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Research paper

Workplace victimization and alcohol misuse among junior military personnel: Mediating the role of anger

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ABSTRACT

Background: : Workplace victimization is one of most serious problems for affecting alcohol misuse in junior military personnel (JMP) that has been largely overlooked in research attention. Studies on workplace victimization and alcohol misuse indicate anger as mediator. Workplace victimization may affect alcohol misuse (in) directly through the mediator.

Methods: : A sample of JMP ($N = 815$) completed an offline survey, consisting of the revised Conflict Tactics Scale-2, Composite International Diagnostic Interview Screening Scale, and the Alcohol Use Disorders Identification Test. Frequency, *t*-test and chi-square test, and mediation analyses were conducted to assess the effects of workplace victimization on alcohol misuse, mediated via anger.

Results: : Victims in the workplace showed higher level of anger and alcohol misuse. In mediation analyses, workplace victimization was related to higher levels of anger, which, in turn, were associated with greater alcohol misuse.

Limitations: : Study limitations included the use of cross-sectional data with the use of retrospective self-report.

Conclusion: : Workplace victimization in JMP is prevalent (17.7%), and alcohol misuse is associated with effects of workplace victimization and anger with full mediation path. Findings suggest that eliminating workplace victimization against JMP and intervention for anger should be focused upon, and implemented for online alcohol misuse prevention in the military context.

1. Introduction

Alcohol has historically been used to reward hard work and promote unit cohesion in the military (Gibbs et al., 2011; Ames et al., 2007). Alcohol-supporting environmental features, such as wide acceptance of alcohol misuse (alcohol is readily available at multiple military bases) and cheaper prices than in civilian communities, are associated with a high level of alcohol misuse among military personnel (Bray et al., 2013). For these reasons, the rate of alcohol misuse is higher among military members than among civilians (Goodwin et al., 2017; Fear et al., 2007). In general, alcohol misuse is characterized by a problematic pattern of drinking tied to a broad range of negative health and social consequences, including alcohol dependence, alcohol abuse, and risky drinking (Frank et al., 2008). Indeed, excessive drinking among military personnel not only deteriorates personal and social relationships (Barry et al., 2013), but is also linked to poorer productivity and a lack of combat readiness (Mattiko et al., 2011; Brown et al., 2010). There is considerable evidence that alcohol misuse is negatively related to mental health problems in the military context (Goodwin et al., 2017; Schumm and Chard, 2012).

Junior military personnel (hereafter referred to as JMP) are characterized by a relatively short service period (less than five years in the South Korea), and are often regarded as vulnerable to developing alcohol-related problems (Brown et al., 2010). Association between JMP and alcohol misuse can be explained by their characteristics. Military service can be viewed as "a rite of passage to male adulthood, teaching toughness and trying to eliminate what is regarded to be effeminate" (Klein, 1999, p. 47), and service as JMP can be regarded as long-term trainings for adaptation in the military context (Lee, 2018). In the South Korea, as the only divided country in the world, military norms have historically emphasized a tough discipline against JMP for combat readiness, especially near the border with the North Korea (Kim et al.,

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2019). Military leaders are focused on fostering military values during JMP by means of re-socializing (Lee, 2018) as JMP are subordinates to learn and follow military norms, and receive orders by higher ranks. Although military authorities emphasize legitimate standards to adjustment of JMP, it has the potential to include violence in the military context (Wadhan, 2017) which is linked to military hazing and/or bullying (Kim et al., 2019). However, JMP victims typically tend to refuse to seek help from others because it may be stigmatized as "weak" act or "maladjustment" (Lee, 2018). Consequently, JMP may be vulnerable not only to be exposed to workplace victimization, but seeking help due to hierarchical disciplinary structure (Kim et al., 2019). It may be reasonable to speculate that, due in large part to fear of stigma from superior and/or fellow, most JMP may prefer to mitigate the stress through self-medication such as drinking alcohols rather than seeking help. In fact, according to Stahre et al. (2009), the incidence of binge drinking among junior enlisted officers (71.2%), non-commissioned officers (NCOs) (59.8%), and junior officers (46.9%) is higher than among those in senior ranks (senior NCOs: 40.6%; senior officers: 23.9%). At the same time, JMP are likely to be exposed to workplace victimization due to the military's hierarchical nature (Kim et al., 2019; Keller et al., 2015) and mental health problems (Bray et al., 2010), which are closely intertwined. However, JMP have received little attention in existing research regarding the military community.

