

*The Determinants of Stress in China:
A Comparison between the Rural, Urban and Migrant Populations*

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Abstract

This paper uses data from the Chinese Household Income Project (CHIP) 2007 to analyze the impact of personal, work, family, and health and behaviour characteristics on the probability of being stressed in China in relation to the respondents' Hukou Status. The Hukou system is a registration system in China that determines where a person is allowed to live and work. In this paper, three population groups are analyzed: urban, rural, and rural-urban migrants. The results show that both urban and migrant people are about 5 percentage point more likely to be stressed than rural dwellers, no matter what specification is used. We observe that male workers have lower probability of being stressed than females and that marital status affects females only. When all the characteristics are studied separately by Hukou status, we see that work characteristics such as unemployment decrease stress for urban citizens only. Poor health increases the likelihood of being stress for all respondents, while smoking behaviour only affects rural people. In addition, Oaxaca decompositions between urban and rural people and between urban and migrant people are performed. The results further show a small total explained effect and a large effect of the constant term in the unexplained part.

1. Introduction

Mental disorders such as stress, depression and anxiety are pervasive in our lives. Stress sometimes can lead to a kind of motivation if it is handled well, but high levels of stress are likely to induce health problems. For instance, according to the World Health Organization (WHO 2018), approximately 800,000 people die from suicide globally every year, an average of one death every 40 seconds, and more than 20% of the total illness burden in China in 2004 was due to mental disorders and suicide. Stress has now become a major public health concern in China, with close to 170 million adults suffering from mental illness (Phillips et al. 2009).

China is a country that has developed very rapidly recently, but it was mainly constructed with arable land and farmers make up more than three-quarters of the population (National Bureau of Statistics of China 2010). Since the end of the 20th century, movements of population in China have been a large-scale phenomenon. Massive migration has been influenced by modernization and industrialization of China. The term “migrant” is used to describe those individuals who move from rural, either with family or alone, to urban areas in order to search for more opportunities and to live better lives, but without enjoying the full rights of urban identity (referred to as the urban Hukou). In 2006, according to the State Council (2006), migrant workers were identified as a new type of labour force that emerged from China's reforms, industrialization and urbanization (State Council, 2006). Their household registration is still rural, even if they are mainly engaged in non-agricultural activities, are highly mobile and some of them have been employed in the cities for a long time. It is undeniable that rural migrant workers have made great contributions to the

modernization of China. But because of the overall environment in China, especially in the countryside, the opportunities for finding non-farming jobs are so few that the primary reason for the migrants to be away from home is to increase their income. However, in the urban areas, their employment choices are constrained because they do not have the same rights as other urban citizens, including education attainment, getting the same social benefits, and so on.

There is a large amount of literature that has concentrated on stress. Some of the studies compared people who live in urban areas with those who live in rural areas. A limited amount of research was about the situation of rural-urban migrant workers in China. This paper constructs simple models to provide further analysis of differences in stress between rural-urban migrants, local urban citizens and rural dwellers in China and to analyze potential factors that are related to stress for these three population groups. Using data from the Chinese Household Income Project (CHIP) 2007, I begin by identifying factors that potentially influence mental stress and then control for as many of them as possible in further regression analysis.

A major finding of this paper is that compared to rural dwellers, people who live in urban areas and those who are rural-migrant workers suffer more stress from either life or work than rural residents, with a difference of about 4 to 5 percentage points (pp). This result holds even after controlling for many variables in the regression analysis. In addition, an Oaxaca decomposition further analyzes the selected groups, and the main finding is that most of the difference in stress between urban and rural residents is due to the differences in regression coefficients, not to differences in average characteristics; however, between urban

residents and migrants, there is a similar level of stress, but characteristics of the two groups are different. For all groups of the population, the probability of being stressed is lower for those who are males, those who are older, those who are not employed and those who are single.

The paper is structured as follows. In the next section, I present a literature review by discussing several articles that addressed the mental illness worldwide and in China. Section 3 describes the datasets and the variables that will be used in the paper, as well as providing an analysis of summary statistics. In section 4, I present the econometric models and section 5 discusses the results. Finally, section 6 concludes.

2. Literature Review

2.1 General determinants of stress and differences between urban and rural areas

Non-psychotic disorders such as stress, depression and anxiety have always been a concern in people's everyday lives. The literature identifies many factors that could influence people's mental health, including demographic, socio-cultural, and health features (Bhugra 2004). For instance, women report consistently more stress than men, likely because of family responsibilities and pressure from work (Crompton 2011; Park 2008). Educational attainment, working hours, and income are also related to stress, the more educated and wealthier population tending to have higher levels of stress (Park 2008; Williams 2003; Yang et al. 2012). Furthermore, Michie (2002) argued that stress can also be seen in changes in one's behaviour, such as drinking and smoking. Overall, individuals differ in the risk of having stress. In addition to all those factors that are influential, it has been observed that the environment, in which people live, such as residing in an urban as opposed to a rural area, is

associated with higher level of stress.

Romans et al. (2011) studied depression and anxiety differences between rural and urban dwellers in Canada using the 2002 Canadian Community Health Survey. They found that, compared to urban citizens, rural dwellers tend to have lower rates of depression and other mental illnesses. In their study, significant differences between rural and urban residents were found for age, gender, education, mental health, marital status and income. Also, they showed that, if respondents report a high sense of belonging to their community, they tend to feel less depressed or stressed. In their results, the proportion having psychiatric disorder is higher among urban citizens (at 17%), than among rural ones (at 14.5%).

In a study on Great Britain, Paykel et al. (2003) examined several characteristics of urban-rural dissimilarities, noting that although there are many studies on rural-urban differences, there are very few about non-psychotic illness. Their sample was drawn from the Household Survey of the National Morbidity Survey of Great Britain and was divided into three groups: urban, semi-rural, and rural. Their results showed that, along with the high consumption of alcohol and of drugs, the rate of psychiatric disorders was also high in urban areas. They found that urban subjects were more likely to experience stress, and that they had lower self-perceived value than rural subjects. The study showed that, the level of mental health is worse in urban areas than in rural.

Viviane et al. (2005) studied urban-rural differences in mental health in the European Union. Their data is based on a cross-sectional, face-to-face personal interview survey called the ESEMeD 2000 study, and it contains the following six European countries: France, Germany, Spain, the Netherlands, Belgium, and Italy. Their results are analogous to those of

the previous studies, but there are differences across countries. For example, there is a high rate of mental disorder among women in urban areas except for those in Belgium, but on average, women who live in urban areas tend to suffer more mental illness. Overall, the people who live in urban areas seemed to be more likely to suffer from mental problems.

