



## Relationship between Employment Stress, Household Income, and Social and Health-risk Behaviors in Students with International Experiences

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### Abstract

While numerous researches portray positive relationship between stress and health-risk behaviors, such as smoking and drinking, some studies claimed that other third variables predicted increased health-risk behaviors instead. Furthermore, researches seemed to yield different results according to countries and/or races too. In a research, Blacks and Hispanics were found to be more likely to experience higher levels of stress than Whites do but were also found to be more resilient to stress due to various support systems (Krueger, Saint Onge, & Chang, 2011). In addition, in South Korea, notorious for high suicide rates and stress levels, there have been several studies on a concept of employment stress, or job-seeking stress, but the construct did not seem to be found in other countries.

To examine whether if the variable of employment stress is a culture-bound concept and if the levels of stress experienced differ according to culture, we examined a total of 82 full-time undergraduate students, many with international background, at University of Utah Asia Campus. Multiple regression analyses were used to examine the relationships between international experience, employment stress, household income, and social and health-risk behaviors. The results showed that while household income predicted increased employment stress and employment stress predicted negative relationship with sociality, international experience did not predict increased employment stress, nor did the employment stress predict increased health-risk behaviors.



## **Introduction**

### **Socioeconomic Status, Stress, and Social and Behavioral Factors**

Numerous researchers around the world have studied the correlation of socioeconomic status (SES), stress, and psychosocial health behaviors such as smoking, alcohol consumption, and diet, and despite small variances, most studies found similar correlation between the socioeconomic stress and unhealthy behaviors. According to Nandi and his colleagues' study on adults in the United States (Nandi, Glymour, & Subramanian, 2014), people in the most-disadvantaged quartile of SES showed almost three times the increased chance of health risk behavior, particularly smoking, along with mortality than the people in the least-disadvantaged quartile of SES. Likewise, in a research by Stringhini and his colleagues (2011) with English and French data displayed strong correlation, almost one-half to three-quarters, between health risk behaviors, SES, and mortality, showing significant connection between unhealthy behaviors and "social disparities" (as cited in Nandi et al., 2014).

In Australia, McKenzie and other psychologists (2011) studied more exclusively the relationship between psychological distress and risk behaviors and found that stress, anxiety, and depression had strong association with risk behaviors. However after controlling for SES or neuroticism, it was concluded that although psychological distress and risk behaviors showed high correlation, socioeconomic status, along with personality trait, seemed to have more significance in relation to unhealthy behaviors (McKenzie, Jayasinghe, Fanaian, Passey, Lyle, Davies, & Harris, 2011).

Conversely, some researches indicated slight differences according to countries. Even within the United States, according to the Blaxter hypothesis (1990) that studied health-risk behaviors in different social classes, Blacks and Hispanics, compared to Whites, use social, cultural, and/or psychosocial resources more to cope with social disadvantage, health-risk behaviors, and stress, despite having higher mortality due to social disadvantage (as cited in Krueger, Saint Onge, & Chang, 2011). In other words, Blacks and Hispanics might perceive more stress than Whites but are more resistant due to various support systems/resources; the results did not support the hypothesis of socioeconomic status affecting stress or the risk of developing unhealthy behaviors.

Some researches showed strong correlation between socioeconomic status, psychological stress, and health behaviors. However there were studies that showed different correlation and explanations for people's health behaviors in other populations, which may suggest that there are cultural differences that affect such relationships.

### **Psychological Stress in South Korea**

Most students in South Korea, driven by the idea of elitism, are pressured to study and to become the top students to become "successful," often referring to monetary success. Unless you are in the top percentile, whether it is education or in workplace, there is no opportunity to achieve high socioeconomic status. Because of such environment, many people suffer from social pressures, such as extreme competitiveness and pressure to reach higher SES. Reflectively, among the OECD countries, Korea's "health status, work-life balance and subjective assessment of well-being were ranked 33<sup>rd</sup>, 31<sup>st</sup> and 29<sup>th</sup>" (as cited in Yoon, 2015).

Students suffer from extreme stress regarding employment even after earning bachelor's degree. According to Kim (2014), only 54.8% of college graduates were able to get a job, and it was estimated that most of the people who did get a job were graduates from universities of higher educational ranks in Seoul (as cited in Cho & Jeon, 2015). Furthermore employment stress was found to have positive relationship with depression and urge to commit suicide, which demonstrates its detrimental influence.