Workplace victimization as one of the risk factors of alcohol misuse in JMP refers to the experience of being a target of any intentional act or threat of aggression that can emerge at work as physical, verbal, or other disruptive behavior (Aquino and Thau, 2009; Henderson and Hasselt, 2017). Workplace victimization is a strong predictor of excessive drinking in the general population (Nielsen et al., 2018), and workplace victimization in the military is prevalent across nations (Kim et al., 2019; Hourani et al., 2018). According to Korean national data, about 13.5% (National Human Rights Commission of Korea [NHRCK], 2020) to 35.0% (Korean institute for Defense Analyses [KIDA], 2010) of JMP reported extensive forms of workplace victimization, and approximately 2.0% exposed to physical forms of violence by higher ranks (KIDA, 2010). In the context of workplace victimization, alcohol misuse can be an emotion-focused coping strategy to deal with the negative emotional effects of being victimized (Aquino and Thau, 2009). In fact, drinking has been utilized as an attempt to cope with stressful events, especially when no coping alternative is provided (Marlatt, 1996). Given the direct effects of the dominant leader-follower, subordinate hierarchical body and chain of command structure in workplace victimization (Aquino and Douglas, 2003), JMP, as those in a lower position, are more likely to be positioned as victims (rather than as perpetrators) under the systematic imbalance of power (Kim et al., 2019). Additionally, this environment may discourage victims from taking any legal action to defend themselves because doing so may involve being associated with negative stereotypes of victims seeking help regarding mental health problems (Heath et al., 2017). Hence, it is understandable that JMP use drinking as a reasonable way to manage the stress of being victimized (Aquino and Thau, 2009).

Post-victimization anger is the dominant response among victims of interpersonal violence (Ditton et al., 1999, p. 40). The link between anger and alcohol dependence has been well documented in theoretical and empirical studies alike (Walitzer et al., 2018; Kelly et al., 2010). For example, Kelly et al. (2010) reported that in a large sample of individuals attending Alcoholics Anonymous (AA), anger was tied to heavier drinking; this group began at the 98th percentile for the trait of anger. Current scholars who pursue military, addiction-related research have mainly focused on posttraumatic stress disorder (PTSD) or "anger as one of the PTSD symptoms" among veterans, which they attribute to combat-related experiences (Worthen and Ahem, 2014). Yet anger can be a prominent issue for active duty military staff regardless of clinical diagnoses (Worthen and Ahem, 2014, p. 356); combat experience is a critical benchmark in psychopathology because of the military context (Morland et al., 2012; Novaco, 2010). Fernandez and Johnson (2016), who developed a comprehensive view of anger based on the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), asserted that people are affected by the cultural atmosphere of attitudes in terms of a specific reference to expressions of anger that go beyond dispositional features (Tsai et al., 2006). The military represents a hierarchical structure with defined ranks (meaning absolute levels of power); consequently, members have a higher baseline for anger in the sense that training intensifies hostile emotions as adaptive responses during combat (Forbes et al., 2008). Considering the hierarchical nature of workplace victimization, the direction of anger may be suppressed toward one's self (anger-in) because the perpetrator is more likely to be of a higher rank (Kim et al., 2019). Empirical evidence suggests that anger and related emotions (irritability, frustration, and annoyance) are associated with self-destructive behaviors (Dyer et al., 2009; Leibsohn et al., 1994), especially with alcohol-related ramifications (Wakeford et al., 2018; Walitzer et al., 2015). Anger may leave no opportunity for rational decision-making (Dimeff and Marlatt, 1995; Leibsohn et al., 1994); therefore, post-victimization anger plays a crucial role in motivating alcohol misuse in the military setting.

There are few studies that examine the relationship between workplace victimization and alcohol misuse among JMP, while also accounting for anger, which is known risk factors for excessive drinking. In the current study, we directly tested the hypothesis that anger mediates the relationship between workplace victimization and alcohol misuse among JMP. We estimated that: (1) greater workplace victimization may be associated with more anger and alcohol misuse; (2) anger may be related to greater alcohol misuse; and (3) anger may mediate the relationship between workplace victimization and alcohol misuse.

