

Factors associated with substance use among Spanish military personnel involved in “Bosnia-Herzegovina”

Factores asociados al consumo de drogas en una muestra de militares españoles desplegados en “Bosnia-Herzegovina”

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Abstract

The use of both legal and illegal drugs has rarely been investigated among the Spanish military population involved in multinational military operations. The aim of the current study was to examine the consumption of drugs by Spanish military personnel in Bosnia-Herzegovina, and the variables associated with such substance use. A total of 605 military personnel participated in the cross-sectional study. The participants' mean age was 25.9 years ($SD = 5.9$), and 93.9% of the sample was male. The majority of the participants were enlisted personnel (83.5%). The most widely used drugs were tobacco (54.2%), and alcohol (39.9%). With respect to illegal drugs, the results showed that the drug with the highest prevalence of “use at some point during a lifetime” was cannabis (36.2%), followed by cocaine (14.9%) and amphetamines (12.1%). The most important variable associated with a decrease in the consumption of illegal drugs was social support. Conversely, participants with friends who have used illegal drugs had an increased likelihood of drug consumption. Given that the use of drugs can adversely affect soldiers' performance, preventive measures should be applied in multinational military operations.

Keywords: Military personnel; Multinational military operations; Drug use; Risk factors; Protective factors.

Resumen

El consumo de drogas legales e ilegales ha sido muy poco investigado en población militar española destinada en zonas de operaciones multinacionales. El objetivo de la investigación fue evaluar el nivel de consumo de drogas en militares españoles que realizaban misiones en Bosnia-Herzegovina, e identificar las posibles variables asociadas con dicho consumo. En el estudio transversal participaron 605 militares. La edad media de los participantes fue de 25,9 años ($DT = 5,9$) y el 93,9% de la muestra eran hombres. La mayoría de los participantes pertenecían a las escalas de tropa y marinería (83,5%). Las drogas más usadas fueron el tabaco (54,2%), y el alcohol (39,9%). En relación a las drogas ilegales, los resultados muestran que la droga con una mayor prevalencia de consumo “alguna vez en su vida” fue el cannabis (36,2%), seguida de la cocaína (14,9%) y las anfetaminas (12,1%). La variable más relevante asociada con una disminución en el consumo de drogas ilegales ha sido el apoyo social. En cambio, los participantes quienes tenían amigos consumidores de drogas ilegales incrementaban la probabilidad de consumo de drogas. Se resalta la importancia de la prevención en zonas de operaciones multinacionales para evitar el efecto negativo que podría tener el consumo de drogas en el desempeño adecuado de las misiones encomendadas.

Palabras clave: Personal militar; Zonas de operaciones multinacionales; Consumo de drogas; Factores de riesgo; Factores de protección.

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Drug use is a social problem that affects a variety of groups, some of them more researched than others. For example, investigations or reports on drug use among adult or adolescent civilians are numerous both nationally and internationally (Melchior, Chastang, Goldberg & Fombonne, 2008; Miquel et al., 2015; Motos Sellés, Cortés Tomás, Giménez Costa & Cadaveira Mahía, 2015; Mounteney et al., 2016; Observatorio Español sobre Drogas, 2013; Observatorio Español de la Droga y las Toxicomanías, 2015; Observatorio Europeo de las Drogas y las Toxicomanías, 2014). On the other hand, there are other more specific groups that have been less researched, the military population among them. As far as we are aware, studies carried out in the Spanish armed forces are far and few between, and given the aim of protecting the confidentiality of critical information in this group, the results they yield are not normally accompanied by precise numerical data (e.g., review the work done by Donoso Rodríguez, 2012). Martínez, Alonso, Taranco and Gutiérrez (2010) carried out a study on Spanish national territory into illicit drug use among non-deployed members of the armed forces in the army, navy and air force. The investigation began in 2002 and ended in 2007. In general, they found that 9% of the military currently used cannabis, 2% hallucinogenic drugs, 3.5% amphetamine and 8% cocaine. The prevalence of drug use declined over the years, with the exception of 2003, when there was an increase in consumption compared to 2002. For example, while 8.2% used cocaine in 2002, which came down to 4.5% in 2007, this progressive decrease was countered in 2003, which saw consumption of 10.7%. In a further study, Donoso Rodríguez (2012) assessed the prevalence of current use of legal (alcohol and tobacco) and illegal drugs (cannabis, cocaine, opiates, hallucinogens and amphetamines) in both a sample of non-deployed professional army soldiers from 1997 to 2007 and a group of non-deployed army officers from 2002 to 2008. This author found that the most heavily used substances in the professional army were alcohol and tobacco, with cannabis the most commonly used illicit drug, followed by cocaine and amphetamines. At the same time, however, it should be noted that a high percentage of the troops declared that they had not used any illegal psychoactive substance. Over the years of the study, there was a decrease in the use of legal and illegal drugs (cannabis, cocaine and amphetamines). Among the officers, the most frequently used substances were also legal drugs (alcohol and tobacco), and the consumption of illicit drugs was very low. Substance use has remained stable over the years and is similar to the troops.

