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Influence of job security on intertemporal choice under home isolation in the epidemic closure

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Abstract: *The protracted battle of COVID-19 has had an impact on people's work, and the epidemic prevention and control state of universal home quarantine has caused many problems as work progress has been stalled and people's livelihood income is difficult to secure. The purpose of this study is to investigate the differences in job security, economic insecurity and job anxiety of different staff under the home isolation status of the prolonged epidemic closure; and the impact of job security on intertemporal choice. In this study, 300 questionnaires were randomly distributed in Ji'an City by questionnaire method, and 294 valid questionnaires were collected (119 males and 175 females). Through statistical analysis of spss data, job security, economic insecurity and job anxiety were significantly different across job types; economic insecurity and job anxiety were significantly and positively correlated ($p<0.001$); job security was significantly and positively correlated with intertemporal choice ($p<0.001$) and could positively predict intertemporal choice. Jobs with high job security and economic security are different from people's general perception; commercial service providers have lower job security and economic security, and other types of workers have higher job anxiety. Society and the state should pay attention to the commercial service workers' and guarantee their job stability and salary; improving job security is important for people's long-term interest decisions.*

Keywords: *Job anxiety; Job security; Economic security; Intertemporal choice; Delayed discounting*

1. Related Concepts and Studies

With social and economic development, people begin to pursue a sense of security in life, and a good life mainly depends on a solid economic foundation as a guarantee. Residents' economic insecurity is their sense of estimation, prediction and reliability of their own and their family's future economic income and expenditure [1] (Xiong Shangpeng & Kang Tao, 2001). Economic insecurity refers to individuals' feelings of uncertainty and unpredictability related to their economic situation [2] [3] (Chou et al., 2016; Abeyta, Routledge, Kersten & Cox, 2017), including fear of unemployment, feeling that the economic situation may become worse, etc. [4] (Kopasker, Montagna, & Bender, 2018).

Job anxiety is a common negative emotion among employees, and excessive or inappropriate job anxiety can be harmful to employees' physical, emotional, and psychological well-being, such as infectious diseases, heart disease, and depression [5] (Ren Huizhu, 2017). An important feature of anxiety is that it causes avoidance behaviors that avoid the source of the anxiety-triggering stimulus. Therefore, job anxiety can also cause some avoidance behaviors to avoid work [6] (Haines, Williams, & Carson, 2002).

Job security refers to an individual's perception and expectation of job continuity in the future [7] (Kraimer, Wayne, Liden, & Sparrowe, 2005). It is a subjective perceived stressor, and the impact of job insecurity on employees in the organization remains even if they do not lose their jobs. Studies have shown that individuals with high job security have more optimistic attitudes and are more motivated [8] (Gui Xiaoling, Li Zhibo, Zhu Peijia, RenLi, & Yan Zheng, 2013); job insecurity can positively predict physical health and emotional exhaustion [9] (Hu Sanman, 2017).

Intertemporal choice refers to the process by which individuals weigh the costs and benefits at different points in time and make a choice [10] (Frederick, Loewenstein, & O'Donoghue, 2002). When people are faced with an immediate smaller benefit and a delayed larger benefit, they often choose the

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former, but this choice is usually not in the long-term interest. A central component of intertemporal choice is delay discounting, whereby individuals making choices about the mental trade-offs of costs and benefits that occur at different time points always tend to assign less weight to the costs and benefits of future time points [11] (Green & Myerson, 2004).

Material deprivation has been shown to influence decision making, from finance to education or health, and people with low socioeconomic status appear to be focused on satisfying short-term needs and wants rather than long-term benefits and rewards [12] (Du Tangyan, Hu Xiaoyong, Yang Jing, Li Lanyu & Wang Tiantian, 2022).

Ji'an City was in an epidemic risk area during the period of this study, as many people were unable to work due to the epidemic, they reduced or lost their income, or even deficit, according to which, this study proposes

Hypothesis 1: There are differences in job security, economic insecurity and job anxiety among people with different types of jobs during the epidemic.

Hypothesis 2: Job security predicts the behavior of Intertemporal choice.

2. Method

2.1. Design

Using questionnaires, the Job Security Scale, Job Anxiety Scale, Economic Insecurity Scale, and Intertemporal Choice Scale were used to measure job security, job anxiety, and economic insecurity, and to investigate their relationships and effects on intertemporal choice.