A comprehensive research done in the Netherlands, called NEMESIS, is a full structured interview survey about psychiatric conditions of the population aged from 18 to 64. Bijl et al. (1998) used this sample to analyze various perspectives of psychiatric problems. Based on their results, “urbanicity” is associated with a higher risk of having mental disorders. Almost 20% of urban citizens reported that they suffered from mental illness over the previous twelve months during the research period, compared to only 15% of rural dwellers. Their study also revealed that demographic variables such as age, gender, and the socioeconomic status are related to people’s mental health.

2.2 The determinants of stress in China

After looking at the rest of world, I now focus on China. In addition to the distinction between rural and urban residents, there is another group of people in China that must be considered. They are those who migrate from rural areas to urban areas and who are seeking for a better life. Because of the Hukou system, their rights are not the same as those of urban citizens and they live far from their families. The Hukou system in China is a household registration system aimed at control population movement; it is used to limit rural-urban migration since a person’s Hukou determines where he or she is allowed to live and what rights he or she are entitled to. In the rest of the literature review, I discuss some studies that have examined the link between stress and living circumstances in China.

Recent empirical studies suggest that migrant workers in China generally suffer more stress, both in life and in work than workers in general, and thus they appear to spend longer time periods under strain. This view is advocated by Zhong et al. (2013), who performed a multilevel meta-analysis to explore the potential factors that are associated with the overall mental health of Chinese migrant workers. They used 48 cross-sectional surveys with a total of 42,813 observations employing the Symptom Checklist-90-R to measure psychological symptoms among Chinese migrant workers. The results showed that the scores of psychological symptoms for the migrant workers are statistically higher than those of the average population in China. Consequently, they concluded that “the Chinese migrant workers have more severe psychological symptoms than the general population, and thus, appear to experience higher level of psychological distress” (Zhong et al. 2013, page 1569).

Another study by Zhong et al. (2016) discussed the acculturative stress of migrant workers in China. The study used a sample from four factories in Shenzhen, one of the largest migrant cities in China, in 2012. The authors randomly selected a few migrant workers and invited them to participate; they ended up choosing 17 migrant workers for their analysis. Although the majority reported that they are better off compared with their previous life in rural areas, more than 70% indicated that they planned to go back to their hometown due to the stress that they currently suffered. The results showed that migrants in China were facing numerous kinds of stress such as family-related stress due to the separation from their family, financial problems, and struggle to adapt to the environment of the urban area and to their own sense of belonging. Their findings suggest that the migration process in China is originally challenging, and given the large number of migrant workers, more services

involving mental health should be provided to them.

In a similar study also done in Shenzhen, Wong and Chang (2010) examined the mental health condition of migrant workers. They randomly chose factories in all six districts in Shenzhen, and they ended up with 582 migrant workers that were drawn from 17 factories in eight different industries. The Migration Stress Scale and the Social Competence Scale were used to measure the stress of the migrant workers, and the results showed that the migrant workers experienced several major clusters of psychiatric symptoms including depression and hostility. However, even if they are aware of the symptoms, only a few of the migrants go searching for help because of the limited medical benefits that they can receive in the cities due to the Hukou system.

Those results are also supported by Wong and He (2008) who examined the mental health of migrant workers in Shanghai. The authors randomly chose four districts in Shanghai and selected four community agencies in each of the four districts; they ended up with 475 migrant workers who were interviewed. Their results indicated “a number of risk factors that are associated with the mental health of migrant workers in Shanghai, China” (Wong and He, 2008, page 140). They also found that financial and employment problems particularly cause more stress for migrant workers due to the overdue wage and long working hours. The authors suggested that it is important to provide counselling for those migrant workers who suffered serious mental illness, and for those who struggle dealing with living difficulties, not only in Shanghai, but nationwide.

But are migrants the only population group in China that is suffering high life stress? The answer is no. Lai (1995) took another perspective to examine the relationship between

work-family stress and psychological distress in urban China. He argued that work and family roles in China have become more important for almost every adult and that people's psychological states have changed over time. He used data from a survey conducted in Shanghai in 1987 on 1,200 adults. The self-reported symptoms were used to represent the psychological distress and were measured by the Center for Epidemiological Studies Depression Scale. After analyzing the data, he concluded that "The urban Chinese are shown to be able to exhibit psychological distress...Work and family stressors are related to psychological well-being among the Chinese" (Lai, 1995, page 30). Moreover, the results also reflect some consequences related to gender, age, and education. Therefore, he suggested that future research should focus more on the effects of Chinese urban citizens' mental health.

Shortly after Lai presented his study, another article by Yang and Huang (2003) studied the level of stress and other related problems among urban residents during China's economic transition period, which is the period from around 1990 to 2000. The authors sampled 3666 participants from Hangzhou, Guangzhou, Chongqing and Taiyuan, and used Perceived Stress Scales to measure the level of stress. They found that almost 64% of the sample suffered moderate to severe levels of stress, with 20% of them being under a high level of pressure and 6% feeling stress severely. In their study, they argued that the social transformation in China was so comprehensive that psychological pressure had become a serious public health problem. It can be expected that with the deepening of the reform, this problem will become more prominent, and in order to improve people's health and quality of life, a high level of attention must be given to those groups of people.

In a recent study, Yang et al. (2012) suggested that stress is positively related to social

class in China, indicating that, compared to rural people, urban citizens may face more pressure. To estimate the level of stress and to identify the potential characteristics that relate to the urban citizens in China, the authors did a cross-sectional survey of 4,735 participants who lived in one of six capital cities in China, which include Nanjing, Hangzhou, Guangzhou, Taiyuan, Harbin and Yinchuan. They set up face-to-face interviews and collected data based on some sociodemographic characteristics such as age and gender. They used the Perceived Stress Scale as the dependent variable. The results showed that almost a third of the participants were severely stressed, and that the stress level was associated with numerous characteristics. It decreased with age, and people who obtained higher education and higher income showed higher stress levels than those with lower education and lower incomes. From their point of view, it is important for governments and local agencies to implement a mix of strategies to help reduce the stress level among the urban population in China.

The literature has shown that stress is ubiquitous, but rural life is to a certain degree more relaxed than urban life. Certain characteristics are found to be related to the stress level, such as having higher education, being a woman, having children, having poor health and smoking. This paper will analyze further these characteristics related to stress level among Chinese people using survey data and will do a comparison between rural, urban and migrant citizens in China.