Some studies suggest that drug use could differ between military personnel and the civilian population. For example, Teachman, Anderson, and Tedrow (2015) noted that there was an increase in alcohol consumption among male soldiers who enlisted in the military compared to those

who did not enroll. Opposite results occur when it comes to the women, where the likelihood of alcohol consumption decreased in those women who enlisted in the military. These data are of great interest because they seem to indicate that there could be an interaction between the variable of being enlisted and sex. It is important to highlight the male-dominated nature of the Spanish military population, with 83.5% of the professional military personnel in the army and navy being men, a proportion that decreases to 73.7% when it comes to service personnel in the armed forces (Unidad de Estadística del Órgano Central, 2016).

In line with this possible discrepancy in drug consumption between military and civilian populations, the Household Survey on Alcohol and Drugs in Spain (EDADES) found that 6.6% of the civil population in Spain (aged 15 to 64) has consumed cannabis in the last 30 days, with 0.1% consuming hallucinogens, 0.3% amphetamines and 1.1% cocaine (Observatorio Español de la Droga y las Toxicomanías, 2015). These levels of illicit drug use are lower than those obtained in the study by Martínez et al. (2010). While it is true that the two studies do not use identical measures of consumption, they are very similar (current consumption and consumption in the last 30 days).

At the same time, there are specific situations that form part of military life, such as the participation in international missions in areas of multinational operations, with or without exposure to combat, and which may be associated with an increase in, or intensive consumption of traditional drugs such as alcohol (Cucciare et al., 2015; Jacobson et al., 2008). Thus, Kelsall et al. (2015) conducted a meta-analytical study comparing the consumption of alcohol or other substances among military personnel who participated in the Gulf War or in the Iraq-Afghanistan War to that of colleagues who did not take part in such conflicts. Military personnel who participated in the above-mentioned conflicts had a higher risk of alcohol consumption (OR of 1.3 in the Gulf War, OR of 1.4 in the Iraq-Afghanistan War) or consumption of other substances (OR of 1.1 in the Iraq-Afghanistan War).

Since research carried out among the military personnel of the Spanish armed forces is scarce, especially in areas of multinational operations, it would be important to have accurate information on the prevalence of drug use in this group during an international mission. Likewise, it would be of great interest to evaluate the possible factors associated with such substance use in this context, which have previously proved significant in other groups (e.g., Brook, Saar, Zhang & Brook, 2009; Coomber et al., 2011; Rudzinski et al., 2014; Schnohr et al., 2004; Sordo et al., 2015).

As a result, the aim of this study is to assess the use of legal and illegal drugs in a population of Spanish military personnel destined for the multinational operations area of Bosnia-Herzegovina, as well as the possible variables associated with such consumption.

Method

Participants and procedure

The sample consisted of 605 professional soldiers belonging to the Spanish armed forces (army and marine infantry), all destined for operational units located in the multinational operations zone in Bosnia-Herzegovina (Mostar-Spain, Mostar- Airport, Duzi detachment in Trebinje, and Sarajevo and Raylovac bases). The total number of military personnel making up the contingent during the time of the investigation was 1212. The inclusion criterion was that the participants were not involved in tasks typical of their profession during the implementation of the research. That is to say, the incidental sample consisted of all the military personnel making up the contingent with the exception of those who were, at the time the questionnaires were completed, on specific assignments such as escort or guard duty, surveillance, etc. As a result, 49.9% of all the troops deployed in the contingent were available, and all of them voluntarily agreed to participate.

