

# The Influence of Perceived Stress on the Alcohol Consumption of the Filipino Migrant Workers in South Korea

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**ABSTRACT**— *This study explored how perceived stress and other common characteristics affected the alcohol consumption of the Filipino migrant workers in South Korea. 201 Filipino migrant workers (78.1% male, 21.9% female) completed the questionnaire containing the Perceived Stress Scale (PSS) for measuring perceived stress and Alcohol Use Disorders Identification Test-C (AUDIT-C) for measuring hazardous drinking. Pearson's correlation, regression analysis, T-test and ANOVA were used for statistical analysis. The results revealed that perceived stress was significantly correlated with alcohol consumption among undocumented migrant workers but not with their documented counterparts. Perceived stress also was found to have predicted alcohol consumption among the undocumented migrant workers. Significantly, documented migrant workers have lower levels of perceived stress and alcohol consumption compared to the undocumented migrant workers.*

**Keywords**— migrant workers, alcohol consumption, perceived stress, AUDIT

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## 1. INTRODUCTION

Irresponsible alcohol consumption is a major health dilemma and has an enormous impact on every aspect of the society. There is a flourishing evidence that alcohol use is a crucial contributing factor to global mortality [1,2,3]. It is responsible for the 3 million deaths a year, 6 deaths every minute - it causes mental and behavioral disorders and communicable and non-communicable diseases.[3]. Aside from its adverse effect on health, alcoholism takes a toll on social relationships, economy, and the society. [4,5,6].

Alcohol consumption is rampant among migrant workers [7,8]. Migrant workers are more likely to experience stressful events due to many unfavorable conditions [9,10]. Korea is a country that has a heavy drinking culture [11,12] and this culture can cross the industrial world of migrant workers. Under the report of Republic of Korea ministry of justice in 2015, there are around 570,000 low-skilled migrant workers in South Korea excluding those who are working illegally [13]. Migrant workers play an important role in keeping economic progress in Korea [14], thus, they have become the backbone of Korean industries. But it is sad that many are subjected to an abusive work condition, Little or no protective equipment when working with heavy machineries and dangerous chemicals, night shifts and long hours with a lesser wage compared to their Korean counterparts, and inadequate medical services [15]. With their status, migrant workers are at the greater risk for exploitation [10,16]. With the significant level of mental and emotional stress they experience daily, it is not impossible for them to turn into alcohol to cope up.

There is a growing body of literature that explores the connection between perceived stress and alcohol consumption [17,18,19,20,). For example, a study done by Heidi Hutton and company [21] in 2017 suggests that alcohol use is positively correlated with stress among heavy drinking HIV-infected women. A different study [22] among college students' samples in the University of Connecticut suggests that alcohol is consumed more on days perceived as stressful. Another research involving 8,057 Korean subjects, ages beginning 20 years old, has shown that individuals with high perceived stress are more likely to consume alcohol [18]. Similarly, perceived level of stress was positively associated with alcohol consumption in a study involving Korean college students from 14 universities in Korea [20]. A cross-sectional study among university students in France also revealed that perceived stress has made the rate of alcohol disorders among students increased [23].

Migrants workers are susceptible to stress brought about by a hard-living condition; distance from family members and culture adjustments [9]. Drinking is often seen as a coping mechanism and outlet for stress [24]. Latino farm workers, for example, have very high rates for alcohol dependence [25]. In China, Risky drinking practices among female migrants' women in entertainment venues are prevalent [26]. Also, a significant number of migrant workers in Spain are identified as hazardous drinkers [27]

On recognizing the increased health risk brought about by alcohol consumption among migrant workers, the interest to study the impact of perceived stress on alcohol consumption among migrant workers was heightened. Many research studies have been conducted to explore the relationship among perceived stress and alcohol consumption. However, such study among migrant workers is limited. Furthermore, very little research, if not nonexistent, has been reported among Filipino migrant workers in Korea.

Therefore, this study aimed to find out the influence of perceived stress on the alcohol consumption of the Filipino migrant workers in Korea.

## 2. METHOD

### 2.1 Participants

The subjects consisted of 201 Filipino migrant workers in South Korea. The sample included documented (21.9%) and undocumented, (78.1) low-skilled migrant workers from different industries mostly coming from the outskirts of Seoul. 157 (78.1%) were males and 44 (21.9%) were females, 72 (35.8%) were single, 107 (53.2%) were married, 15(7.5%) were separated, and 7(3.5%) were either annulled or divorced.