3. Data and Summary Statistics

The 2007 Chinese Household Income Project Survey (CHIP 2007) is used as my dataset in this paper. This survey was initiated by a group of scholars from the Beijing Normal University and the Australian National University, and it was supported by the National

Bureau of Statistics of China and the Institute for the Study of Labor (IZA) in Germany. The data were collected by the Chinese Academy of Social Science. The CHIP 2007 survey is a part of the large Rural-Urban Migration in China project (RUMiC) and it is divided into three independent samples: the “Urban Household Survey”, the “Rural Household Survey” and the “Rural-Urban Migrant Household Survey”. For the “urban” and “rural-urban” surveys, nine provinces were selected: Shanghai, Zhejiang, Guangdong, and Jiangsu from Eastern China; Henan, Hubei, and Anhui from Central China; Sichuan and Chongqing from Western China. The “rural” survey also covered nine provinces, but Shanghai was excluded while Hebei was added. Urban residents are those respondents who hold an urban Hukou, rural residents are those who hold a rural Hukou, and migrant workers are people who hold a rural Hukou but lived or worked in an urban area when the survey was conducted. The urban and migrant samples each contain about 5000 households, while the rural sample contains around 8000 households. Each of the three samples includes detailed information on household members, such as age, gender, children, marital status, working conditions, health status, education attainment, and mental feelings. With its comprehensive and in-depth questions, this survey is a unique tool to explore and understand the developing process of labour markets in China. In my research, I pooled all these three samples as my dataset, with the urban sample containing a total of 14,683 individuals, the rural sample 31,791 individuals, and the migrant sample 8,446 individuals.

The purpose of the paper is to examine possible differences between urban, rural and migrant people regarding their stress. I will report on stress differences between those groups and on some potential factors associated with them.

3.1 Sample Restrictions

Some observations are dropped from the sample before doing the analysis. The sample is restricted to respondents whose age ranges from 22 to 65. The reasons for that choice are: first, the minimum legal age for working is 16 years old in China; second, according to China's Marriage Law, the minimum legal age for males to get married is 22 years old, and it is 20 years old for females; and third, the official retirement age for males is 60 years old and 55 years old for females, but with considerations that senior people may still work in rural areas if they don't have any pensions, I set the maximum age at 65. I also excluded observations with missing values on variables such as age, working condition, educational attainment, smoking, and stress level, and it left me with a final sample of 23,993 observations: 12,684 (53%) are males, and 11,309 (47%) are females; 12,209 (51%) are from the rural sample, 7,051 (29%) are from the urban sample, and 4,733 (20%) are migrants based on their Hukou status.

3.2 Variables

3.2.1 Dependent Variable

The survey gathered detailed information for each respondent, including the responses to the question “Are you constantly under strain?” with four choices of answer. In this paper, the dependent variable “stress” is a dummy variable taking the value of 1 if the respondent reports being under strain “sometimes”, “fairly often” or “very often”; otherwise taking the value of zero if they report being “never” under strain. I also created a variable indicating a “high” level of stress by including only those whose responses are “fairly often” or “very often”. The results using this dependent variable were similar to those using the previous one

for most of the regression coefficients. Therefore, I will focus on the general stress level in my analysis. This way of categorizing individuals based on self-reported feeling has also been used in other studies (Sedigh et al. 2017; Park 2008).

3.2.2 Independent Variable

Many factors can affect one's mental health status and can cause certain groups of people to feel more stressed than others. Such factors include age, gender, education, working condition, health condition, marital status, smoking behaviour, presence of children, and whether people live in rural or urban areas. I also divided these independent variables into categories: personal characteristics, working characteristics, family characteristics and health-behaviour characteristics. In this part, I will describe these key explanatory variables in detail.

In the context of China, a main independent variable is the Hukou status, whereby individuals are divided into "urban", "rural" and "migrant" based on the responses to questions in the survey. From previous research, I expect rural people to be less stressed than urban people. Based on the studies in China, I expect migrants to be more stressed given their difficult working conditions.

Personal characteristic is the first group of variables which include age, gender and education. Age is a continuous variable that takes values from 22 to 65. Gender is a dummy variable taking the value of 1 if the respondent is male, and zero for females. Education attainment is an important factor in the labour market, and it is also a strong indicator of well-being. I generated four dummy variables for education level. The first dummy is called "Less Than Secondary School" and it includes people who finished primary school or were

not educated at all. The second group is the “Secondary School” level, which includes people who finished either their secondary school or high school. This is the majority group in China, especially in rural areas because of the high cost of living and the high expense of sending children to college. The third dummy variable is called “Some Postsecondary School”, which includes people who hold a college diploma or a graduate degree from a technical school. The last group is “University and Master” level which includes people who hold a bachelor or a higher degree. The “Secondary School” level is taken as the reference category. Generally speaking, people with higher education are expected to suffer more stress due to the competition that they face either in work or in life.

Working characteristics include one variable: being employed or not being employed at the time of the survey (retired, looking for a job, or staying home to do housework). People who have a job are expected to be more stressed since they face a stronger competition; however, people who are unemployed may also face more stress because their life may not be guaranteed.

Marital status and presence of children are family characteristics that make up the third group of variables. Marital status is an important factor that may influence people’s mental health, so I divided the sample into three categories: married, single, and divorced/widowed, in order to examine whether people who are single or divorced are more stressed than those who are married. I include the group of people who “cohabit” with the group “single” since their proportion in this sample is small. Divorced or separated people are expected to be more stressed, especially women, and they are more likely to report physical and emotional symptoms of stress than men.

Having children is important, but it can also cause some stress to the parents. The number of children can be an important factor that influences people's mental status. The expected result is people who have more children tend to be more stressed than others, because they need to devote more time and money to parenting.

Finally, health condition and personal behaviour also are qualitative variables that could influence people's stress level. People with poor health condition may be more likely to suffer stress. Regarding smoking behaviour, the prediction is not obvious because smoking may sometimes tend to relax people, but it may also cause stress.

3.3 Summary Statistics

Table 1 reports the summary statistics with the mean values of selected variables in my sample using the CHIP2007 datasets. Looking at the dependent variable of stress, 69% of the people in the total sample report having stress and 9% suffer high stress (are under strain "fairly often" or "very often"). The proportions of urban and migrant workers who feel stress are about the same, at about 71% (11% for high level of stress), while the proportion for the rural dweller is only 66% (7% for high level of stress). Also, as found in earlier research, women have more stress than men with a difference of 4 percentage point (71% and 67% respectively).