2. Methods

2.1. Participants

Participants were active duty JMP in South Korea (hereafter referred to as Korea), and we used cross-sectional data from the "Survey on Mental Health of Korean Soldiers: Junior Military Personnel" conducted by the Yonsei University Family and Youth Welfare Research Team in 2017. We applied the purposive sampling method to select national military units in cooperation with the National Defense University of Korea. Military populations are divided in three groups in Korea; Officers (*Jang-gyo*), NCOs (*Busagwan*), and enlisted (*Byeong*). As Korea has adopted the conscription system since 1957, all Korean males are required to serve in the military for 21 to 24 months. About 330,000 male citizens are enlisted in mandatory service each year, most of them serve as enlisted, from the rank of private (*e-deung-byeong*) to sergeant (*byeong-jang*). Compared to Officers and NCOs, enlisted ranks are prohibited from gaining access to drink alcohol during their entire service duration except on granted vacations authorized by the military. On the other hand, junior officers (1st and 2nd lieutenants) and junior NCOs (staff sergeants) are permitted to drink during their leisure time after work. Thus, target participants were active duty officers and NCOs serving in the military for less than five years. The initial round of data collection started with 1000 respondents. We excluded individuals who did not agree to participate in the survey ($N = 15$), thus the response rate was 98.5%. Of the remaining 985 individuals, 170 participants were excluded because they did not response to items on any of the variables of interests, such as workplace victimization, anger, and alcohol misuse. The present study comprised an effective sample of 815 valid participants from 5 army units, 1 naval unit, and 2 air force units. The written consent of the participants was obtained, and a self-reported survey was conducted after the nature of the study was fully explained. All current analyses were approved by the Institutional Review Board of Yonsei University (7001988–201705-HR-190–02).

2.2. Measures

2.2.1. Workplace victimization

We assessed workplace victimization using the short form of the revised Conflict Tactics Scale-2 (Straus and Douglas, 2004). The respondents were asked to report on five kinds of workplace victimization experience in the past 12 months. These include the use of (1) abusive language; (2) threats; (3) non-physical forms of aggression (spreading gossip or ostracism); (4) minor physical abuse (being pushed, grabbed, or slapped); and (5) severe physical abuse (being kicked, threatened, or attacked with a lethal weapon). These are indicative of the five most common types of workplace victimization in the military (National Defense Committee, 2016). The participants were asked to report on workplace victimization that had occurred in the last 12 months. Each item had a 5-point response option: 0=never, 1 = 1–2 times, 2 = 3–5 times, 3 = 6–9 times, 4=more than 10 times. Utilizing this scale, a *t*-test was carried out on workplace victimization experiences. The sum score was utilized in a mediation model analysis. With regard to internal consistency, the Cronbach's alpha coefficient score was 0.879.

2.2.2. Anger

Anger was assessed using the revised version of the Composite International Diagnostic Interview Screening Scale (CIDI-SC; Kessler et al., 2013) – this measure is also used in the US Army Study to Assess Risk & Resilience in Servicemembers (Army STARRS) (Kessler et al., 2015). A five-item assessment of intermittent explosive disorder (IED; e.g., "felt so angry that you thought you might explode," "felt that your anger was out of control") was employed. The respondents rated each item using a 5-point scale ranging from "1″ (none of the time) to "5″ (all or most of the time). The ratings were summed for a total score over the past 30 days. A higher score indicated that the participants experienced a greater level of anger. The Cronbach's alpha coefficient score for anger was 0.896.

2.2.3. Alcohol misuse

The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item scale that can be used to identify hazardous and harmful patterns of alcohol consumption. The scale focuses on current drinking behaviors and experiences with alcohol in the previous 12 months. The first eight items have five response options scored from 0 to 4, while the last two items have three response options scored at 0, 2, or 4. The responses are summed to give a score ranging from 0 to 40. AUDIT scores (0–40) were divided into 4 risk zones (0–7 for low risk, 8–15 for risky or hazardous level, 16–19 for high-risk or harmful level, and 20 or more for high-risk dependence level), and a cut-off value of 8 points was recommended by WHO for identify a hazardous or harmful pattern of drinking (Babor et al., 2001). However, Lee et al. (2000), who validated AUDIT for Korean version recommended cut-off scores of 12 due to optimal sensitivity and specificity for Korean cultures of alcohol consumption. In the analyses, we used a cutoff of $\geq$12 to indicate alcohol misuse.