## Culture & Stress

Cultural psychology divides culture into two general types: individualistic and collectivistic culture. In individualistic culture, people focus on independence whereas people in collectivistic culture have interdependent tendencies, and according to a study by a Dutch psychologist, Geert Hofstede (1983), of IBM workers regarding personal values, interests, and concerns, people from English-speaking countries and Western European countries were found to have more individualistic tendencies compared to people from Asian countries who were shown to have more collectivistic tendencies (as cited in Heine, 2016).

Additionally, people's senses of control over their lives differ depending on the type of culture (individualism vs. collectivism). Psychologists named Rothbaum, Weisz, and Snyder (1982) defined two kinds of control over personal lives in which people perceived in relation to the environment. First kind was primary control, which is the belief that an individual can influence the environmental factors to achieve his goals – very similar to the internal locus of control. Second kind was secondary control, which is the belief that the environment is fix and that the individual changes his goals and expectations to align with the environment – similar to the external locus of control.

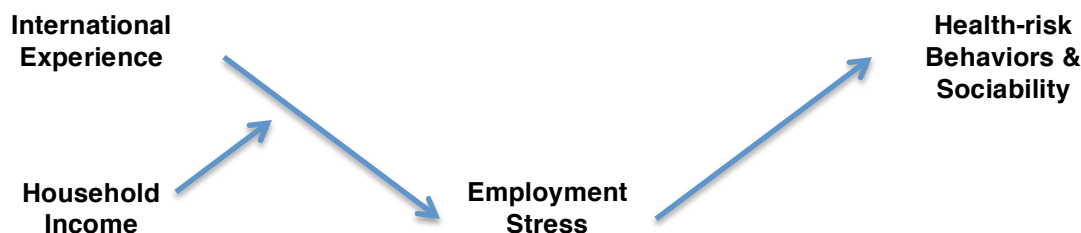
In perspective of the two cultures, most Asian people believed in secondary control, that an individual cannot influence a big change on the environment while most Western people believed in primary control, that they can manage the environment to meet their goals, which shows a fundamental difference in their perception of control (as cited in Heine, 2016). Sense of control has been reported by several researchers including Thoits (1994, 2006) to affect proficiency of coping in dealing with psychological distress in which people with higher sense of control were found to be more likely to exercise coping methods (as cited in Xi & Hwang, 2011).

In perceiving stress, environmental factors influence how vulnerable or resistant a person can be to stress as seen in the difference between Hispanics, Blacks, and Whites in the study by Blaxter (1990) (as cited in Krueger et al., 2011), and naturally, an important determinant that leads to variance in such factors like sense of control is culture.

## Objectives

Several Korean researches focus specifically on the topic called job-seeking stress, or employment stress. However in American and other English-speaking scholarly journals, there were no studies regarding stress during the process of employment, or searching for jobs while there were studies regarding stress at jobs, which suggests that the culture might influence the construct of stress, much like the variance in relationship between SES, health risk behaviors, and stress in different populations. Hence the purpose of this study is to examine the correlation between international experiences, which is to consider the cultural difference/influence, and employment stress with household income as a moderator. Then the study will also examine the relationship between employment stress and unhealthy behaviors & sociability.

Figure 1. Conceptual Framework



## **Ethics Statement**

This study was reviewed and approved by the University of Utah Institutional Review Board.

## **Methods**

### **Participants**

The participants were recruited from pool of students attending the University of Utah Asia Campus during the Fall semester 2016. A total of 82 students participated in the study. However after filtering out incomplete responses, a total of 74 responses were completed ( $n = 74$ ). In terms of gender, 23 participants were male and 51 participants were female. Most of the students at the University of Utah Asia Campus have experience living abroad; 15 students did not have any experiences living abroad while 59 students have experiences living abroad.

### **Procedure**

The data was collected through an online questionnaire with combined questions from a survey developed by Dr. Jeong, my research mentor, and an employment stress scale developed by Kang (2006), which she derived from Hwang's (1998) rendition of the Jobs Seeking Stress Questionnaire. The advertisement and announcements for participant recruitment were made through posters around the university campus and through KakaoTalk, a Korean social networking service, and umail. The data was collected in two recruitment periods because there were not enough participants in the first round. The advertisement and announcements were sent out starting at end of October and the data collection continued until the middle of November. The instructions, the objective of the research, and the questionnaire link were sent out to students through umail. Afterwards, the analysis was computed on SPSS through T-test and regression analysis, comparing the employment stress levels and unhealthy behaviors of students who lived abroad and students who have not with household income as a moderator. Then a regression analysis was done between employment stress and unhealthy behaviors (drinking and smoking) and sociability to examine if employment stress evokes unhealthy behaviors and decreases sociability.