As shown in the table, the sample is composed of 51% rural dwellers, 29% urban citizens and 20% migrant workers. According to the China National Bureau of Statistics, the number of rural-urban migrants was approximately 260 million in 2010, representing about 20% of the population in China. Therefore, my data is reliable and representative of the Chinese population.

The table also shows the mean values of the four categories of characteristics described earlier. For the education level, around 25% of the people either went to primary school or received no education at all, 60% finished secondary or high school, 12% obtained a post-secondary diploma, and only 3% of the respondents received a bachelor or higher degree. Looking at the distribution of each education level by their Hukou status, we can see that a much higher proportion of urban citizens (40%) graduated from higher level institutions (postsecondary school or higher) than migrants (14%) and rural people (4%).

Additionally, the average age for males is 43 years and it is 42 years for females. We can also see from the table that the average age of migrant workers is 33 years old, which is almost 13 years younger than the other two groups. Since the migrants usually live in a poor rural environment originally, with no financial support, they must quit school and move to big cities to seek a better life.

The gap between divorced and married people is fairly large, with 87% of the people being married, and only 3% of the people reporting that they are either divorced, separated or widowed; among all three marital statuses, migrants tend to have the lowest proportion being married, at only 68%. Also, rural people have an average of two children in their family, while migrants have the lowest number with less than one child on average.

Most people report having a good or fair health condition, at about 73%, and the proportion who smoke is 33% on average. Specifically, we can see that 60% of males smoke daily or occasionally, but only 2% of female in the sample do. In Chinese culture, it is still considered unacceptable for women to smoke, as it used to be in Western countries many years ago.

4. Econometric Model

4.1 Regression Analysis

I use an OLS regression, or a linear probability model, to investigate the difference in the level of stress among rural, urban and migrant workers using the above variables. Alternative regressions that combine different subsets of variables are used to estimate the effect on stress level, with five specifications in total. The OLS model is used in this study since its results are easily interpretable, but I also did probit regressions in order to verify that my OLS results are reliable and found that both results were about the same. I also performed an ordered probit regression model (See Table A1 in the Appendix) to estimate the relationships between all four levels of stress reported in the survey and a set of independent variables. Robust standard errors are used through analysis to account for potential heteroscedasticity.

The first specification includes only the “Hukou” variables:

$$stress_i = \beta_0 + \beta_1 Hukou_i + \varepsilon_i \quad (1)$$

Here, $stress_i$ is a binary variable that takes value of one if the respondent feels stress, and otherwise zero; $Hukou_i$ is a vector of binary variables which includes the variables “urban”, “rural” and “migrants”, with “rural” serving as the reference category.

The second specification adds the personal characteristics as shown below:

$$stress_i = \beta_0 + \beta_1 Hukou_i + \beta_2 personal_i + \varepsilon_i \quad (2)$$

where $personal_i$ is a vector of the variables of age, gender and education attainment.

The next specification adds the work characteristics, denoted as $work_i$, into the regression:

$$stress_i = \beta_0 + \beta_1 Hukou_i + \beta_2 personal_i + \beta_3 work_i + \varepsilon_i \quad (3)$$

The fourth specification adds the family characteristics of marital status and the number of children:

$$stress_i = \beta_0 + \beta_1 Hukou_i + \beta_2 personal_i + \beta_3 work_i + \beta_4 family_i + \varepsilon_i \quad (4)$$

Finally, the last specification adds health and behaviour characteristics, which are health condition and smoking behaviour.

$$stress_i = \beta_0 + \beta_1 Hukou_i + \beta_2 personal_i + \beta_3 work_i + \beta_4 family_i + \beta_5 healthbehavior_i + \varepsilon_i \quad (5)$$

4.2 Oaxaca Decomposition

As an additional investigation, the Oaxaca decomposition technique is used for decomposing differences in average stress level between two groups (urban and rural / urban and migrants) into a component that is due to differences in the average characteristics between these two groups, and another component that is related to differences in the returns to those characteristics. Those components are called the explained and unexplained parts. The models for rural, urban and migrants are conducted as follows:

$$\text{Regression for rural: } (\overline{Stress}_r) = \bar{X}_r \beta_r \quad (6)$$

$$\text{Regression for urban: } (\overline{Stress}_u) = \bar{X}_u \beta_u \quad (7)$$

$$\text{Regression for migrants: } (\overline{Stress}_m) = \bar{X}_m \beta_m \quad (8)$$

where (\overline{Stress}_r) , (\overline{Stress}_u) and (\overline{Stress}_m) are the proportions being stressed for rural, urban and migrants, respectively. \bar{X}_r , \bar{X}_u and \bar{X}_m are vectors of the means of the explanatory variables. Two decompositions are done, between urban and rural, and between urban and migrants. They can be written as:

$$\text{Urban and Rural: } (\overline{Stress}_u) - (\overline{Stress}_r) = (\bar{X}_u - \bar{X}_r) \beta_u + \bar{X}_r (\beta_u - \beta_r) \quad (9)$$

$$\text{Urban and Migrants: } (\overline{Stress}_u) - (\overline{Stress}_m) = (\bar{X}_u - \bar{X}_m) \beta_u + \bar{X}_m (\beta_u - \beta_m) \quad (10)$$

The first term of equations (9) and (10) on the right hand-side is known as the component of the differential that is explained by differences in the average characteristics between the urban and rural groups, and between the urban and migrant groups, respectively, while the second term is the unexplained component.

4.3 Limitations

This study aims to identify the effect of a number of factors associated with being stressed by people in China. Before presenting the results, some limitations must be mentioned. First, the cross-sectional nature of the survey used in this paper means that some causal factors may be undetermined; they could be investigated further using longitudinal data if possible. Identifying the direction of causality can be difficult; for example, people who smoke daily may become more stressed, but they may also start smoking to relax themselves after feeling stressed. Second, the use of self-reported stress has its own disadvantages such as the desire to participate and the willingness to truly answer the questions. For example, respondents may underestimate or overestimate the stress level they experienced when answering the survey, which could affect the number of respondents being identified as having stress or not. That causes measurement errors which could lead to an underestimation of the regression coefficients. There may be differences between genders when reporting how they feel. Overall, future research is required in order to attempt to validate the effects of all the variables.