2.2.4. Other covariates

Demographic variables such as gender (0=female, 1=male), age (18–31), rank (0=NCOs, 1=Officers), and marital status (0=never, 1=married) were controlled for. Additionally, alcohol misuse is a strong predictor of adverse mental health (Trautmann et al., 2015; Sundin et al., 2014). We included job stress and depression as frequently examined mental risk factors for alcohol misuse. Job stress (Frone, 2016) and depression (Schumm and Chard, 2012) are the most prevalent reasons for drinking problems among military personnel. Therefore, depression and job stress, as mental health risk factors for alcohol misuse, were also employed. Depression was assessed using the Patient Health Questionnaire-9 (PHQ-9). The PHQ-9 determines the frequency with which respondents have been bothered by nine depressive symptoms; items include "interest in doing things and feeling down, depressed, or hopeless." The PHQ-9 also has an item to evaluate suicidal ideation. If the respondents indicated a positive answer to the suicidal ideation question, the research team initiated a Suicide Prevention Protocol, which involves immediate counseling by a licensed psychiatrist or clinical social worker during in-person training, as well as crisis intervention resources during online assessments. Reponses to the items range from 0 (not at all) to 3 (nearly every day). The total score was from 0 to 27, and the cutoff for clinical depression was 9 (Kroenke and Spitzer, 2002). The internal consistency of the PHQ-9 has been found to be good (Cronbach's alpha=0.84).

Job stress was established using 24 items of the Korean Occupational Stress Scale Short Form (KOSS-SF), which was validated in a nationwide epidemiological study (Chang et al., 2005). KOSS-SF is a self-reported questionnaire divided into seven subscales: (1) job demands; (2) insufficient job control; (3) inadequate social support; (4) job insecurity; (5) the organizational system; (6) lack of rewards; and (7) occupational climate. Each question was rated on a Likert scale from 1 (not at all) to 4 (very much). A higher score signaled a higher level of job stress. The total scores of the scale were converted into a 100-point system. Chang et al. (2005) who developed KOSS-SF suggested a cut-off score of 54.8 points for men and 56.0 points for women, which yielded optimal sensitivities for a total job stress score to distinguish high-risk of job stress. As the "interpersonal conflict" subscale dimension, which measures the level of support from colleagues and supervisors (e.g. "My colleague/-supervisor helps me with my work", "I have a colleague who understands me when I am having a hard time at work", "I have a colleague that relates to my job-related challenges"), did not exceed the recommended cut-off for multi-collinearity ($r > 0.80$) (Katz, 2011) with workplace victimization, all sub-scales were included to calculate the level of job stress. Each cutoff was implemented by gender.

2.3. Statistical analyses

Descriptive statistics were computed for the major variables (workplace victimization, anger, and alcohol misuse). An independent *t*-test and $\chi 2$ analysis were conducted to investigate the significance of the mediator and the dependent variable based on workplace victimization experiences. After conducting *t*-test, the effect size was calculated by utilizing Cohen's d, which implying values of 0.20, 0.50, and 0.80 represented small, medium, and large effect sizes respectively. A mediation model was performed using the PROCESS macro program for SPSS 25.0, model 4 (Hayes, 2013). In this model, the independent variable affected the mediator, and subsequently, the dependent variable. This model provides results based on simple mediation models with a direct effect (i.e., c': direct effect of independent on dependent variables after controlling for the mediator), and a total indirect effect (i.e., ab: effect of the mediator in the relationship between the independent and dependent variables). Mediation models appraise indirect effects, without the need for the relationship between the independent and dependent variables to be significant. We investigated anger as a mediator of the link between workplace victimization and alcohol misuse, controlling for gender, age, rank, marital status, depression, and job stress. Furthermore, bootstrapping was undertaken to overcome inferential problems, and yield a 95% confidence interval (CI) (Preacher and Hayes, 2008). For this model, we utilized 5000 bootstrapped samples.

