

## Abstract

### Level of Problem Drinking, Health Status and Perception of Need for Moderate Drinking by Male Blue-collar Workers in Steel Factory

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**Objective:** This study was conducted to investigate the level of problem drinking by male blue-collar workers in light of their health status and their perception of drinking amount.

**Method:** A steel factory located in the central region of Korea was chosen and 182 questionnaire responses from male workers were analyzed using the SPSS/WIN 11.0 in reference to each worker's physical examination record.

**Results:** According to the criteria set by WHO, 19 workers(10.4%) were found to have 'problem drinking', 81 workers(44.5%) 'alcohol use disorder' and 14 workers(7.7%) 'alcohol dependence'. Only the remaining 68 workers(37.4%) were found to have 'normal drinking'. In relation to the workers' health status by CMI, 'alcohol dependence' scored 62.92, and 'alcohol use disorder' scored 56.53, both of which were far higher than the 'problem drinking' score of 44.52. In particular, it was found that each of the diabetes group( $t=2.32$ ,  $p<.05$ ) and the liver-disease group( $t=2.01$ ,  $p<.05$ ) drank much more than the non-diabetes group or the non-liver-disease group. In terms of the workers' perception of drinking amount, 'alcohol use disorder' and 'alcohol dependence' scored 147.62 and 144.21 respectively, both of which were far higher than the 'problem drinking' score of 138.57.

**Conclusion:** The above results suggest the need to educate workers on the necessity and practices of moderate drinking before they enter a state of alcohol use disorder or alcohol dependence. Accordingly, as a part of early management and treatment of the workers' drinking problem, it may well be necessary to activate OAPs (Occupational Alcohol Programs).

**Key Words:** Alcohol, Workers, Problem Drinking



1. ; 12~14 , 15~25 가 11.0%, 5~9 58.8%, 10~19 20.3%,  
 ' , 26 ' 20-32 9.9% 8.6  
 19.8% ,  
 31.3%,  
 48.9% 가  
 45.6%, 67% ,  
 6~8 가 74.2% .  
 가  
 37 , 12.1%, 8.2%, 2.2% (Table 1).  
 67% 4

**Table 1.** General characteristics of the subjects

		N (%)	
Age (year)	34	72 (39.6)	mean=37
	35~44	86 (47.3)	
	45~56	24 (13.2)	
Education	High	122 (67.0)	
	College and above	60 (33.0)	
Religion	Christian	35 (19.2)	
	Buddhism	39 (21.4)	
	Catholic	13 ( 7.1)	
	Others	95 (52.2)	
Work period (year)	4	20 (11.0)	mean=8.6
	5~9	107 (58.8)	
	10~19	37 (20.3)	
	20~32	18 ( 9.9)	
Exercise	No	36 (19.8)	
	Irregular	57 (31.3)	
	Regular	89 (48.9)	
Smoking	No	38 (20.9)	
	Past smoking	61 (33.5)	
	Present smoking	83 (45.6)	
Breakfast	Always	122 (67.0)	
	Sometimes	60 (33.0)	
Sleeping (time)	<6	47 (25.8)	
	6~8	135 (74.2)	
Liver disease	Yes	22 (12.1)	
	No	160 (87.9)	
Hypertension	Yes	15 ( 8.2)	
	No	167 (91.8)	
DM (Diabetes Mellitus)	Yes	4 ( 2.2)	
	No	178 (97.8)	
Total		182 (100.0)	

2.

가 (t=2.01, p=.046).

가 가 69.8% 가

가

(Table 5).

2~4 가 44.5%,

7~9 41.2% 가

5.

(Table 2).

Table 6

3.

147.62 144.21

138.57

'68 (37.4%),

'81

'19 (10.4%),

(44.5%), '14 (7.7%)

2/3 가

(Table 3).

Table 3. Level of Problem drinking of subjects

Level of Problem drinking (AUDIT)	N (%)
Normal drinking	68 (37.4)
Problem drinking	19 (10.4)
Alcohol use disorders	81 (44.5)
Alcohol dependence	14 ( 7.7)
Total	82 (100.0)

4.