### 2.2 Instruments

*Perceived stress scale (PSS)* developed by Cohen [28] is among the most widely used measures of stress. This scale comes in 3 versions;14-item scale, 10-item scale, and the 4-item scale. All three versions were found to be valid and reliable, with the 10-item scale considered to be superior [29]. The participants were asked to evaluate their feelings and thoughts during the last month based on a five-point Likert scale (0-never, 1- almost never, 2- sometimes, 3-fairly often, 4s-most often). Scores for positively worded items (4,5,7, and 8) were reverse and added to the score of the rest of the items. The total score of the 10 questions varies from 0-40, 0-13= low perceived stress, 14-26= moderate perceived stress, and 27-40=high perceived stress). The Cronbach's  $\alpha$  of the PSS used in Cohens' study was .78. and was initially .504 in our study. After performing a factor analysis using principal component extraction method with a varimax rotated solution and excluding the 2 items which did not attribute Cronbach's alpha, the Cronbach's  $\alpha$  increased to .623. Hence, those items were not included in all the statistical analysis done in this study.

*Alcohol Use disorders Identification Test-C (AUDIT-C)* Is a 3-item measure from a modified version of 10-item AUDIT instrument. It is an effective tool to measure problematic drinking [30]. The total score of 3 items varies from 0-12. A score of 4 or more in men and 3 or more in women is considered hazardous drinking. In our study, we found satisfactory Cronbach's alpha values (.075) for AUDIT-C, while it was .098 in the previous study done in Japan by Osaki and company [31].

### 2.3 Procedure

This cross-sectional survey was performed among migrant workers in South Korea. The participants in this study were recruited using a non-probability sampling method in various Filipino migrant workers' communities. This method was used because probability sampling was difficult to carry out for such a big population of Filipino migrant workers. The gathering of data, which lasted for 6 months, was done by visiting Filipino communities. The Questionnaires, Alcohol Use Disorders Identification Test (AUDIT)and the Perceived stress scale were given to the respondents along with an accompanying letter containing the purpose of the study, informed consent, and confidentiality assurance. The questionnaire, anonymously taken, took approximately 5-7 minutes to complete. Important aspects of biographical information of the respondents like age, gender, age, visa status and marital status were included.

### 2.4 Data Analysis

The data was analyzed using SPSS 21.0. Descriptive statistics was run on all the variables in this study. First, differences among general characteristic were calculated using T-test and ANOVA. Correlation between variables was calculated using Pearson correlation coefficients and the predictive analysis of the independent variable was analyze using simple linear regression

## 3. RESULT

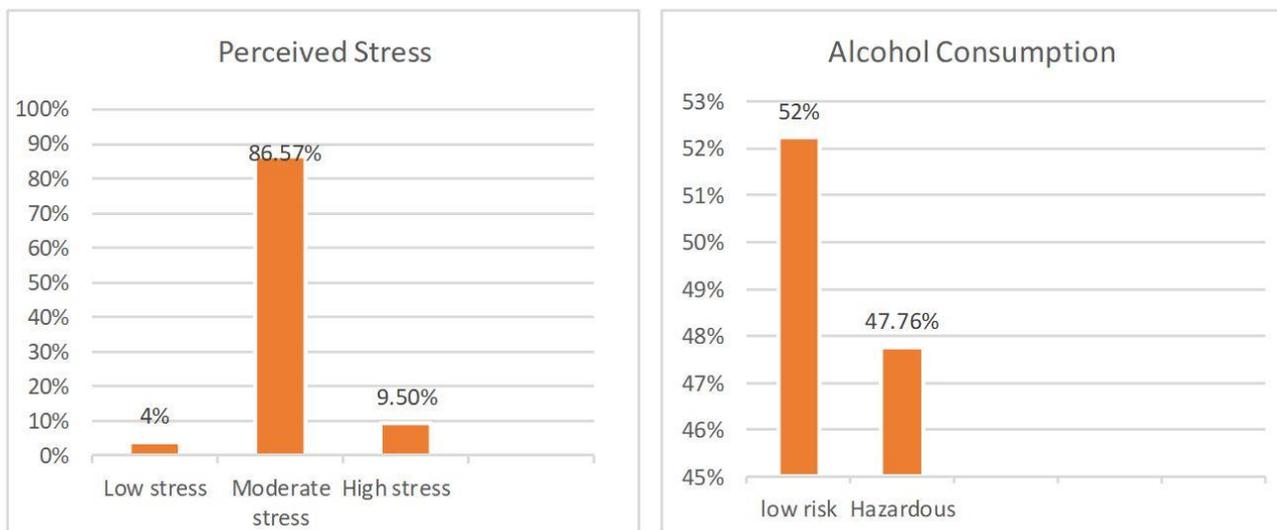
The general characteristics of the samples are described in table 1. In total, 201 subjects were involved in the study, including 157 (78.1%) males and 44 (21.9%) females. Approximately 90% of the respondents were in the age range 25-