3. Results

3.1. Sample characteristics

Table 1 displays the sample's demographic characteristics. The majority of the respondents were male (88.8%, $n = 723$) and from the army (47.1%, $n = 387$); 31.9% ($n = 262$) were from the air force and 21.0% ($n = 173$) from the navy. Most of the sample comprised NCOs (64.5%, $n = 529$). The respondents ranged in age from 18 to 24 (50.4%, $n = 411$). Other than missing data, 72.1% ($n = 587$) of the participants had more

Table 1
Characteristics of the participants.

	Frequency	Percentage (%)
Gender		
Male	723	88.8
Female	92	11.2
Branch of service		
Army	387	47.1
Air force	262	31.9
Navy	173	21.0
Rank		
Officers	291	35.5
Non-commissioned officers	529	64.5
Age (years)		
18–24	411	50.4
25–29	246	30.2
30+	19	2.3
Missing	139	17.0
Education		
HS/GED or less	228	27.9
More than HS	587	72.1
Marital status		
Married	60	7.3
Single	755	92.7
Probable depression		
Depression	63	7.7
Normal	759	92.3
Job stress		
High-risk	262	31.9
Normal	560	68.1

than a high school degree, and 92.7% (n = 755) were single. Additionally, 7.7% (n = 63) of JMP had a higher cutoff rate for clinical depression, and 31.9% (n = 262) were classified under the high-risk group for job stress.

3.2. Comparisons of the key variables

Table 2 shows prevalence of workplace victimization and comparisons of the key variables by victim status. Of the total sample, 150 (17.7%) respondents were identified as individuals with workplace victimization histories. The most widespread specific type was abusive language; 16.3% (n = 134) of the respondents had experienced it within the last 12 months. Meanwhile, 5.5% (n = 45) of the sample had been threatened, and less than 5% had been bullied (3.4%, n = 28) or physically victimized (minor physical abuse: 3.9%, n = 32; severe physical abuse: 3.2%, n = 26). In addition, we conducted a t-test and χ^2 analysis to determine if the sub-groups, based on workplace victimization, differed regarding anger and alcohol misuse. The anger and alcohol misuse of these sub-samples differed statistically, and JMP with workplace victimization had higher levels of both variables than JMP without workplace victimization (anger, t = 4.05, p=.000; alcohol misuse, χ^2=9.22, p=.002). With regard to the proportion, 46.6% of JMP with workplace victimization showed alcohol misuse, which was higher than the rate of JMP without workplace victimization (39.7%).

3.3. Model analysis

As illustrated in Table 3 (Fig. 1), the total effect of workplace victimization significantly predicted alcohol misuse in the initial stage (Z = 2.291, p<.05). However, the direct effect of workplace victimization disappeared when mediator and control variables were added (Z = 1.743, p=.081). In addition, significant direct paths were found from workplace victimization to anger (Z = 6.012, p<.001), and from anger to alcohol misuse (Z = 2.509, p<.05). The bootstrapping technique was employed (Table 4), and the results indicated that the total indirect effect was examined (B = .066, 95% CI=.013 to .141), which signals a significant full mediation effect. Workplace victimization on alcohol misuse was fully mediated by anger, with a 95% CI that did not contain zero. Table 5 presents the outcomes of the effect of control variables on alcohol misuse. However, no variables had a considerable effect on alcohol misuse.

4. Discussion

Alcohol use is common in the military (Mattiko et al., 2011; Bray et al., 2010). Thus, removing appropriate risk factors for alcohol misuse is key to improving organizational effectiveness. This study aimed to examine the prevalence of workplace victimization and alcohol misuse among JMP, and to investigate the role of anger as a mediator in the relationship between workplace victimization and alcohol misuse. However, existing studies on the risk factors for alcohol misuse have mainly centered on job stress and depression as risk factors for alcohol misuse (Frone, 2016; Trautmann et al., 2015; Sundin et al., 2014; Schumm and Chard, 2012). Only a few have looked at the connection

Table 3
Path analysis of the main variable.

Path	b	S.E	Z	p
Workplace victimization → Alcohol misuse (the initial stage)	.288	.126	2.291*	.021
Workplace victimization → Alcohol misuse (after covering mediator)	.224	.128	1.743	.081
Workplace victimization → Anger	.968	.161	6.012***	.000
Anger → Alcohol misuse	.068	.027	2.509*	.012

*p<.05, **<0.01, ***p<.001.