The study was transversal. The evaluation booklet was self-administered collectively every Wednesday from January to April 2003 at 11:00 a.m. in the barrack messes. The same researcher who started the session was always present in the hall, giving the instructions aloud to complete the booklet and clarifying any doubts arising before the participants began to complete it. The session lasted approximately 60 minutes. He warned of the importance of not leaving any question or item unanswered. Finally, the anonymity of the participants and the confidentiality of the information obtained were guaranteed. All the military personnel present at the time the survey was carried out participated voluntarily in the research and received no compensation.

Variables

A booklet was provided in which information could be recorded on sociodemographic characteristics (age, sex, level of education, who they live with, locality of origin, etc.), habits of legal drug use among relatives (tobacco consumption in parents and siblings), illicit drug use of among friends, and the use of different drugs by the respondents themselves (alcohol, tobacco, cannabis, amphetamines, cocaine and other substances). Specifically, regular alcohol consumption was recorded (do you usually drink alcohol?), as was current smoking (do you smoke at present?), and whether illegal drugs have ever been used during the respondents lifetime (for example, have you ever used cocaine?). Likewise, questions specific to the military context were included, such as the respondent's type of unit (which force, role, and headquarters /general staff) or military rank (enlisted personnel and officers).

The protection variables were measured through a version of the Risk and Protection Factors Questionnaire (CFR-P, Martínez-González, Trujillo-Mendoza & Robles-Lozano, 2007) adapted for use with the study population.

This measurement instrument was included in the above mentioned booklet, and consists of 35 items evaluating variables of protection against the consumption of legal and illegal drugs. The response format is a five-point Likert type scale, where 1 equals no protection and 5 maximum protection. The psychometric properties of the questionnaire were evaluated because the sample studied was different in composition and variability to the benchmark (Wilkinson and APA Task Force on Statistical Inference, 1999). Exploratory factor analysis was performed to study the dimensional structure of the evaluation instrument. The findings showed the existence of two dimensions of protection, which were coping skills (23 items) and social support (12 items). The internal consistency for the coping skill dimension, as measured by Cronbach's alpha coefficient, was 0.86 and for social support 0.68.

Statistical analysis

The data were analyzed descriptively by calculating the arithmetic means and standard deviations for variables continuous, and the frequencies for the categorical variables.

Student's t-test was used for hypothesis testing on two independent sample means of quantitative variables. If the assumption of equal population variances (using Levene's test) was not given, the Welch approximation was applied to perform the contrast on mean differences. Pearson's Chi-square analysis was applied for qualitative variables to contrast the prevalence of consumption obtained for the psychoactive substances in question. All variables yielding statistically significant differences with a p-value <0.05 were included as predictors in the various multiple binary logistic regression analyses performed for each of the legal and illegal drugs. The prevalence Odds Ratio (OR) was the indicator on which the multivariate analysis was focused. When the predictive variable introduced in the model is quantitative, for example age (completed years), and an OR greater than 1 is obtained with respect to the criterion variable, for example alcohol consumption, it means that the probability of alcohol consumption of a 35-year-old is higher than one who is 34 years old. In contrast, when the OR is less than 1, the probability of alcohol consumption of a 35-year-old individual is lower than that of a 34-year-old. In the selection of variables, the stepwise regression method was used (the elimination criterion was based on the probability of the Wald interval). All analyses were performed with the SPSS 20.0 statistical package, with the exception of the calculation of the 95% confidence intervals for prevalence of drug use, which followed Newcombe's test (1998).

Results

Sample characteristics

The mean age of the participants was 25.9 years (SD = 5.9), with a range of 18 to 51 years. Men made up 93.9%

of the sample, 69.8% of which had attended secondary school. The majority of the participants came from the forces (54.7%) and 83.5% of the personnel were enlisted personnel (Table 1).

Prevalence of legal and illegal drug use

Of the total sample, 39.9% regularly drink alcohol and 54.2% currently smoke. With regard to illicit drugs, 36.2% have at some point in their lives tried cannabis, 12.1% amphetamines, and 14.9% cocaine. Only 8% of participants have ever tried substances other than those indicated (Table 2).