### **Measurements**

#### *International Experience*

This variable was divided into three main components: whether if the person has lived abroad, the length of stay, and the period in which he/she lived abroad (i.e. kindergarten, elementary school, middle school, high school, college). The period of when the participant lived abroad was deemed significant because according to stage five of Erik Erikson's Theory of Psychosocial Development, the period of adolescence is when a person defines his/her role and is most vulnerable to surroundings, whether it is due to environmental factors or social factors. Also people are more likely to adapt to the culture they lived in during this critical period of adolescence and relate to that culture strongly.

#### *Household Income*

The household income was measured subjectively on a scale of five levels: low, mid-low, mid, mid-high, and high. The reason for measuring household income in subjective was because even though a student's household might earn more money than other students, if the budget does not match his/her lifestyle or ideal, the student may still experience high level of stress since stress is also subjective.

#### *Unhealthy Behavior & Sociability*

The behaviors that were measured in the study were smoking and drinking, which were both were recorded as a binary question, asking yes or no. Then on the Likert scale, the sociability was

measured by three questions within the employment stress scale that asked subjective evaluation of oneself whether if he/she 1. gets along with roommates, 2. thinks he/she has enough social skills to get along with others, and 3. participates sufficiently in social activities.

### Employment Stress

The employment stress scale by Kang (2006) comprises of twenty-two questions in total on the Likert scale, asking about emotional state, health risk behaviors, socioeconomic burden, and academic factors. The questions are in Korean, and so the questions was translated into English during the survey development.

## Results

### Correlation

Variables of gender/sex, international experience (IE), household income, smoking, drinking, employment stress, and sociability were run through bivariate correlation as shown in *Figure 1*, and few variables were shown to have relationship of statistical significance. In terms of gender, the only variable that seemed have moderate relationship was smoking; men were found to be more likely to smoke ( $r = .330, p < 0.01$ ). Household income, though subjectively evaluated, showed negative relationship with employment stress ( $r = -.355, p < 0.01$ ); participants with lower household income experienced higher level of employment stress. Additionally, employment stress and sociability had negative relationship ( $r = -.278, p < .05$ ), in which sociability decreased as employment stress increased.

*Table 1.* Bivariate Correlation between Gender, IE, Income, Smoking, Drinking, Employment Stress & Sociability

Measure		1	2	3	4	5	6	7
Gender	<i>r</i>	--						
	<i>p</i> (2-tailed)							
IE	<i>r</i>	-.048	--					
	<i>p</i> (2-tailed)	.684						
Income	<i>r</i>	.093	.003	--				
	<i>p</i> (2-tailed)	.433	.982					
Smoking	<i>r</i>	-.330	.067	.015	--			
	<i>p</i> (2-tailed)	.004	.569	.900				
Drinking	<i>r</i>	.034	-.134	-.062	.148	--		
	<i>p</i> (2-tailed)	.776	.255	.597	.207			
Emp. Stress	<i>r</i>	.141	-.024	-.355	.071	.062	--	
	<i>p</i> (2-tailed)	.232	.839	.002	.546	.603		
Sociability	<i>r</i>	.007	.129	.116	.073	.047	-.278	--
	<i>p</i> (2-tailed)	.952	.273	.326	.534	.691	.016	

### International Experience, Employment Stress, & Household Income

The result from linear regression analysis between international experience (Y/N) and employment stress showed a negative relationship between the two variables, but the relationship was not of any statistical significance ( $p = .839$ ). Moreover, the analysis between length of stay, period in which a participant lived abroad, and employment stress also did not yield any statistically significant results. However when household income was included as a control variable, the employment stress was shown to have negative relationship of statistical significance ( $p = .002$ ) not with international experience but, instead, directly with household income.

*Table 2.1* Linear Regression Analysis b/t International Experience (IE)-(Y/N), Employment Stress, & w/Household Income Controlled

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta (β)			
Constant	48.342	8.502			5.686	.000
IE (Y/N)	-.942	4.616	-.024		-.024	.839
Income Cont.						
Constant	69.652	10.404			6.695	.000
Income	-6.404	1.998	-.355		-3.205	.002
IE (Y/N)	-.906	4.345	-.023		-.209	.835

a. Dependent Variable: Employment Stress

*Table 2.2* Linear Regression Analysis b/t International Experience (IE)-(Length & Period) & Employment Stress