Table 2
Prevalence of workplace victimization and comparisons of the key variables by workplace victimization status.

	Frequency	Percentage (%)	Mean (SD)	Median
Workplace victimization [a]				
Any kind of victimization	150	17.7	.10 (.31)	2.00
Abusive language	134	16.3	.27 (.75)	1.00
Threats	45	5.5	.08 (0.46)	.00
Bullying	28	3.4	.04 (0.30)	.00
Minor physical abuse	32	3.9	.05 (.34)	.00
Severe physical abuse	26	3.2	.03 (0.28)	.00

Variables	JMP without workplace victimization (n = 665)		JMP with workplace victimization (n = 150)		Test statistics[b]	P	Cohen's D
	Mean (SD)	N (%)	Mean (SD)	N (%)			
Anger	1.41 (.59)		1.89 (.77)		4.05	.000	0.68
Alcohol misuse		267 (39.7)		68 (46.6)	9.22	.002	–

Notes.
[a] Minor physical abuse=being pushed, grabbed, or slapped; Severe physical abuse=being kicked, being threatened with, or being attacked with a lethal weapon.
[b] Significance was tested using the t-test for the continuous variable (anger) and an χ2 test for the categorical variable (alcohol misuse).

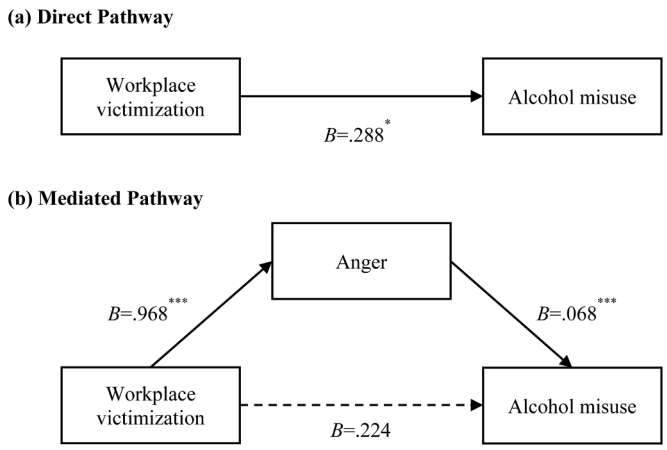

Fig 1. Direct and mediated pathway.

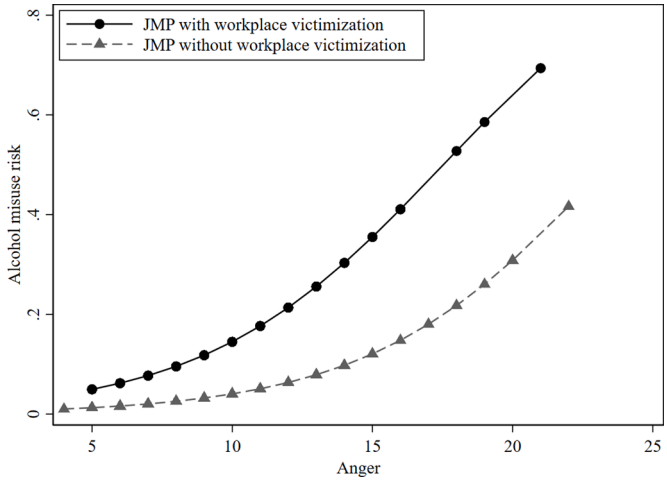

Fig 2. Predicted count between alcohol misuse risk and anger via workplace victimization.

Table 4
The test of the direct and indirect effect sizes of the mediation model.

Path	Effect	S.E	BC 95% CI
Workplace victimization → Alcohol misuse (direct effect)	.224	.128	−.027 to .477
Workplace victimization → Anger → Alcohol misuse (indirect effect)	.066	.032	.013 to .141

Table 5
The effects of control variables on alcohol misuse.

Path	b	S.E	Z	*p*
Gender	−.426	.238	−1.785	.074
Rank	.052	.158	.333	.738
Age	−.092	.113	−.816	.414
Marital status	.190	.298	.637	.523
Depression	.136	.307	.443	.657
Job stress	.021	.423	.051	.959

*$p<.05$, **<0.01, ***$p<.001$.

between workplace victimization and alcohol misuse, focusing on the JMP in particular. Our results extend previous work in several ways.