5. Empirical results

5.1 Regressions for all respondents

In Table 2, the OLS regression results are displayed after controlling for the groups of characteristics discussed earlier (personal, work, family, and health and behaviour) in five different combinations. First of all, focusing on the Hukou differential, the main finding is that both urban citizens and migrant workers are about 4 to 5 pp more likely to be stressed than rural dwellers across all five regressions, and this is true at the 1% level of significance. Urban citizens have the biggest difference compared to rural citizens, at 5.5 pp, when personal, work and family characteristics (column 4) are controlled for. Migrant workers are 4.1 pp more likely to be stressed than rural people, and the biggest difference is at 4.9 pp when all characteristics are controlled (column 5). This implies that, even after controlling for many relevant variables, urban citizens and migrants are still more stressed than the rural populations. This finding is consistent with those of previous studies that urban citizens are generally more likely to be stressed than rural people, but it does not support the view expressed in some studies that migrants in China may be more stressed than urban citizens.

Across specifications (2) to (5) in Table 2, males are significantly less stressed than females. As seen in the literature review, the rate of mental disorder is high among women (Viviane et al. 2005). Males are the least stressed, at a 4.3 pp less than females when controlling for Hukou, personal and work characteristics (column 3).

The paper supports the result of the literature that the probability of having stress decreases with age. This is significant at the 1% level when all characteristics are controlled for (column 5) and it's also significant in column 4, but not significant in columns 2 and 3. This implies that the fact that the elder is less stressed becomes even more apparent when more variables are controlled.

Although people who have “less than secondary school” or “some postsecondary school” degrees are showed to be more stressed than the reference group of those with secondary school, the differences are not statistically significant. However, people who earned a bachelor or higher degree are about 5 pp more likely to be stressed, and it is true at the 1% level of significance across all specifications. As found in the literature, people who obtained higher education show higher stress levels than those with lower education (Yang et al. 2012). Regarding working characteristics, people who are not employed are 2 to 3 pp less likely to be stressed than employed workers.

Considering the family characteristics, the number of children and marital status both show a strong relationship with stress level. People who have more children are more likely to be stressed as shown in specification (4) and (5) (both are significant at 1% level); the high cost of education and living expenses for raising a child could possibly be the reason. For marital status, compared to those who already married, single people are less likely to be stressed and it is significant at the 5% level when controlling for all characteristics (column 5). Since single people do not need to worry about his/her partners or kids, this may be the reason for lower probability of stress. Similarly, those who are divorced, separated or widowed are 5.4 pp more likely to be stressed than the married people, and it is statistically significant at the 1% level.

Finally, for the last group of variables, respondents who have poor or fair health status seemed to be 14 pp more likely to be stressed than those whose health condition is excellent or good (significant at 1% level), the largest magnitude among the coefficients of all other variables in this study. However, smoking behaviour is shown to be irrelevant in the

determination of the stress level.

5.2 Separate regressions by gender

There is evidence that males and females are different with respect to mental health and throughout my analysis, I found some interesting results regarding the probability of being stressed by gender, which are shown in Table 3. The model specification includes all five groups of characteristics and it provides details on the differences between males and females in being stressed. Looking at the Hukou status, compared to the reference group of those who live in rural, both urban and migrant males and females are more likely to be stressed than rural citizens by 4 to 5 pp. We observed that male migrant workers have the highest probability of being stressed, at 5 pp higher than that of the rural workers.

Among the personal characteristics, both males and females appear to be less stressed as they older. Compared to the reference group of those who finished secondary school, only males with a bachelor or higher degree have a statistically significant coefficient which shows that they are more likely to be stressed by 7.5 pp. People who are not employed are less likely to be stressed and this is still true when studied by gender.

In the family characteristics group, both genders appear to have more stress when they have more children, but females show a higher coefficient (2.1 pp) than males (1.2 pp). As for marital status, although the fact that people who are divorced, separated or widowed are more likely to be stressed was significant when studied for the whole sample, this is the case only for females, with a difference of 8.2 pp compared to married people. Also, only female singles are less likely to be stressed than married ones, with a difference of 3.8 pp. The coefficients of those variables for males are not statistically significant. Because of their roles

in the family, females are more affected than males as they are not only responsible at home as housewives or mothers; those females who have careers may face more stress.

In terms of health and behaviour characteristics, the effects on stress are similar for both genders. Poor health increases the probability of being stressed among females by 13 pp, and among males by 14 pp. Although, smoking behaviour did not have a statistically significant coefficient in the regression for both genders in Table 2, when studied by gender, smoking for males has a positive effect of 1.6 pp on being stressed (significant at the 10% level); for females, the effect of smoking behaviour is not statistically significant. As noted in Table 1, smoking is widespread only among males in China.

5.3 Separate regressions by Hukou status

As mentioned earlier, urban citizens and migrants are more likely to be stressed than rural dwellers, Table 4 presents three regressions based on respondents' Hukou status after controlling for the five groups of characteristics. Among the personal characteristics, males who live in rural areas tend to have a lower probability of being stressed than females with a difference of 5.4 pp (significant at the 1% level); among the migrant workers, males are less likely to be stressed than females by 3.3 pp (significant at the 1% level). For urban citizens, the difference is not statistically significant. Although age was significant when studied for the whole sample or by gender, the impact of age is only significant for the rural and urban populations; as people age by one more year, the probability of being stressed decreases by 0.1 pp (significant at the 10% level) and 0.5 pp (significant at the 1% level), respectively. In terms of educational attainment, compared to the reference group who has a secondary education, only migrants who have less than secondary school level education and who

earned a degree from postsecondary schools have statistically significant coefficients, being less likely to be stressed by 3.9 pp and 4.6 pp respectively. However, unlike in other regression results shown in Table 2 and Table 3, the coefficients of university and master education for all three population groups now are not statistically significant. One possible reason could be that urban citizens are much more likely to be highly educated than the other two groups (about 12% of population in Table 1, compared to only 0.2% of rural people and 0.7% migrants).

Regarding the work characteristics, urban citizens who are not employed have the lowest change in probability to be stressed by 3.9 pp compared to those who are employed and it is significant at the 1% level. For the other two groups, the coefficients are not statistically significant.

In terms of family characteristics, the effect of the presence of children on stress is significant for rural people and migrants. Rural dwellers with one more child are 1.4 pp more likely to be stressed (significant at the 1% level), and migrant dwellers are 2.4 pp more likely to be stressed. As for marital status, compared to the reference group of those who are married, rural people who are either divorced, separated or widowed are more likely to be stressed by 5.5 pp (significant at the 5% level); in contrast, single urban citizens are 8.8 pp less likely to be stressed than married people, which is significant at the 1% significance level. The coefficients of family characteristics are not statistically significant for migrants.