It is worth pointing out that the parents of the participants smoke in 41.7% of cases, mothers in 21.9%, and siblings in 54.8%. The consumption of illegal drugs by friends is 60.8% (Table 1).

Association between variables of interest and drug use

The variables that were statistically significant in relation to habitual consumption of alcohol were: level of education, who you live with, military rank, father smoking tobacco, friends consuming illicit drugs, and age. The variables predicting habitual alcohol consumption were having a father who smoked and age (Table 3).

The variables that were statistically significant in relation to the current consumption of tobacco were: educational level, military rank, father smoking tobacco, and age. The variables level of education and having a father who

smokes make up the predictive model for current tobacco consumption (Table 3).

The variables that were statistically significant in relation to cannabis use were: place of origin, level of education, who you live with, military unit, military rank, mother smoking tobacco, father smoking tobacco, friends consuming illicit drugs, age, coping and social support. The variables significantly predicting cannabis use were: place of origin, military unit, father smoking tobacco, friends consuming illicit drugs, age, and social support (Table 3).

The variables that were statistically significant in relation to the consumption of amphetamines were: level of education, who you live with, military unit, mother smoking tobacco, friends consuming illicit drugs, age, and social support. In the consumption of amphetamines, the predictor variables were friends consuming illegal drugs, age, and social support (Table 3).

The variables that were statistically significant in relation to cocaine use were: level of education, who you live with, military unit, military rank, mother smoking tobacco, father smoking tobacco, friends consuming illicit drugs, age, and social support. The results of the significant predictor variables comprising the model for cocaine use were: military unit, military rank, friends consuming drugs and social support (Table 3).

The variables that were statistically significant in relation to the consumption of other substances were: military scale, mother smoking tobacco, friends consuming illicit drugs, age, coping skills, and social support. The variables that

Table 1. *Characteristics of the sample and use of drugs among family and friends*

Sex	% (n)	Military rank	% (n)
Male	93.9 (568)	Enlisted	83.5 (505)
Female	6.1 (37)	Officer	16.5 (100)
Level of education	% (n)	Father smokes	% (n)
Primary school	21 (127)	Smoker	41.7 (251)
Secondary school	69.8 (420)	Mother smokes	% (n)
University	9.1 (55)	Smoker	21.9 (132)
Who you live with	% (n)	Siblings smoke	% (n)
Parents	40.2 (243)	Smoker	54.8 (328)
Shared household	24.5 (148)	Friends use illicit drugs	% (n)
Own family	25 (151)	User	60.8 (367)
Alone	10.3 (62)		
Place of origin	% (n)		
Rural	75 (454)		
Urban	25 (151)		
Military unit	% (n)		
Forces	54.7 (331)		
Forces support services	37 (224)		
Headquarters	8.3 (50)		

Table 2. *Prevalence of legal and illegal drug use*

				95% Confidence Interval	
		Prevalence (%)	n	Lower limit	Higher limit
Regularly consumes alcohol	Yes	39.9	241	36.1	43.9
Currently smokes	Yes	54.2	328	50.2	58.1
Uses cannabis	Yes	36.2	219	32.5	40.1
Uses amphetamines	Yes	12.1	73	9.7	14.9
Uses cocaine	Yes	14.9	90	12.3	17.9
Uses other substances	Yes	8	48	6	10.4

Table 3. *Binary logistic regression analysis of variables predicting legal and illegal drug use*

		95% Confidence Interval	
	Odds Ratio	Lower limit	Higher limit
Regular drinking			
Father smokes (rc. doesn't smoke)	1.5	1.0	2.1
Friends use illicit drugs (rc. don't use)	1.4	1.0	2.0
Age ^a	0.96	0.93	0.99
Currently smokes			
Secondary school (rc. primary)	0.9	0.6	1.3
University (rc. primary)	0.4	0.2	0.8
Father smokes (rc. doesn't smoke)	1.4	1.0	2.0
Cannabis use			
Urban (rc. rural)	0.6	0.4	0.9
Forces support services (rc. forces)	0.6	0.4	0.9
Headquarters (rc. forces)	1.2	0.6	2.3
Father smokes (rc. doesn't smoke)	1.6	1.1	2.2
Friends use illicit drugs (rc. don't use)	2.3	1.6	3.4
Age	0.9	0.9	1.0
Social support	0.6	0.4	0.9
Amphetamine use			
Friends use illicit drugs (rc. don't use)	5.5	2.8	10.7
Age	0.8	0.7	0.9
Social support	0.4	0.2	0.6
Cocaine use			
Secondary school (rc. primary)	0.6	0.3	1.0
University (rc. primary)	0.2	0.0	1.3
Forces support services (rc. forces)	0.4	0.2	0.7
Headquarters (rc. forces)	0.1	0.0	0.9
Mother smokes (rc. doesn't smoke)	1.7	1.0	2.9
Friends use illicit drugs (rc. don't use)	2.8	4.9	8.7
Social support	0.4	0.2	0.7
Use of other substances			
Friends use illicit drugs (rc. don't use)	8.7	3.8	19.9
Social support	0.4	0.2	0.7

