

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Differences in problem alcohol drinking by military service type among male professional military personnel in South Korea using Military Health Survey data
AUTHORS	Park, Jeongok; Jung, Eunyoung; Bae, Eunyoung

VERSION 1 – REVIEW

REVIEWER	Robert Stewart King's College London, Institute of Psychiatry
REVIEW RETURNED	25-Nov-2020

GENERAL COMMENTS	<p>This manuscript reports an analysis from a cross-sectional survey of military personnel in which the authors investigated correlates of problem drinking as defined from a nationally adapted version of the AUDIT instrument. The analysis is straightforward and my comments are relatively minor ones.</p> <ol style="list-style-type: none"> 1. 'Prevalence' would be a better term than 'rate' in the abstract results and elsewhere. 2. It's optional, but the lengthy text in the first section of the Results would be a lot more readable without the repetition of statistics that are already in Table 1. 3. There are rather a lot of variables, it seems, being entered simultaneously into regression models for Table 2. It would be helpful to know if the authors checked for highly correlated variables at the outset, as these could have rendered models unstable. 4. Although I would say that the English language standard is acceptable, the paper would benefit from being proof-read for quality if this service is available to the authors as there are a few typographical errors.
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REVIEWER	DD Jeffery Defense Health Agency, Department of Defense-Health Affairs, Falls Church, VA
REVIEW RETURNED	11-Jan-2021

GENERAL COMMENTS	<p>This well-written manuscript describes a topic of high interest to all military services and contributes to general knowledge. The research is very well done and deserves publication although there are a few areas that could use more attention.</p> <p>As someone who is unfamiliar with the Military Health Survey, please provide more information about this measure including (a) how long it has been administered, (b) what are its major content factors, (c) if it was informed by the U.S. Health-Related Behaviors Survey of Active Duty Personnel, (d) if the U.S. National Sleep Foundation questions about sleep hours was used.</p>
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	<p>Another limitation that was not addressed is the relationship between alcohol use and military exposure to combat. Is the reader to assume that all subjects had the same combat exposure? Please see the research results of Jacobson, Ryan, Hooper et al. at: https://pubmed.ncbi.nlm.nih.gov/18698065/</p> <p>While the authors discussed the Law for the Promotion of Nation's Health and lower rates among Air Force personnel (assumedly due to prohibitions regarding use of alcohol during flight training or aircraft maintenance), there is no mention of military policy regarding alcohol use apart from enlisted personnel not being allowed to drink. For example, does the Korean military perform alcohol breathalyzer tests? Are there policies for how military personnel identified as having an alcohol problem are treated or subject to military discharge? The higher rates of alcohol use among first and second lieutenants compared to more senior officers might suggest that those with drinking problems are discharged before they are promoted to higher ranks. Are there any policies in place that examine alcohol use and promotion?</p> <p>If the substance use control or cessation programs enacted since 2000 have not been effective, what would nursing health promotion programs do differently? Given the high rates of alcohol use in the Korean culture, what would be key elements of a program to change alcohol use within the military culture?</p> <p>Lastly, this review recommends not including the reference by Bray et al. (2007) because it contradicts the findings of Barlas et al. The Bray article is based on >20- year old definitions of substance use/misuse, provides no description of methods used to weight their samples, and primarily cites their own work which has subsequently been found to inflate the extent of substance use in the U.S. military. In contrast, the Barlas et al. report used up-to-date definitions to categorize substance use, and fully reported subject recruitment procedures and weighting procedures.</p> <p>Lastly, although only 201 women were in the sample, it is unclear why women were excluded from the analysis. See the following citations which suggest similar problems regarding alcohol use among military women: Wallace et al. https://pubmed.ncbi.nlm.nih.gov/19702478/ Cucciare et al. https://pubmed.ncbi.nlm.nih.gov/32081595/ Fadamet al. https://pubmed.ncbi.nlm.nih.gov/31623632/ Watrous et al. https://pubmed.ncbi.nlm.nih.gov/33374741/ https://pubmed.ncbi.nlm.nih.gov/33374741/ Jeffery et al. https://pubmed.ncbi.nlm.nih.gov/26741908/ It may be outside the scope of this research, but recommend at least one sentence explaining why women were omitted, ideally, an indication that women were not found to have the same rates of use and(or) K-AUDIT cut off scores are different for women.</p>
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VERSION 1 – AUTHOR RESPONSE