Finally, for health and behaviour characteristics, the impact of poor or fair self-rated health is highly significant for all three groups of people. Migrant workers have the highest

probability of being stress due to poor health by 15.1 pp. Smoking behaviour is significant only for rural dwellers, with a positive effect of 2 pp.

5.4 Oaxaca decomposition analysis

After running several separate regressions to understand the circumstances of stress in China, and after looking at the mean values of the characteristics that may affect stress, I perform Oaxaca decompositions to further analyze the causes of the differences across the three population groups regarding their stress level. Two decompositions are presented.

The first Oaxaca decomposition is between *urban* and *rural* populations to estimate the impact of socioeconomic factors on the differences of being stress. The second Oaxaca decomposition is between the *urban* and *migrant* populations. The results are shown in Table 5. The specifications are based on all variables which were categorized into six groups: age, gender (male), education (less than secondary, some postsecondary, university and master), work (not-employed), family (children, divorced/separated/widowed, single), and health and behaviour (poor health, smoke daily).

The difference between urban and rural in the stress level is 4.8 pp. In Table 5, we can see that about 1 point is explained by differences in mean characteristics and the rest is due to differences in coefficients. Within the explained part, three groups of characteristics, *age*, *work*, and *health and behaviour* show significant results. Firstly, the coefficient of the *age* characteristic is positive in the explained part, at 0.0023. The positive sign indicates that urban citizens are more likely to be stressed than rural dwellers from the *age* characteristic; as we can see from Table 1, the average age of rural people is higher than that of urban people, and stress decreases with age as shown in the regressions. Therefore, the older age of rural

people leads to less stress for them. Secondly, the *work* characteristic has a coefficient of -0.0084. The negative sign implies that urban citizens should have less stress than rural people based on the *work* characteristic; this is because urban citizens are less likely to work and employed people are more likely to be stressed, as noted earlier. Finally, within the explained part, *health and behaviour* characteristics play a major role, since urban people have worse health than rural ones as we can see in Table 1, and poor health makes people feel more stressed. As for the unexplained part which is due to differences in coefficients, the constant term contributes the most with a positive contribution of 0.2552. The high value associated with the constant term indicates that the urban equation has a higher intercept than the rural equation. The *age*, *work*, and *health and behaviour* characteristics now all have a significant negative effect in the unexplained part, but their impacts are much smaller than that of the constant term.

The second Oaxaca decomposition is between the urban and migrant population. The same groups of characteristics are used to identify the differences of being stress based on various socioeconomic factors. We can see the difference to be explained is very small (0.0070), urban citizens having (slightly) more stress than migrants. Even if the difference is small, the decomposition shows that the factors that are related to it are important. The two groups are very different from each other in terms of characteristics, but the factors tend to cancel each other.

In Table 5, the total explained difference due to the differences in characteristics is -0.0174 (significant at the 10% level). The negative number indicates that urban people should have less stress than migrants given their characteristics. Looking at *age*, for example,

the contribution is at minus 0.0588 and it is significant at 1% level. The negative sign implies that urban people are less stressed than migrant people due to the *age* characteristic; as we can see in Table 1, urban people are much older than migrants and we know from the regressions that stress decreases with age. Therefore, the older age of urban citizens makes them less likely to be stressed than migrant workers. *Work* characteristic is also significant at 1% level and also has a negative coefficient at 0.0113. The negative sign indicates that *work* characteristic benefits urban more than migrants. There are generally more urban citizens who are not-employed as shown in Table 1, and in Table 4, we can see that *work* characteristics, as measured by employment status, affect urban citizens the most so that they have the least probability of being stressed among all groups of populations. Other characteristics that have significant values are the *family* and *health and behaviour* characteristics. Both of them have similar magnitudes with positive signs, and are significant at 1% level of significant. The positive signs indicate that urban people have more stress than migrant workers due to the *family* and *health and behaviour* characteristics. For *family* characteristics which is measured by marital status and the presence of children, since urban citizens are less likely to be single and have more children than the migrants, as shown in Table 1, stress increases with the presence of children and decreases with being single, therefore, leading to more stress for urban in this case. The positive and significant coefficient that the group of *health and behaviour* characteristic implies again that the urban people have more stress than the migrants. As shown in Table 1, urban citizens tend to have poor health and it increases the probability of being stress. Finally, the unexplained part has a similar magnitude as the explained part, but it has the opposite sign so that the two parts

cancel each other, which is why we are left with a small total difference in the stress level for those two groups.

6. Conclusions

This study has explored the impact of various socioeconomic factors on the probability of being stressed in China among three major population groups using the 2007 Chinese Household Income Project. All needed factors are divided into five main categories of characteristics: Hukou, personal, work, family, and health and behaviour characteristics. It was observed that both urban citizens and migrant workers are about 4 to 5 pp more likely to be stressed than rural dwellers. This study proposed different specifications to examine the effect of various factors on being stressed in China on an aggregate level, by gender and by Hukou status. This research further used Oaxaca decompositions to explain the cause of the gap between urban and rural, and between urban and migrant people.

First, when all respondents were analyzed, results were mostly consistent with the previous studies. They show that both urban and migrant people are more likely to be stressed than rural people, even after controlling for all variables. Furthermore, the study supports the result of the literature that males are less stressed than females and that having stress decreases with age. Moreover, work and family characteristics also have significant impact on the probability of being stressed among all respondents. However, the results were not in agreement with the Chinese studies that migrants are more stressed; perhaps because of the different data used in the paper.

When separate analyses are done by gender, marital status has a significant effect for females only. The effect of poor health is highly significant for both genders, with the effect

of smoking behaviour on stress being significant only for males. When analyzed only by Hukou status, the work characteristic of being unemployed is only significant for urban citizens. In contrast, family characteristics such as the number of children is significant for rural and migrant people but not for urban citizens. Poor health is still significant for all groups of people while smoking behaviour now only has significant impact on rural dwellers. The Oaxaca decomposition results further support the above results that despite the fact that many variables were included, urban citizens remain more likely to be stressed than rural people by about 5 pp. There is about 1 point that is explained by differences in characteristics, and a significant constant contributed the most in the unexplained part in the Oaxaca decomposition analysis. Between urban and migrant populations, the decomposition shows that the difference to be explained is very small, but these two groups are very different in terms of characteristics. For example, in the total explained part, urban people have less stress than migrants given their characteristics.