Our findings reveal that the pervasiveness of alcohol misuse among JMP with workplace victimization. 39.7% of JMP without workplace victimization reported alcohol misuse in the sample, which is slightly higher than the proportion of Korean aged over 19 with problematic alcohol use (38.7%; Korea Disease Control and Prevention Agency, 2020) and the American military population (33.1%; Mattiko et al., 2011). However, 46.6% of JMP with workplace victimization reported alcohol misuse showing that higher levels of alcohol misuse compared to average civilian population as well as JMP without workplace victimization experience. The fact that 46.6% of 17.7% respondents who experienced workplace victimization showed alcohol misuse suggested that more attention needs to be paid to eradicate violence in the military. Workplace victimization in the military is a frequent problem in the U.S. (Keller et al., 2015) as well as Korea (Korean National Defense Committee, 2016). The hierarchical, disciplinary structure of the military may discourage victims from addressing workplace victimization related complaints due to the fear of retaliation from perpetrators; in turn, this may weaken trust within ranks. The Department of Defense (DoD) (2018, p. 5) proposed that military commanders and supervisors of each branch take responsibility for fostering a climate of inclusion that assist and support those who reported victimization in the military with zero tolerance principles. Two-track strategies for protecting JMP are needed. First, taking legal actions against perpetrators and ensuring the impartial adjudication of bullying complaints is required. Second, it is necessary to guarantee that victims will not be disadvantaged, and will have the right to support through available resources such as military and civilian medical services, counseling, and treatment.

Furthermore, in line with previous research (Nielsen et al., 2018), we highlight the direct association between workplace victimization and alcohol misuse. These findings are consistent with preceding studies that found that alcohol use may be utilized as a coping strategy to handle the emotional dysregulation of being victimized (Aquino and Thau, 2009), or to cope with stressful events, especially when there is no alternative (Marlatt, 1996). Military staff can be isolated from moderating social norms and institutions, and military culture expects members to be "tough" and to "shut down" their feelings (Kulesza et al., 2015). Hence, JMP may choose to drink since they fear the stigma surrounding help-seeking behaviors.

Our results demonstrate that workplace victimization was fully mediated by anger, which consequently might be related to greater risk of alcohol misuse. This result is similar to past research (Murphy and Turgoose, 2019), which has shown that a higher level of anger may predict alcohol misuse. This relationship can be explained in that health risk behaviors attributable to violence could emerge as coping strategies for addictive behaviors; even people with no mental disorders can develop them. The path from victimization to anger can then contribute to higher alcohol dependency in the military population. Military personnel basically have a higher anger baseline because training augments anger as an adaptive response during combat (Forbes et al., 2008). As workplace victimization has a strong association with exclusion from group solidarity (Hernandez, 2015), those who experience workplace victimization may feel difficulty resisting perpetrators or readily taking any action to protect themselves, which may closely link to anger-in (Kim et al., 2019). Additionally, military subculture encourages alcohol consumption as part of emphasizing social cohesion, termed "manhood" or "military masculinity" (Hinote and Webber, 2012). As a result, "additional" anger triggered by workplace victimization can reinforce the motive to drink alcohol. Since anger can play a salient role in addictive psychological disorders (Fernandez and Johnson, 2016), which makes individuals more vulnerable to psychopathology (Novaco, 2010), greater anger might be closely tied to alcohol misuse (Leibsohn et al., 1994).

Military clinicians should implement screening for problematic drinkers, with further probing questions regarding anger, as well as workplace victimization. The DoD has applied annual alcohol misuse screenings for beneficiaries enrolled in military treatment facilities (MTFs, which are primary care medical settings) with an empirically validated instrument (DoD, 2014). Since higher levels of anger are frequently linked to greater risks of negative treatment outcomes among