34 (42.8%, n=86) years old and 35-44 (44.8%, n=90) years old. The other groups were in the range 18-24 (5%, n=10) and 44 or up (7.5%, n=15). For marriage status, 35.8 % (n=72) were single and 53.2 % (n=107) were married. The rest were either estranged, annulled or divorced (11.0%, n=22). More than fifty percent (57.2%, n= 115) of the respondents had stayed in Korea for not more than 5 years, 20.9% (n=42) had stayed between 6-10 years, and 21.9% (n=44) had stayed for 11 years or more. Among 201 respondents, 157 (78.11%) were documented while the rest were undocumented (21.89%, n=44).

**Table 1: General Characteristics of the participants**

Variable	Group	Frequency (n)	Percentage %
Gender (n=201)	Male	157	78.1
	Female	44	21.9
Age (n=201)	18-24	10	5.0
	25-34	86	42.8
	35-44	90	44.8
	44 or up	15	7.5
	Marital Status (n=201)	Single	72
	Married	107	53.2
	Estranged	15	7.5
	Annulled/divorced	7	3.5
Length of Stay (n=201)	0-5	115	57.2
	6-10 years	42	20.9
	11 or more	44	21.9
Visa	Documented	157	78.11
	Non-documented	44	21.89

Figure 1 shows patterns of perceived stress and alcohol consumption. It is shown that 96.07% (193) of the respondents were under stress-86.57% (n=174) were under moderate stress and 9.50% (n=19) were under high stress. For alcohol consumption, 52.24% (n=105) of the respondents reported consuming alcohol at a low-risk level while 47.76% (n=96) reported consuming alcohol at a hazardous level.



**Figure 1: Patterns of perceived stress and alcohol consumption**

The Comparison of the means and standard Deviations of the respondents' general characteristic is presented in Table 2. Though, there was no significant difference ( $p=.056$ ) between male and female on alcohol consumption, it is noticeable that Filipino male migrant workers had higher alcohol consumption ( $M=3.44$ ,  $SD=2.70$ ) than Filipino female migrant workers. ( $M=2.55$ ,  $SD=2.79$ ). Though the overall perceived stress of female Filipino migrant workers was higher

(M=14.64, SD=4.36) than their male counterparts (M=13.84, SD= 3.91), the difference was not statistically significant (p=.246).

Significant difference was not found on variables perceived stress (p=.073) and alcohol consumption (p=.284) across all age groups. It is however, important to note that participants in the range 18-24 years old had noticeably lower perceived stress level (M=11.00, SD=4.35) than the rest of the participants in the other age groups (M=14.33, SD=3.60; M=14.19, SD=4.19; M=13.20, SD=4.48).

There was no significant difference in all marital status groups in perceived stress (p=.464) and alcohol consumption (p=.679).

Undocumented participants reported higher perceived stress (M=15.27, SD=4.74) and higher alcohol consumption (M=4.57, SD=3.08) compared to documented participants (M=13.66, SD=3.73, M=2.87, SD=2.51). The differences between the two groups in two variables were found to be significant (p=.018, p=.000)

Length of stay in Korea did not make a significant impact on perceived stress (p=.571) and alcohol consumption (p=.164).

