers in long-term precarious employment are more likely to drop out of panel surveys. Although the rotation and tracking rules of the China Family Panel Studies partly mitigate this problem, future research should still apply inverse probability weighting (IPW) or other attrition correction methods. Third, sources of heterogeneity remain underexamined: this study did not examine heterogeneity by education, occupation, or industry.

These limitations notwithstanding, resource conservation theory implies that early intervention is critical. First, because the damage from precarious employment is greatest in the early years of exposure, we recommend shortening the social insurance enrollment grace period for flexible workers from three months to one month. Second, because social trust is a central relational resource, governments should invest in community building and public services. Third, because care crowding-out disproportionately affects women, policies should provide flexible working hours, childcare subsidies, and long-term care support.

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