military personnel (Walitzer et al., 2015; Morland et al., 2012), dealing with anger in terms of treating alcohol-related issues may be effective in reducing such problems. For example, data on outpatient, alcohol-dependent males and females who participated in "alcohol--adapted anger management [AM] treatment" indicate that AM treatment was followed by a significant drop in alcohol consumption frequency, intensity, and maladaptive anger-related thoughts for 6 months after the treatment ended (Walitzer et al., 2015). However, as the military setting could involve negative responses to both alcohol-related infractions (i.e., ostracism, career damage, loss of rank) and mental health challenges (such as the stigma regarding care), military personnel may feel discouraged from openly initiating treatment sessions (Gibbs et al., 2011). Online interventions are one option for confidential treatment. Evidence implies that web-based interventions can be effective since they can guarantee anonymity by circumventing face-to-face screenings. The absence of a personal encounter may increase the openness of the responses (Van Sickle and Sokolow, 2006) and decrease defensiveness when military staff are confronted with feedback on problematic drinking outcomes. Web-based media comprise one of the most widely used communication tools among younger personnel. Moreover, JMP would prefer to receive online interventions. Therefore, online anger treatment programs can successfully lower the high risk of alcohol misuse.

4.1. Limitations

There are a number of limitations of this study. First, the study data were cross-sectional, with the use of retrospective self-reports, thereby restricting the generalization of the causality. It is necessary to carry out a nationwide survey covering the actual conditions of workplace victimization, mental health problems, and alcohol misuse in the military. Second, understanding the prevalence of workplace victimization (17.7%) needs to be careful consideration. Victims' response patterns tend to be underreported for crimes with less serious victimization (such as abusive language) compared to physical attacks. In addition, acts of violence might be downplayed by an informal "code of silence" that conceals misconduct, or due to fear of reprisal toward the perpetrators in the context of the military (Kim et al., 2019; Pershing, 2006). Also, as mental health stigma is strongly grounded in the military culture (Kulesza et al., 2015), military personnel deliberately refuse to report mental health status due to the anticipated negative outcomes such as career harm (Ben-Zeev et al., 2012). Considering that alcohol use severity was not associated with receiving mental health care in the military (Kulesza et al., 2015), potential for under-reporting of alcohol misuse exists. Therefore, it can be assumed that workplace victimization as well as alcohol misuse might be more prevalent than the results of this study. More research needs to be carried out on the effect of workplace victimization in the military, and strategies to prevent it should be implemented in the armed forces. Third, this study did not account for the sexual minorities status in participants. As sexual minorities in the military are vulnerable to workplace victimization (Schvey et al., 2020), it may be an important risk factor for mental health problems. Future research should assess the sexual minority status of JMP in order to clarify the relationship between workplace victimization and mental health variables. Additionally, this study was solely designed to focus on the exposure to workplace victimization rather than other types of traumatic events. For example, combat experience is one of the important factors in other military studies because it is associated with mental health problems, such as alcohol misuse and PTSD (Miller et al., 2017). However, most Korean military personnel, especially JMP, have rarely experienced actual combat in recent few years despite South and North Korea relations becoming increasingly tense when North Korea commits military provocations, including missile and nuclear tests. Future research needs to assess for various types of trauma as well as interpersonal violence.

5. Conclusions

As a result of the hierarchical structure of the military, JMP, who have served a relatively short service of fewer than five years, are especially vulnerable to the exposure of workplace victimization. Additionally, JMP are susceptible to alcohol misuse, and anger may directly breed alcohol misuse in JMP with a history of workplace victimization. The study provides the prevalence of workplace victimization, alcohol misuse, and a cross-sectional understanding of the role of anger in JMP. Specifically, anger was found to mediate the relationship between workplace victimization and alcohol misuse in JMP even after accounting for demographic variables and other risk factors of alcohol misuse, such as depression and job stress. These findings suggest that workplace victimization and anger can play an important role in alcohol misuse prevention and intervention programs for JMP.

Author statements

We the undersigned declare that this manuscript is original, has not been published before and is not currently being considered for publication elsewhere.

We confirm that the manuscript has been read and approved by all named authors and that there are no other persons who satisfied the criteria for authorship but are not listed. We further confirm that the order of authors listed in the manuscript has been approved by all of us.

We understand that the Corresponding Author is the sole contact for the Editorial process. Joonbeom Kim is responsible for communicating with the other authors about progress, submissions of revisions and final approval of proofs

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Disclaimer

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Declaration of Competing Interest

The authors have no relevant conflicts of interest to disclose.

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