**Table 2:** Comparison of the means and standard deviations by participants' general characteristics

Variable		Stress			Alcohol		
		M±SD	t or F	p-value	M±SD	t or F	p-value
Gender	Male (157)	13.84±3.91	-1.163	.246	3.44±2.70	1.923	.056
	Female (44)	14.64±4.36			2.55±2.79		
Age	18-24 (10)	11.00±4.35	2.362	.073	2.56±2.35	1.275	.284
	25-34 (86)	14.33±3.60			3.57±2.90		
	35-44 (90)	14.19±4.19			3.16±2.69		
	45 or older4(15)	13.20±4.48			2.27±1.98		
Marital Status	Single (72)	14.50±3.89	.858	.464	3.37±2.91	.506	.679
	Married (107)	13.64±3.79			3.05±2.53		
	Estranged (15)	13.87±5.76			3.80±2.96		
	Annulled/Divorced (7)	15.14±4.56			3.71±3.68		
Visa status	Undocumented (44)	15.27±4.74	2.379	<b>.018</b>	4.57±3.08	3.772	<b>.000</b>
	Documented (157)	13.66±3.73			2.87±2.51		
Length of Stay	0-5 (115)	13.97±3.80	.563	.571	2.92±2.83	1.823	.164
	6-10 (42)	13.62±5.04			3.67±2.52		
	11-more (44)	14.52±3.47			3.66±2.61		

Correlation between perceived stress and alcohol consumption in documented and undocumented Filipino Migrant workers is presented in Table 3. There was no correlation found between perceived stress and alcohol consumption in documented Filipino migrant workers (r=.077, p=>.05). However, a significant relation was detected in their undocumented counterparts (r=.347, p=<.05).

**Table 3:** The Correlation between perceived stress and alcohol consumption in documented and undocumented Filipino Migrant workers.

Visa Status	Variable	Perceived Stress	Alcohol consumption
Documented	Perceived Stress	1	
	Alcohol consumption	.077	1
Undocumented	Perceived Stress	1	
	Alcohol consumption	.347*	1

p=<.05 \*, p=<.01\*\*, p=<.001 \*\*\*

Table 4 shows that perceived stress had a significant influence on alcohol consumption among undocumented migrant workers. ( $\beta$  =.347, p=0.025). The overall regression model was significant (p=.021). The predictor, perceived stress, account for 12% the variances in alcohol consumption.

**Table 4:** Linear analysis for the variable perceived stress and alcohol consumption among undocumented Filipino migrant workers

Variable	Unstandardized coefficients		Standardized coefficients	t
	B	Standard error	$\beta$	
Perceived stress	.225	.094	.347	2.295*
	$R^2 = .120$	$F = 5.738$	$P = .021^b$	

#### 4. DISCUSSION

As far as our knowledge is concerned, there is very little study, if not non-existent, done among Filipino migrant workers in Korea, with its focus on the impact of perceived stress on alcohol consumption. It has been known that alcohol consumption is a global health problem [1,2] and it is prevalent among low-skilled migrant workers [6,7]. One of the factors that has been established to affect alcohol consumption is perceived stress. Low-skilled migrant workers may experience high levels of stress related to the difficult nature of their job. [9,14,15]

This study aimed at exploring the prevalence of perceived stress and alcohol consumption of Filipino low-skilled migrant workers in Korea., at the same time also finding out the differences of perceived stress and alcohol consumption in relation to personal characteristics. It also aimed to find out the relationship of perceived stress and alcohol consumption, whilst also finding out whether perceived stress is a predictor of alcohol consumption.

It is shown that 96.07% (193) of the respondents were under stress-86.57% (n=174) were under moderate stress and 9.50% (n=19) were under high stress. The number of migrant workers who were under high stress in our study was significantly lower than migrant workers in Malaysia in the study led by Foo [32]. They reported more than 85% of their respondents had higher than average perceived stress. The difference could be attributed to various social aspects of migrant workers living in South Korea, which differs from those migrant workers living in Malaysia.

Almost half of the participants in this study (47.76, n=96) were consuming alcohol at hazardous level. This result is a little higher compared to a related study on alcohol consumption among migrant workers in Shanghai which reported 37.7% were consuming alcohol at hazardous level [33]. Korea’s drinking culture could be the contributing factor to the higher alcohol consumption among migrant workers in Korea compared to the migrant workers in Shanghai. Though it is notable that alcohol consumption in our study were much higher among male than their female counterparts, the difference was not significant (p=.056). This could be explained by the fact that women have begun to mirror drinking patterns once known to men. The finding in the study led by Tim Lade shows that the gap between men and women’s drinking habits is narrowing [34].