1. Reviewer 1

Reviewer comments	Response of comments	Page
'Prevalence' would be a better term than 'rate' in the abstract results and elsewhere.	Thank you for the comment. We revised the term from 'rate' to 'prevalence'.	p. 3, 5, 11, 13
It's optional, but the lengthy text in the first section of the Results would be a lot more readable without the repetition of statistics that are already in Table 1.	Thank you for the comment. We strove to shorten the text by removing redundant descriptions and we hope this will improve its readability.	p. 10
There are rather a lot of variables, it seems, being entered simultaneously into regression models for Table 2. It would be helpful to know if the authors checked for highly correlated variables at the outset, as these could have rendered models unstable.	Thanks for your comment. We apologise that we did not sufficiently describe this information. We have added the following information in the second section of the results: 'For the multiple logistic regression analysis, we only considered variables showing statistical significance in the univariate analysis.'	p. 12
Although I would say that the English language standard is acceptable, the paper would benefit from being proof-read for quality if this service is available to the authors as there are a few typographical errors.	We apologise for the inconvenience. We hired a professional proofreading company to edit the paper once again before submission. We have revised the manuscript again and hope that this will remedy this issue.	-

2. Reviewer 2

Reviewer comments	Response of comments	Page
As someone who is unfamiliar with the Military Health Survey, please provide more information about this measure including (a) how long it has been administered, (b) what are its major content factors, (c) if it was informed by the U.S. Health-Related Behaviors Survey of Active Duty Personnel, (d) if the U.S.	Thank you for your comment. We revised the 'Data source' section to include the suggested information as follows: 'The MHS was conducted for only two years, from 2014 to 2015, to	p. 7

<p>National Sleep Foundation questions about sleep hours was used.  [SEP]</p>	<p>understand the health behaviour and medical utilisation of military personnel. The survey consisted of four domains: health behaviour, injury/safety, mental health, and medical utilisation. It was designed to fit the situation of the military based on the Korean National Health and Nutrition Survey. In consideration of the fact that the survey measurement tools for the major variables in 2014 and 2015 were different, this study only used data from 2015.'</p>	
<p>Another limitation that was not addressed is the relationship between alcohol use and military exposure to combat. Is the reader to assume that all subjects had the same combat exposure? Please see the research results of Jacobson, Ryan, Hooper et al. at: https://pubmed.ncbi.nlm.nih.gov/18698065/</p>	<p>Thank you for your valuable opinion. This would make the manuscript more robust. Compared to U.S soldiers, however, Korean soldiers have relatively little experience of being exposed to combat; hence, it is difficult to obtain enough of a population or high quality data for an analysis regarding combat exposure. We have mentioned this limitation in the manuscript as follows:</p> <p>'Second, since this study was based on secondary data analysis, there was limited information on some factors affecting alcohol drinking such as combat exposure experience.'</p>	<p>p. 16</p>
<p>While the authors discussed the Law for the Promotion of Nation's Health and lower rates among Air Force personnel (assumedly due to prohibitions regarding use of alcohol during flight training or aircraft maintenance), there is no mention of military policy regarding alcohol use apart from enlisted personnel not being allowed to drink. For example, does the Korean military perform alcohol breathalyzer</p>	<p>We appreciate your comment. The Korean military does not perform breathalyser tests. However, if drunk driving is caught by police, the driver and any companions face disciplinary action by the military. Furthermore, when a soldier who has been disciplined is promoted to a higher rank, such a disciplinary action has a</p>	<p>p.14</p>

<p>tests? Are there policies for how military personnel identified as having an alcohol problem are treated or subject to military discharge? The higher rates of alcohol use among first and second lieutenants compared to more senior officers might suggest that those with drinking problems are discharged before they are promoted to higher ranks. Are there any policies in place that examine alcohol use and promotion?</p>	<p>negative impact. Therefore, we think the higher the level of the officer, the more sensitive the individual may be to the problem.</p>	
<p>If the substance use control or cessation programs enacted since 2000 have not been effective, what would nursing health promotion programs do differently? Given the high rates of alcohol use in the Korean culture, what would be key elements of a program to change alcohol use within the military culture? </p>	<p>We appreciate the comment. We have noted a detailed explanation about this comment in the manuscript as follows:</p> <p>'According to the Military Health Promotion Instruction, the stop drinking project provides educational and promotional content that can be applied to anyone, focussing on health problem that may arise from drinking.³¹ However, the stop drinking project was ineffective, owing to the permissive drinking culture^{7 12} in which alcohol is recognised as a medium for unity among military members. Furthermore, such culture is a factor that hinders recognition of the severity of problem alcohol drinking. Thus, to successfully conduct projects related to the use of alcohol, nursing officers should regularly check the drinking status of soldiers using AUDIT-K, find people who engage in problem alcohol drinking, and provide them with individual interventions. In addition, as the military is a hierarchy organisation, we should conduct health promotion projects to change the minds of commanders about drinking and the drinking culture that reflect the</p>	<p>p. 14</p>