Table 4

62.92,

56.03,

52.32,

44.52

가

가

(t=2.32, p=.021),

Table 2. Characteristics related drinking of subjects

		N (%)
Type of drinking	Distilled liquor(Soju)	127 (69.8)
	Beer	32 (17.6)
	Makgeolli	3 ( 1.6)
	Others	20 (11.0)
Frequency of drinking	No	15 ( 8.2)
	1 time/month	27 (14.8)
	2~4 times/month	81 (44.5)
	2~3 times/week	50 (27.5)
Once amount of drinking (cup) <sup>1</sup>	4 times/week	9 ( 4.9)
	No	13 ( 7.1)
	1~2	17 (9.3)
	3~4	29 (15.9)
	5~6	48 (26.4)
	7~9	75 (41.2)
Total		182 (100.0)

<sup>1</sup> , , 1 , 350cc

**Table 4.** Health Status (CMI) by level of problem drinking of subjects

	N	Health status (CMI)	F	p	tukey
		Mean ± SD			
Normal drinking (a)	68	52.32 ± 16.45	3.06*	.030	b*d (p=.032)
Problem drinking (b)	19	44.52 ± 7.92			
Alcohol use disorders (c)	81	56.03 ± 22.83			
Alcohol dependence (d)	14	62.92 ± 17.36			
Total	182	53.97 ± 19.42			

\*p&lt;.05

**Table 5.** Level of problem drinking (AUDIT) by DM, Hypertension, Liver disease of subjects

n=182

		N	Level of problem drinking (AUDIT)	t	p-value
			Mean ± SD		
DM	Yes	4	23.50 ± 2.51	2.32*	.021
	No	178	14.46 ± 7.75		
Hypertension	Yes	15	18.13 ± 7.32	1.81	.072
	No	167	14.35 ± 7.77		
Liver disease	Yes	22	17.77 ± 7.82	2.01*	.046
	No	160	14.23 ± 7.70		

\*p&lt;.05

**Table 6.** Perception of need for Moderate Drinking by level of problem drinking of subjects

	N	Perception of need for Moderate Drinking	F	p-value	tukey
		Mean ± SD			
Normal drinking (a)	68	140.25 ± 13.09	3.840*	.011	b*c (p=.014)
Problem drinking (b)	19	138.57 ± 15.77			
Alcohol use disorders (c)	81	147.62 ± 12.79			
Alcohol dependence (d)	14	144.21 ± 28.45			
Total	182	143.66 ± 15.25			

\*p&lt;.05

**Table 7.** Affected variables of level of problem drinking

variables		t (p-value)	R <sup>2</sup>	F	p-value
Breakfast	.300	3.23***(.001)	.134	9.21***	.000
Work period	.247	3.17** (.002)			
Smoking	.211	3.03** (.003)			
(constant)	12.08	5.94***(.000)			

\*\*p&lt;.01, \*\*\*p&lt;.001

6.

7  
13.4%  
가  
F=9.21, p=.000).

Table  
가  
(R<sup>2</sup>=.134,

, , , , ,  
가  
(Dayliy & Marlatt, 1997),  
(alcohol dependence),  
(alcohol abuse), (problem  
drinking) (binge drinking)

가 37.4%, ' 가 10.4%, '  
' 44.5%, ' ' 7.7% ,  
62.6%가

가 가 69.8% 가

2~4 가 44.5% 가 4.2% 10.9%가  
4 4.9% . (1999) (1998)  
7~9 41.2% 1 (1998)

가 (2004)가 44.7%가  
4231 83%가 . 2000

가 4 1 ' 18  
AUDIT 12 가 19.5%

. 가 ( (2004)  
62.5%) 가 . 가

1 1 ( 가  
7~8 ) 가

, 1998: , 1999). (QF) 45.6%

(High Risk)  
60 g(5 ,

12 g ) , CMI 62.92, ' 56.03, '  
40 g(3.5 ) 가 52.32, 44.52

5 (49 g~56 g) , 가 가 . 가

60 g(5 ) , 40 가 .  
g(3.5 ) , 64 g(6 )

(WHO, ( , 1997).  
10 40 60 2 9000  
2

2000). 8.4%  
31.4%가 ( (

, 2002) . 2004.9.12). 10 (

2003 22.8, 가  
 20.6( 7.6, 9.5, 8.0,  
 6.7) 가

(, 2004).

가

(OAPs: Occupational Alcohol Programs)

가

가

147.62 144.21  
 138.57

가

가 가  
 (, 1998).

가

가 13.4%  
 가

(2002)

(, 2000). 2001

가 가 5.9 , 2003.7.20 ~ 8.20  
 가 가 14.3 , 182  
 가 가 18.4 SPSS/WIN  
 (, 2003) 가 11.0

(2004)

: 1) WHO(1993)  
 가 19 (10.4%),  
 가 62.6% 가 81 (44.5%), 14 (7.7%)  
 가 가 68 (37.4%)  
 가 . 2) 62.92  
 가 56.03 44.52

가  
 가  
 가  
 (t=2.32, p<.05),  
 (t=2.01, p<.05)  
 147.62 144.21  
 138.57 (F=3.84, p<.05).

2003;28(1):44-50.  
 1998. pp 167-73.  
 1998;20:55-76.  
 1998.  
 2001;2(1):67-114.

가

2001.  
 2003 2004.  
 2001  
 -. 2003.

가

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(OAPs: Occupational Alcohol Programs)

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