The current study analyzed the differences of stressed level between rural, urban and migrant people. Further steps need to take such as collecting more comprehensive data to identify the characteristics that affect stress in China. Some shortcomings also should be mentioned. The dataset used in this paper are somewhat old. CHIP 2007 is a well-organized dataset for my study since it contains all the information that I need. I checked with the recent CHIP datasets, but the information was not as comprehensive that they don't have questions on stress. Moreover, there are potential measurement errors due to the inaccurate answers provided by some respondents. For example, some less-educated individuals may misunderstand the questions and therefore provide with the wrong answers. In conclusion,

stress, as a universal mental disorder, needs to be given more attention, and more comprehensive analyses are required for a deeper understanding of the issue.

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Table 1 Mean Value of Selected Characteristics

Characteristics	All	Male	Female	Stress	High level of Stress	Rural	Urban	Migrants
No. of observations	23,993	12,684	11,309	16,517	2,177	12,209	7,051	4,733
Stress	0.688	0.669	0.711	-	-	0.667	0.714	0.707
High level of Stress	0.091	0.081	0.101	-	-	0.075	0.107	0.108
<i>Hukou Status</i>								
Rural	0.509	0.536	0.478	0.492	0.419	-	-	-
Urban	0.294	0.240	0.355	0.305	0.347	-	-	-
Migrants	0.197	0.224	0.167	0.203	0.234	-	-	-
<i>Personal Characteristics</i>								
Male	0.529	1	0	0.513	0.475	0.557	0.431	0.601
Female	0.471	0	1	0.487	0.525	0.443	0.569	0.399
Age	42.6	43	42.1	42.4	42.9	45.2	44.7	32.6
Less Than Secondary School	0.246	0.194	0.304	0.245	0.287	0.378	0.085	0.142
Secondary School	0.593	0.644	0.536	0.588	0.553	0.582	0.532	0.713
Some Postsecondary School	0.124	0.126	0.123	0.127	0.118	0.037	0.266	0.137
University and Master	0.037	0.036	0.038	0.041	0.042	0.002	0.117	0.007
<i>Work Characteristics</i>								
Employed	0.810	0.902	0.707	0.811	0.746	0.858	0.644	0.932
Not-employed	0.190	0.098	0.293	0.189	0.254	0.142	0.356	0.068
<i>Family characteristics</i>								
Married	0.866	0.852	0.882	0.865	0.845	0.919	0.903	0.675
Single	0.107	0.127	0.085	0.106	0.102	0.059	0.055	0.308
Separated, widowed, or divorced	0.027	0.021	0.033	0.029	0.052	0.022	0.041	0.017
Number of children	1.50	1.50	1.51	1.51	1.51	2.00	1.17	0.95
<i>Health & Personal Behaviour Characteristics</i>								
Health: Poor or Fair	0.270	0.245	0.299	0.306	0.486	0.267	0.356	0.153

Health: Excellent or Good	0.730	0.755	0.701	0.694	0.514	0.733	0.644	0.847
Type of smoker: daily or occasionally	0.327	0.599	0.021	0.318	0.295	0.374	0.236	0.339
Type of smoker: Not at All	0.673	0.401	0.979	0.663	0.705	0.626	0.764	0.661

Source: CHIP 2007

Table 2 Regression Results of being under stress, OLS model, specifications with various combination of characteristics

	Hukou	Hukou & Personal	Hukou, Personal & Work	Hukou, Personal ,Work & Family	Hukou, Personal, Work, Family &Health and Behavior
Variables	(1)	(2)	(3)	(4)	(5)
<i>Hukou (ref.Rural)</i>					
Urban	0.048*** (0.007)	0.041*** (0.008)	0.046*** (0.008)	0.055*** (0.009)	0.044*** (0.009)
Migrants	0.041*** (0.008)	0.042*** (0.009)	0.043*** (0.009)	0.048*** (0.009)	0.049*** (0.009)
<i>Personal</i>					
Male		-0.038*** (0.006)	-0.043*** (0.006)	-0.040*** (0.006)	-0.040*** (0.008)
Age		-0.0003 (0.0003)	-0.00008 (0.0003)	-0.001*** (0.0004)	-0.002*** (0.0004)
<i>Education (ref. Secondary School)</i>					
Less than Secondary School		0.011 (0.008)	0.011 (0.008)	0.009 (0.008)	0.004 (0.008)
Some PostSecondary School		0.001 (0.010)	-0.001 (0.010)	0.002 (0.010)	0.003 (0.010)
University & Master		0.050*** (0.016)	0.047*** (0.016)	0.048*** (0.016)	0.055*** (0.016)
<i>Work (ref. Employed)</i>					
Not-employed			-0.024*** (0.008)	-0.023*** (0.004)	-0.032*** (0.008)
<i>Family</i>					
Number of children				0.016*** (0.004)	0.016*** (0.004)
<i>Marital Status (ref. Married)</i>					
Divoced, Seperated or Widowed				0.054*** (0.017)	0.043** (0.017)
Single				-0.014 (0.012)	-0.025** (0.012)
<i>Health & Behaviour</i>					
Health:Poor or Fair (ref. Health: Excellent or Good)					0.136*** (0.007)

Type of smoker: daily/occasionally (ref. Type of smoker: Not at All)					0.011 (0.008)
<i>Constant</i>	0.666*** (0.004)	0.696*** (0.014)	0.692*** (0.014)	0.706*** (0.016)	0.729*** (0.016)
<i>F test</i>	29.40	16.56	15.66	14.33	45.55
<i>R²</i>	0.002	0.005	0.005	0.006	0.022
<i>Observations</i>	23,993	23,993	23,993	23,993	23,993

*Note: Robust standard errors in parentheses. *10% significance, **5% significance, *** 1% significance.*

Table 3 Regression results on the probability of being stressed, OLS model, by gender

Variables	Female	Male
<i>Hukou(ref. Rural)</i>		
Urban	0.044*** (0.012)	0.043*** (0.012)
Migrants	0.044*** (0.013)	0.053*** (0.012)
<i>Personal</i>		
Age	-0.003*** (0.0006)	-0.002*** (0.001)
<i>Education (ref. Secondary School)</i>		
Less than Secondary School	0.005 (0.011)	-0.0008 (0.011)
Some Postsecondary School	-0.006 (0.014)	0.010 (0.014)
University & Master	0.036 (0.024)	0.075*** (0.024)
<i>Work(ref. Employed)</i>		
Not-employed	-0.035*** (0.010)	-0.029* (0.015)
<i>Family</i>		
Number of children	0.021*** (0.006)	0.012** (0.005)
<i>Marital Status (ref. Married)</i>		
Divoced, Seperated or Widowed	0.082*** (0.024)	-0.008 (0.029)
Single	-0.038** (0.018)	-0.017 (0.016)
<i>Health & Behaviour</i>		
Health:Poor or Fair (ref. Health: Excellent or Good)	0.129*** (0.010)	0.143*** (0.010)
Type of smoker: daily or occasionally (ref. Type of smoker: Not at All)	-0.023 (0.029)	0.016* (0.009)
<i>Constant</i>	0.742*** (0.021)	0.674*** (0.023)
<i>R²</i>	0.021	0.02
<i>F test</i>	22.33	24.00
<i>Observations</i>	11,309	12,684

Note: Robust standard errors in parentheses. *10% significance, **5% significance, *** 1% significance.