Our results also revealed a significant difference in visa status on perceived stress and alcohol consumption. Undocumented workers showed a significantly higher perceived stress and higher alcohol consumption than documented workers. Unfavorable circumstances surrounding illegal migrant workers such as lack of legal protection, lower compensation and fewer rights may explain this finding [15]. In Addition, Atteyara [35] mention in his study that documented migrant workers in Korea do not have medical insurance, live in fear of being caught by police, succumb to late or unpaid wages, and deal with abusive employers.

Length of stay was not a significant factor in perceived stress and alcohol consumption. A closely related study by Doki and her companions [36] found similar result to ours. They reported that in their study length of stay was not a significant factor for stress.

It was somewhat expected to find a significant relationship on perceived stress and alcohol consumption. The result of our study supported the result of the previous study by Yoon and company [17] involving more than 8000 thousand Korean subjects, ages 20 and above. They reported that individuals with high perceived stress are more likely to consume alcohol. Another study involving Korean students also revealed that alcohol misuse was associated with perceived stress. [23] More initial findings also found similar results to ours [10,17,23,37,38,39]. However, in our study, such significant relationship, was only found in undocumented migrant workers and not in documented migrant workers. It is also important to note that in our study, participants drink even when they are just moderately stressed. Moreover, the result of this study shows that an increase in perceived stress led to an increase in alcohol consumption.

The influence of perceived stress on alcohol consumption among the undocumented workers is significant. Results of the regression analysis revealed that perceived stress is a predictor of alcohol consumption. Though it only accounts for 12% the variance in alcohol consumption, it remains a meaningful result since human behavior is harder to predict than physical processes. Therefore, we believe this result is significantly meaningful.

## **5. LIMITATION OF THE STUDY**

Our study has limitations. First, the sampling method was convenience sampling, so it may not be fully representing the larger population of Filipino migrant workers in Korea. Furthermore, it does not include other nationalities, and therefore should not be considered a representation of the general population of migrant workers in Korea.

Another limitation was the deletion of the 2 items from the 10-item Perceived Stress Scale. The initial reliability test resulted to a less than .05 Cronbach alpha, so the researchers opted to delete the said items to improve overall reliability.

Despite these limitations, the study findings give a contribution to literature in the areas of mental health and health behaviors among migrant workers, and thus may be useful for professionals in helping migrant workers who are struggling with stress and drinking problems.

## **6. CONCLUSION AND RECOMMENDATION**

In conclusion, it has been found that most Filipino migrant workers are moderately stressed. However, quite a number of participants are engaged in hazardous drinking. This study would like to emphasize that alcohol consumption can increase with the increase in perceived stress, regardless of the person's perceived stress level. Many participants were moderately stressed, yet they engaged in hazardous drinking. It can be inferred that drinking can be their way of coping up with the challenges, regardless of how they perceived stress. Hence, it is necessary for them to develop other effective coping skills so they will not turn to harmful sources of stress relief.

A very significant finding showed that undocumented Filipino migrant workers were found to be significantly more stressed and more prone to drinking alcohol compared to documented Filipino migrant workers. The findings in this study may be very relevant in providing a basis in developmental programs for migrant workers wellbeing, especially the marginalized undocumented workers. It is recommended that migrant centers in Korea create programs and provide services specifically catering undocumented migrant worker. With this effort, inequity gap between documented and undocumented migrant workers may be lessened.

The relationship of perceived stress and alcohol consumption, though weak, was significant. It has been found also that perceived stress is a significant predictor of alcohol consumption. Therefore, it is not something to be taken for granted. Still, preventive and intervention programs like providing classes on stress management and stress reduction should be made available to reduce the future burden of alcohol related to stressful events.

To provide a strong foundation for public health policies and intervention on alcohol consumption among migrant workers, future research studies should continue to further investigate major risk factors and protective factors that may contribute to or prevent hazardous alcohol consumption.

## **7. ACKNOWLEDGEMENT**

We express our gratitude all migrant workers from different parts of South Korea who participated in our study. We also give thanks to the Addiction Science Department of Samhyook University for the Guidance. Authors have no conflicts of interest to report.

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