	occupational characteristics and environment of the military service types.'	
<p>Lastly, this review recommends not including the reference by Bray et al. (2007) because it contradicts the findings of Barlas et al. The Bray article is based on >20- year old definitions of substance use/misuse, provides no description of methods used to weight their samples, and primarily cites their own work which has subsequently been found to inflate the extent of substance use in the U.S. military. In contrast, the Barlas et al. report used up-to-date definitions to categorize substance use, and fully reported subject recruitment procedures and weighting procedures. ^[L]_[SEP]</p>	<p>Thank you for this comment. We have deleted the reference by Bray et al. (2007).</p>	<p>p. 18</p>
<p>Lastly, although only 201 women were in the sample, it is unclear why women were excluded from the analysis. See the following citations which suggest similar problems regarding alcohol use among military women: ^[L]_[SEP]Wallace et al. https://pubmed.ncbi.nlm.nih.gov/19702478/ ^[L]_[SEP] Cucciare et al. https://pubmed.ncbi.nlm.nih.gov/32081595/ ^[L]_[SEP] Fadamet al. https://pubmed.ncbi.nlm.nih.gov/31623632/ ^[L]_[SEP] Watrous et al. https://pubmed.ncbi.nlm.nih.gov/33374741/ ^[L]_[SEP] https://pubmed.ncbi.nlm.nih.gov/33374741/ ^[L]_[SEP]Jeffery et al. https://pubmed.ncbi.nlm.nih.gov/26741908/ ^[L]_[SEP] t may be outside the scope of this research, but recommend at least one sentence explaining why women were omitted, ideally, an indication that women were not found to have the same rates of use and(or) K-AUDIT</p>	<p>Thank you for your comment. We reviewed the recommended articles and found that some female soldiers suffer from problem alcohol drinking. However, there was a cut-off score difference between men (10) and women (8) in the AUDIT-K. In addition to this, numbers of female soldiers are completely different in the Army, Navy, and Air Force, making reliable analysis possible. Therefore, female soldiers were not considered in the analysis, and this is another limitation of our research.</p> <p>We added this information to the manuscript as follows:</p> <p>'On the scale used in this study, men and women face a different cut-off score²⁵; moreover, women were excluded from the study due to the</p>	<p>p. 7</p>

cut off scores are different for women.	substantial difference in the number of people in each group.'	
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VERSION 2 – REVIEW

REVIEWER	Robert Stewart King's College London, Institute of Psychiatry
REVIEW RETURNED	06-Mar-2021

GENERAL COMMENTS	The authors have addressed most of my comments in the revision satisfactorily; however, I think they have misunderstood my third comment about simultaneous entry of variables into regression models. I was not concerned about the significance in univariate analyses (as their new text addresses) but more that there are a lot of variables being adjusted for each other. If variables are themselves strongly associated (e.g. if there were to be a strong correlation between occupational life stress and personal life stress) then entering them into the same regression model may give rise to misleading coefficients. What I wanted to know was whether the authors had checked for this at all (e.g. through a correlation matrix), as it would be standard practice to do so.
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VERSION 2 – AUTHOR RESPONSE

1. Reviewer 1

Reviewer comments	Response of comments	Page
The authors have addressed most of my comments in the revision satisfactorily; however, I think they have misunderstood my third comment about simultaneous entry of variables into regression models. I was not concerned about the significance in univariate analyses (as their new text addresses) but more that there are a lot of variables being adjusted for each other. If variables are themselves strongly associated (e.g. if there were to be a strong correlation between occupational life stress and personal life stress) then entering them into the same regression model may give rise to misleading coefficients. What I wanted to know was whether the authors had checked for this at all (e.g. through a correlation matrix), as it would be	<p>Thanks for your kind suggestion.</p> <p>In order to cover the issue, we investigated correlations among independent variables. The result showed that there were statistically significant correlations among pairs but with small range of coefficient value (.05-.40). Please note that second highest coefficient value was .20. In addition, we also tested multicollinearity using variance inflation factor (VIF) and tolerance with the range of 1.021~2.310 and 0.408~0.980, which means that collinearity among independent variables can be ignored.</p> <p>These sentences were noted in 'data analysis' and 'results' of the manuscript.</p>	p. 10, 12

standard practice to do so.		
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VERSION 3 – REVIEW

REVIEWER	Robert Stewart King's College London, Institute of Psychiatry
REVIEW RETURNED	20-Aug-2021

GENERAL COMMENTS	I feel that the authors have adequately addressed my comments on the last submission.
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