Table 4: Regression results on the probability of stress, OLS model, by Hukou Status

Variables	Rural	Urban	Migrants
<i>Personal</i>			
male	-0.053*** (0.012)	-0.018 (0.014)	-0.033** (0.016)
Age	-0.0009* (0.0005)	-0.005*** (0.0007)	-0.0009 (0.001)
<i>Education (ref. Secondary School)</i>			
Less than Secondary School	0.002 (0.010)	-0.003 (0.021)	-0.039* (0.020)
Some Postsecondary School	0.036 (0.023)	-0.007 (0.013)	-0.046** (0.021)
University & Master	0.098 (0.083)	0.022 (0.018)	0.094 (0.069)
<i>Work(ref. Employed)</i>			
Not-employed	-0.0006 (0.012)	-0.039*** (0.013)	0.004 (0.027)
<i>Family</i>			
Number of children	0.014*** (0.005)	0.002 (0.010)	0.024** (0.012)
<i>Marital Status (ref. Married)</i>			
Divoced, Seperated or Widowed	0.055** (0.027)	0.039 (0.026)	0.027 (0.050)
Single	0.004 (0.020)	-0.088*** (0.027)	0.002 (0.021)
<i>Health & Behaviour</i>			
Health:Poor or Fair (ref. Health: Excellent or Good)	0.148*** (0.009)	0.115*** (0.011)	0.151*** (0.016)
Type of smoker: daily or occasionally (ref. Type of smoker: Not at All)	0.020* (0.012)	-0.010 (0.016)	0.012 (0.017)
<i>Constant</i>	0.660*** (0.021)	0.915*** (0.028)	0.717*** (0.033)
<i>R²</i>	0.023	0.025	0.019
<i>F test</i>	29.72	16.97	10.50
<i>Observations</i>	12,209	7,051	4,733

Note: Robust standard errors in parentheses. *10% significance, **5% significance, *** 1% significance.

Table 5: Oaxaca Decomposition of the difference in probability of stress between Urban and Rural / Urban and Migrants, by characteristics

	Urban-Rural	Urban-Migrants
Urban mean stress	0.7144*** (0.005)	0.7144*** (0.005)
Rural mean stress	0.6661*** (0.004)	
Migrants mean stress		0.7074*** (0.007)
Difference	0.0483*** (0.007)	0.0070 (0.009)
Total Explained	0.0096 (0.009)	-0.0174* (0.010)
Total Unexplained	0.0387*** (0.011)	0.0243* (0.013)
<i>Explained</i>		
Age	0.0023*** (0.0009)	-0.0588*** (0.008)
Gender	0.0023 (0.002)	0.0031 (0.002)
Education	0.0019 (0.007)	0.0017 (0.003)
Work	-0.0084*** (0.003)	-0.0113*** (0.004)
Family	-0.0001 (0.007)	0.0235*** (0.007)
Health and Behaviour	0.0116*** (0.003)	0.0244*** (0.003)
<i>Unexplained</i>		
Age	-0.1767*** (0.039)	-0.1285*** (0.040)
Gender	0.0191* (0.010)	0.0091 (0.013)
Education	-0.0036 (0.009)	0.0101* (0.006)
Work	-0.0055** (0.003)	-0.0029 (0.002)
Family	-0.0299 (0.020)	-0.0485** (0.021)
Health and Behaviour	-0.0200** (0.008)	-0.0131 (0.008)
<i>Constant</i>	0.2552*** (0.035)	0.1981*** (0.044)

Note: Standard error in parentheses. *10% significance, **5% significance, *** 1% significance

Appendix

Table A1: Regression Results of Ordered Probit model

Variables	
<i>Hukou (ref. Rural)</i>	
Urban	0.143*** (0.022)
Migrants	0.187*** (0.022)
<i>Personal</i>	
Male	-0.089*** (0.198)
Age	-0.007*** (0.0010)
<i>Education (ref. Secondary School)</i>	
Less than Secondary School	0.059*** (0.020)
Some PostSecondary School	-0.018 (0.025)
University & Master	0.123*** (0.041)
<i>Work (ref. Employed)</i>	
Not-employed	-0.016 (0.022)
<i>Family</i>	
Number of children	0.043*** (0.010)
<i>Marital Status (ref. Married)</i>	
Divoced, Seperated or Widowed	0.222*** (0.048)
Single	-0.062** (0.030)
<i>Health & Behaviour</i>	
Health:Poor or Fair (ref. Health: Excellent or Good)	0.469*** (0.018)
Type of smoker: daily/occasionally (ref. Type of smoker: Not at All)	0.030 (0.021)
<i>cut1</i>	-0.573 (0.0388)
<i>cut2</i>	1.306 (0.039)
<i>cut3</i>	2.308 (0.045)

<i>Observations</i>	23,993
<i>Wald chi2</i>	913.24
<i>Pseudo R2</i>	0.0214

*Note: Robust standard errors in parentheses. *10% significance, **5% significance, ***1% significance. The results are similar to the OLS model performed above. Although the magnitude of the coefficients cannot be compared, the signs and significance levels can, and they have mostly the same signs and similar significance levels.*

Note: The distribution of the 4 levels from stresslevel is shown as follows:

<i>Felt constantly under strain</i>	<i>Freq.</i>	<i>Percent</i>	<i>Cum.</i>
<i>Never</i>	7,476	31.16	31.16
<i>Sometimes</i>	14,340	59.77	90.93
<i>Fairly often</i>	1,920	8.00	98.93
<i>Very often</i>	257	1.07	100.00
<i>Total</i>	23,993	100.00	