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta (β)			
IE (Length)	.038	0.45	.112		.849	.400
Per. (College)	-1.399	4.615	-.036		-.303	.763
Per. (High Sch.)	4.836	3.719	.151		1.300	.198
Per. (Mid. Sch.)	6.649	3.629	.211		1.832	.071
Per. (Elem. Sch.)	-.009	3.828	.000		-.002	.998
Per. (Kinder.)	-8.632	7.326	-.138		-1.178	.243

a. Dependent Variable: Employment Stress

### **Employment Stress, Unhealthy Behaviors, & Sociability**

Further linear regression analyses were conducted to examine the relationships between employment stress, unhealthy behaviors (i.e. smoking and drinking), and sociability. The results did not reflect any statistically significant results for relationships between employment stress and smoking ( $p = .546$ ) and drinking behaviors ( $p = .603$ ). On the other hand, sociability ( $p = .016$ ) was shown to have negative relationship of statistical significance with employment stress.

*Table 3.1.* Linear Regression Analysis between Employment Stress & Smoking

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta (β)			
Constant	1.043	.114			9.137	.000
Emp. Stress	.001	.002	.071		.607	.546

a. Dependent Variable: Smoking

*Table 3.2.* Linear Regression Analysis between Employment Stress & Drinking

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta (β)			
Constant	1.590	.172			9.240	.000
Emp. Stress	.002	.003	.062		.523	.603

a. Dependent Variable: Drinking

*Table 3.2.* Linear Regression Analysis between Employment Stress & Sociability

	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta (β)			
Constant	12.927	1.112			11.628	.000

Emp. Stress	-0.056	.023	-.278	-2.458	.016
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a. Dependent Variable: Sociability

## Discussion

The analyses between international experience and employment stress did not show any statistically significant relationships between the variables; the directions of the relationship shown between the variables (having international experience, length of stay, and period in which the participant lived abroad) were most likely incorrect and due to chances, which is reflected in the *p* values of the relationships. Hence from the results, international experience and employment stress seemed unrelatable, and there were no significant relationships that could be determined between the two variables. However, surprisingly, household instead was shown to have direct negative relationship with employment stress, which meant the lower a person's household income, the more he/she experienced employment stress. Although the level of household income was evaluated subjectively by the participants, the personal evaluation of the participants' income status still showed a statistically significant relationship, which may suggest that personal evaluation of a person's status, regardless of objective financial status, still affects a person's stress level.

Then in relation to the health-risk behaviors and sociality, the employment stress did not show any relationship with smoking and drinking, meaning that health-risk behavior also was not relevant to health-risk behaviors. But there was a statistically significant negative relationship between employment stress and sociality; people with high levels of employment stress were less likely to be content with their social relationships and have less social interactions. In association to health psychology, according to psychologists, Taylor and Stanton (2007), a type of coping style called avoidant coping style accounts for people's tendency to sometimes avoid interactions and events in order to minimize the possibility of experiencing distress (as cited in Taylor, 2014). Also people who are stressed out could prevent him/herself from receiving social support by conveying distress to others (Alferi, Carver, Antoni, Weiss, & Duran, 2001), and reversely, too much social support or unresponsive social support may become invasive, inducing more stress and further influencing people's sociality as Lewis & Rook (1999) describes (as cited in Taylor, 2014).

## Limitations

Although the study showed some statistically significant relationships, it had few limitations that affected the research. One of the prominent weaknesses of the study was the sample size. Since the University of Utah Asia Campus has been established only for a few years, the total number of students is still small, numbering a little over 200 students at the time of the study. Because of such small student body, the potential sample size is very small, and as a result, due to small sample, the study does not have big effect size, which weakens the support of the study. There were attempts to open the study to participants from other universities. However, due to legal complications, the study was done only within the University of Utah Asia Campus.

Additionally, because the university is an American university, most of the students are expected to have had international experience living abroad or at least had some international exposure before admission, which may lead to sample bias. There are some students who have not had any international experience and have only lived in Korea, but a huge majority have had international exposure, which limits possible number of students who are naive to international experiences. So such limitation would have affected the representation of samples population, making the participants pool skewed towards having international experiences.

### **Future Research**

For future study, researchers should consider increasing the sample size and the sample pool to minimize potential biases and increase the effect size and the credibility of the possible future study's findings. Also if possible, recruiting participants from different universities or sites would diversify the sample pool and mitigate confounding variables.

### **Conclusion**

The study did not support the general framework of the relationship between international experience, employment stress, and social/health-risk behaviors. However despite different results from the hypothesis, few relationships between the variables of income, stress, and sociality were observed. With consideration to limitations of this study, future research could examine further relationship between stress, international experience, and social and health behaviors.



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