2.2. Subjects

A total of 300 questionnaires were randomly distributed in Ji'an City, 6 invalid questionnaires were excluded, 294 valid questionnaires were collected, of which 119 (40.48%) were men and 175 (59.52%) were women; 68 people (23.13%) were in charge of state organs, party organizations, enterprises and institutions, 74 people (25.17%) were professional and technical personnel, 22 people (7.48%) were clerical and related personnel, 41 people (13.95%) were commercial and service personnel, 4 people (1.36%) were production personnel in agriculture, forestry, animal husbandry, fishery and water conservancy, and 1 person (0.34%) was production and transportation equipment operator and related personnel. (0.34%), 1 military personnel (0.34%), 5 students (1.70%), and 78 other personnel (26.53%);

2.3. Measurement instruments

2.3.1 Self-administered demographic information questionnaire

The general information form including age, gender, educational level, urban status, type of work, income level, additional income, indebtedness, and other economic aspects.

2.3.2 Job Security Scale

Oldham et al. [13] (1986) developed the Job Security Scale, which consists of 10 items. The Likert 5-point scale was used, with 1 representing "strongly disagree" and 5 representing "strongly agree", and the Cronbach's alpha coefficient for this study was 0.835.

2.3.3 Job Anxiety Scale (JAS)

In this study, we used the Job Anxiety Scale (JAS) of the job stress scale developed by Parker et al [14] (1983), with 5 items and a five-point Likert scale, with "1" being "totally disagree" and "5" being "totally agree". "The higher the score, the more severe the job anxiety. The Cronbach's alpha coefficient for this study was 0.873.

2.3.4 Economic Insecurity Scale

The Schwarz et al. (1997) economic insecurity scale was used, and subjects were asked to assess the extent to which some of the descriptions fit their subjective perceptions on a 4-point scale (1 being "very much out of line"; 4 being "very much in line"). In this study, individuals' current economic situation was examined, and the Cronbach's alpha coefficient for the scale was 0.906.

ISSN 2706-6827 Vol. 4, Issue 12: 53-59, DOI: 10.25236/IJFS.2022.041210

2.3.5 The delayed discount paradigm

Card presentation [15] (Mark RD, Marley J, Jacobs AE. 2003), was used with an adaptive adaptation. Subjects were given two choices at the beginning of the experiment, an immediate reward that was immediately available to the subject and a future reward that required a certain amount of time to wait. The immediate reward was of lower value and the future reward was of higher value. In this study, the amount of the future reward is kept constant at 1000 yuan, and the amount of the immediate reward will be increased from 50 yuan to 950 yuan, and the amount of the subject's choice reversal will be recorded.

2.4. Statistical methods:

SPSS 25.0 statistical software was used for data entry and statistics.

3. Results and analysis

3.1. Common method bias test

In this study, the data on job security, economic security, and intertemporal choice were obtained by self-assessment of the scales, and there is a possibility of common method bias. Therefore, the Harman one-way test was used to test for possible common method bias in the study. The results showed that the variance explained by the first factor without rotation was 25.46%, which was less than the threshold of 40% and could be considered not to have serious common method bias.

3.2. Gender differences in job security, job anxiety, economic insecurity, and intertemporal choice

Table 1: Differences in gender for each variable (N=294)

	Male($\bar{X} \pm S$, *n*=119)	*Female*($\bar{X} \pm S$, *n*=175)	*t*	*p*
Job Security	32.79±9.51	35.63±8.09	-2.670	0.008
Job Anxiety	12.64±5.25	12.11±5.08	0.861	0.390
Economic insecurity	10.75±5.39	10.90±4.92	-0.251	0.802
Intertemporal choice	607.98±356.24	569.71±346.07	0.915	0.361

The gender differences in job security, financial security, and intertemporal choice were examined. The results showed that job security was significantly greater for women than for men (Table 1), which is consistent with previous studies; women preferred immediate rewards to men in intertemporal choice, but the difference was not significant ($p>0.05$).

3.3. Differences in job security, economic insecurity, job anxiety, and intertemporal choice across job types

Because of the small number of subjects in some job types, the results were not representative, so 33 small sample questionnaires were deleted for further analysis.

According to Table 2 it can be seen that job security, economic insecurity, job anxiety and intertemporal choice differ across job types. Post hoc multiple tests on this found that the differences in job security were significant between professionals and businessmen, service workers ($p=0.003$) and those in other professions ($p=0.007$), and that job security was higher for professionals than for businessmen service workers and those in other professions (Figure 1).

