

## Study of the Effectiveness of Programs to Curb Employee Drinking

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**Abstract.** The purpose of this study is to evaluate the PIDC (Program for Improving Drinking Culture) for lessening consumption of alcohol by pre-post control group design. An online self-entry questionnaire for pre and post-testing was done in this study. As eleven subjects presented data errors, entries from 1,827 subjects out of the total 1,838 were analyzed. The programs lasted for six months. The data was analyzed using the SPSS/WIN 19.0. For verifying the differences in the amount of alcohol consumption, independent-samples paired t-test, and cross tabulation were used. Problematic alcohol consumption was measured by Korean version Alcohol Use Disorders Identification Test (AUDIT-K) developed by World Health Organization (WHO). As the results, there was a statistically significant difference in the amount of alcohol consumption pre-post implementation of programs. In addition, there was a statistically significant difference in age by position, gender and in the AUDIT-K.

**Keywords:** drinking culture of workers, drinking culture improvement program.

### 1 Introduction

In South Korea, it has been thought that alcohol consumption in social situations is necessary for interpersonal connections (“human network”) and societal activities (“social network”). Failure to accept offered drinks can be seen as a rude behavior. Since alcohol is also used as a means to maintaining social relationships, the problem by alcohol consumption are considered relatively tolerable and tolerance for intoxication within South Korea is known to be very high compared to that of many other nations. Nowadays, alcohol consumption is one of the ways of dealing with stress. Alcohol consumption does not merely cause problems to individuals, but has expanded to families, businesses, and the society. However, purchasing alcohol is relatively easy, drunken behaviors are generously regarded, and offering alcohol to others is considered virtuous in Korea. Excessive drinking leads to various illnesses as well as many other side effects such as cognitive impairment, decreased work efficiency, absence from workplace, and sexual harassment. Drunken driving has

come under the public spotlight as 39.9% of South Koreans in their 30's suffer from related accidents and financial losses, causing issues to the society and work places. The largest proportion (38.83%) of these issues is due to alcohol-related decreases in work efficiency (Cho, 2010). Since workers tend to get more chances for drinking than ordinary citizens, businesses are now in a dire need to focus on and take actions against drinking problems. Consequently, the domestic businesses ought to aim for improving employees' health and work efficiency by creating counteractive system (Um, 2004).

Although the drinking culture cannot be easily changed, the health under this culture could never be over simplified. Therefore, any effort to improve this drinking culture applied to the employees of a company is strongly required for their health.

## **2 Method**

### **2.1 Design**

This study was done on the pretest-posttest control group design to evaluate the differences between before the implementation of the program for lessening of alcohol consumption, the PIDC (Program for Improving Drinking Culture) by using self-entry questionnaire.

### **2.2 Subjects**

The total subjects were 1,838 employees of a company who understood and agreed to participate in this study among all the employees who were educated on alcohol-related complications and illnesses, the goals and purposes of improving the drinking culture, and behavioural guidelines as a campaign style program regularly and periodically through personal email and SMS. Since 11 subjects presented data errors, only 1,827 subjects' data was used for analysis.

### **2.3 Research tools**

In this study, structured questionnaire was used for comparing pre-post data. Items of this questionnaire was consisted of four questions on general characteristics, 10 on alcohol-related conditions in workplace, and eight on post-drinking impairments of daily functions. And, also 10 questions on AUDIT-K (a test for detecting cognition-related alcohol abuse) developed by WHO and six questions on opinions towards the programs for improving drinking culture. The sensitivity was 92% and specificity 93% at the time of development. Lee (2008)'s AUDIT-K credibility was originally Cronbach's  $\alpha = .86$ , the revised one used in this study Cronbach's  $\alpha = .89$ . The modified one for this study showed Cronbach's  $\alpha = .92$ .

## **2.4 Implementation of education and campaign**

The PIDC (Program for Improving Drinking Culture) was carried out by clinicians during regular educational sessions, educational sessions on industrial safety, special lectures, staff meetings and regular morning assemblies. The PIDC (Program for Improving Drinking Culture) was consisted of "119" campaign slogan that means the first 1 is drinking one type of alcohol, the other 1 is for one round only, and the last 9 is until 9 PM. Lasting for six months, this "119" campaign slogan was periodically advertised using email, long message service (LMS), the company web page, leaflets, and posters.

## **2.5 Data collection and ethical considerations**

For collecting data, the pre- and post-tests were conducted in December, 2012 and July, 2013, respectively. After obtaining the approvals by the judicial and human resource departments in the company, purposes of this study were posted on the company web page. This study only targeted the employees who self directly agreed to participate. The terms of agreement stated that the questionnaire data shall be used for research purposes only and confidentiality related to the study shall be guaranteed. Agreeing to this study was prerequisite for questionnaire handing-out.

## **2.6 Data Analysis**

The gathered data was analyzed using SPSS/WIN 19.0 by frequency, independent-samples paired t-test, and cross tabulation.

# **3 Result**

## **3.1 The program supplied to all subjects**

The below pop-ups appeared when accessing personal emails and the company-wide intranet. The simple slogan, "Just remember three things," was created to trigger changes in the employees. It could be verified that strongly-worded messages for improving the culture within the company were conveyed.

## **3.2 AUDIT-K scores of the subjects**

To define alcohol abuse, this study used the standards put forth by Alcohol Use Disorder Identification-Korea (AUDIT-K), a Korean translated version of the original AUDIT developed by WHO. AUDIT-K scores in the range of 1-12, 13-19, or 20 or higher were categorized into normal drinker, problematic drinker, and alcohol abusers,

respectively. A total of 1,827 subjects were the targets of analysis. The composite percentage of problematic drinkers and alcohol abusers decreased from 49.5% to 13.2%. The problematic drinkers also decreased from 4.2% to 1.3%. Consequently, normal drinkers increased from 68.7% to 85.5%. The proportion of alcohol abusers was 49.5% prior to the PIDC (Program for Improving Drinking Culture). The 593 subjects (32.5%) showed no differences before and after the PIDC (Program for Improving Drinking Culture). A decrease in the amount of drinking, even by one shot, was observed for 1,151 subjects (63.0%). Nonetheless, 82 subjects reported that they drink more after the PIDC (Program for Improving Drinking Culture) than before it.

### 3.3 Pre-post comparison of alcohol abuse

Independent-samples paired t-test was used for determining whether there was a significant difference in the amount of alcohol consumption between before and after the PIDC (Program for Improving Drinking Culture). As the result, there was a statistically significant difference between pre and post score ( $t=18.760$ ,  $p<0.001$ ).

## 4 Conclusion

To summarize the results above, it was verified that the PIDC (Program for Improving Drinking Culture) exerted the biggest effect to the employees' alcohol-related problems and amount of drinking. To maximize the effectiveness of educational materials, a keen interest in the PIDC (Program for Improving Drinking Culture) ought to be prerequisite. When the PIDC (Program for Improving Drinking Culture) is under way, sending SMS and advertising on panel displays should take place simultaneously. In addition, support from companies is likely to induce positive changes in the employees and lead to desirable outcomes. In public, it will be seen as a renovation project. Finally, since a company-wide drinking culture depends heavily on superiors in rank, it is crucial to educate department heads.

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