In terms of economic insecurity, the difference between workers in state agencies and institutions and in business services ($p=0.009$) and other workers ($p=0.017$) is significant; workers in state agencies and institutions have lower economic insecurity than those in business services and other workers; workers in business services have lower economic insecurity than those in professional services ($p=0.000$). The difference between commercial service workers and professional and technical workers ($p=0.000$) was significant, and the economic insecurity of professional and technical workers was significantly lower

ISSN 2706-6827 Vol. 4, Issue 12: 53-59, DOI: 10.25236/IJFS.2022.041210

than that of commercial service workers (Figure 2).

Table 2: Differences of variables on different job types (N=261)

	Source of variation	SS	df	MS	F	p
Job security	Between-group	863.728	3	287.909	4.039	0.008
	Within-group	18317.751	257	71.275		
	Total	19181.479	260			
Economic insecurity	Between-group	458.676	3	152.892	6.542	0.000
	Within-group	6006.496	257	23.372		
	Total	6465.172	260			
Job anxiety	Between-group	273.139	3	91.046	3.843	0.010
	Within-group	6089.283	257	23.694		
	Total	6362.421	260			
Intertemporal choice	Between-group	1045940.240	3	348646.747	2.913	0.035
	Within-group	30763159.380	257	119701.009		
	Total	31809099.62	260			

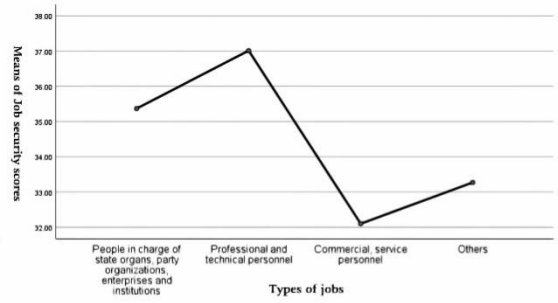

Figure 1. Differences in job security of subjects in different job types

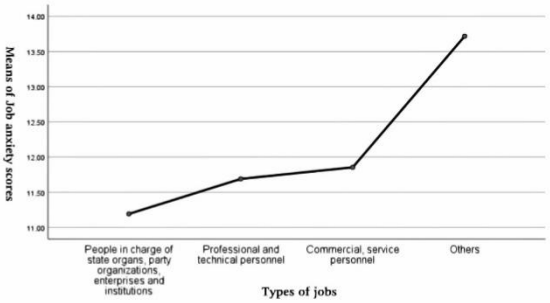

Figure 2. Differences in job anxiety of subjects in different job types

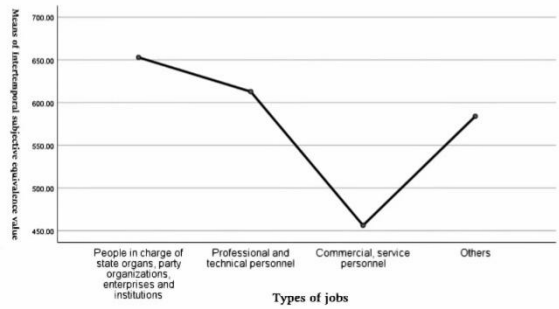

Figure 3. Differences in Intertemporal subjective equivalence value of subjects in different job types

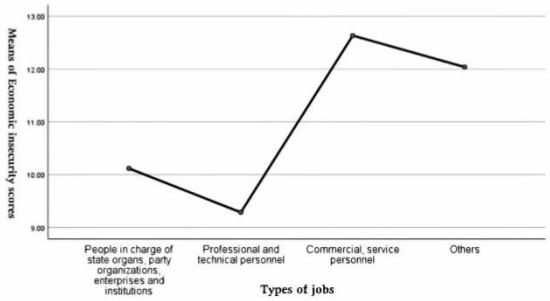

Figure 4. Differences in Economic insecurity of subjects in different job types

In terms of job anxiety other industry personnel differed significantly from state institutions (p=0.002), professional technicians (p=0.011), and business service personnel (p=0.048), all significantly higher than the other three job positions (Figure 3).

In terms of intertemporal choice, there were significant differences between business service workers and state institution workers (p=0.004), professional and technical workers (p=0.021), and business service workers was significantly lower (Figure 4).

3.4. Correlation analysis of job security, economic insecurity, job anxiety, and intertemporal choice

Table 3: Correlation analysis of job security, economic insecurity, job anxiety, and intertemporal choice (N=294)

Variation	Job security	Economic insecurity	Job anxiety	Intertemporal choice
Job security	1			
Economic insecurity	0.021	1		
Job anxiety	-0.108	0.375**	1	
Intertemporal choice	0.235**	0.095	-0.009	1

ISSN 2706-6827 Vol. 4, Issue 12: 53-59, DOI: 10.25236/IJFS.2022.041210

As shown in Table 3, economic insecurity and job anxiety were positively correlated (□<0.001) and job security and intertemporal choice were significantly positively correlated (□<0.001), and job security positively predicted the behavior of intertemporal choice.

4. Discussion

In today's environment, both re-industrialization and tertiary industrialization will greatly increase the survival pressure of low- and middle-income groups, and they are likely to face the risk of "downgrading" in the process of industrial transformation and upgrading, resulting in the reduction of the number of middle-income groups and the return of low-income groups to poverty [16] (Wang Xu, 2022), the arrival of the epidemic has once again changed people's perceptions of employment. Different jobs make people face different psychological reactions in the face of major events.

According to the eight categories classified by the Occupational Classification Dictionary of the People's Republic of China [17] (Song Yafeng, 2021), the categories with too few samples were excluded, and the first, second, fourth, and eighth categories were analyzed (see Figure 1~Figure 4). It was found that job security, economic insecurity, job anxiety, and intertemporal choice differed by job type. Job security was highest among professional and technical personnel and lowest among business service workers; economic insecurity was lower among state agencies and institutions than among business service workers and other workers; economic insecurity was lowest among professional and technical personnel and highest among business service workers; job anxiety was lowest among state agencies and institutions, while it was significantly higher among workers in other industries. The job anxiety of workers in state agencies and institutions is the lowest, while that of workers in other industries is significantly higher than that of workers in the other three jobs.

In terms of intertemporal choice, there are significant differences between the workers in state agencies, institutions, professionals and business service workers, with significantly higher intertemporal choice in state agencies and institutions and significantly lower intertemporal choice in business service workers, as well as some differences in their debt profiles, which is consistent with previous studies that people with low socioeconomic status have more debt and less savings [18] [19] (Kim et al., 2017; Moav & Neeman, 2012); and invest less in education [20] (Blanden & Gregg, 2004).

There is a significant positive relationship between job security and intertemporal choice. Among them, the feeling of job security is lower among state agencies and institutions workers than among professionals and technicians, but the intertemporal choice is higher than that of professionals and technicians, probably due to the significant differences between their age, education and urban/rural status.

From the post-study interviews, we learned that more and more parents are advising their sons and daughters to work for state agencies and institutions to ensure their financial stability and future life because of the low job security of their own jobs. The number of college graduates applying for national and provincial civil service has been increasing year by year, among which 14.28% of college students said that they took the public examination to meet their parents' expectations; 14.01% of college students suggested that the current employment situation is too severe [21] (Zhang Zhongqi & Gao Cuixin, 2022). The "wolves are many and meat is few" has led to more and more people failing in their job search and then re-planning their careers, and the time of job seekers is wasted, and some jobs in society are not sought by anyone. Research shows that the jobs with higher job security and economic security are professional and technical staff, not state agencies and institutions, which is different from people's perception.

Through the results of this study, it is intended to appeal to society and the state to pay attention to business service workers, to guarantee job stability and wages, and to improve job security, which is important for people's long-term interest decisions; to improve social attitudes toward different jobs, to give people a reasonable perception of different jobs, and to improve the national employment problem.

5. Shortcomings and Prospects

Shortcomings: In this study, the questionnaires were distributed randomly on line, and the types of work of the subjects may be different depending on the proportion of social jobs. Some of the subjects were missing, and they were deleted in the later statistics due to the small number of jobs, but we should pay attention to the jobs with a small proportion of social jobs.

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Prospect: This study is based on the investigation under the situation that the epidemic blocked the city for a long time and it was difficult to carry out normal work, to examine people's sense of security of their own jobs, the degree of job anxiety and the sense of security of their own finances in the face of similar major events, and also to explore the influence of job security on intertemporal choice. On this basis, we can either supplement the sample with a smaller proportion of workers in society, or expand the total sample size of the study to analyze the survey.

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