Notes. rc. = reference category for the predictor variable; a = two decimal places are reported to avoid potentially incorrect interpretation when rounding a single decimal place.

predict the consumption of other substances were friends consuming illicit drugs, and social support (Table 3).

Discussion

In the present study, smoking was the most common example of substance use among the Spanish military population in the multinational operations zone of Bosnia-Herzegovina. Drinking was the second most common substance use, followed by cannabis consumption. Social support was an important predictor variable of illicit drug use; therefore, greater social support was associated with a lower probability of such use. Another relevant variable that predicted drug use was having friends who used illicit drugs, i.e., soldiers with friends who used illicit drugs had an increased likelihood of using those drugs.

As mentioned above, the most readily consumed drugs in the multinational operations area were tobacco (54.2% currently smoke) and alcohol (39.9% regularly drink). With regard to the latter, it is important to mention that it appears that alcohol consumption increases in the military population deployed in the area of operations in accordance with the conclusions drawn from international studies (Jacobson et al., 2008; Kelsall et al. 2015). The results obtained showing greater consumption of legal compared to illegal drugs coincide with other investigations carried out with a non-deployed Spanish military population (Donoso Rodríguez, 2012). If we compare these data with those observed in the Household Survey on Alcohol and Drugs in Spain (EDADES), selecting for this purpose the civil population group and level of consumption closest to that used in the current study, we find that 7.2% of the male population aged 25 to 34 consume alcohol daily. With regard to smoking, 37.9% of the general male population aged 25-34 years have used this drug daily in the last 30 days (Observatorio Español de la Droga y las Toxicomanías, 2015). Consequently, it could be tentatively concluded that tobacco and alcohol consumption is higher in the military population deployed in the area of operations compared to the Spanish civilian population. This assertion would need to be confirmed in future studies where similar consumption criteria are employed.

With respect to illicit drugs, the most widely consumed was cannabis, with 36.2% of the military personnel having used it at some point in their lives. The second most used was cocaine with 14.9%, followed by amphetamines with 12.1%. Other substances were used by 8% of the participating military. In a study by Martínez et al. (2010) with a non-deployed Spanish military population, the order of the most commonly consumed illicit drugs found in their sample was similar to that obtained in the present study (9% currently consume cannabis, 8% cocaine and 3.5% amphetamines). The prevalence of illicit drug use in the study by Martínez et al. (2010) was lower than that found in

the area of operations, although these values are not completely comparable because each study used a different measure of consumption: 'current use' was used in the research by Martínez et al. (2010) and 'have used at some point' in the present study. Another aspect to be highlighted in the study by Martínez et al. (2010) is that the prevalence of drug use in the Spanish military population was found to have been decreasing over the years (2002-2007), except for the year in which the data were obtained for the present study; a year in which there was an increase in the consumption of illicit drugs compared to the previous year. In the EDADES survey, prevalences of cannabis and cocaine use at some point in a lifetime were higher in the Spanish civilian population of similar age and sex (males aged 25 to 34 years) than in the deployed military population. On the other hand, the consumption of amphetamines was inferior to that yielded by the present sample. In the Spanish civilian population, 50.5% consumed cannabis, 9.4% amphetamines and 22.1% cocaine (data provided by the Government Delegation for the National Plan on Drugs according to the study published by the Observatorio Español de la Droga y las Toxicomanías in 2015).

Participants whose parents were smokers were more likely to consume alcohol; conversely, the probability of use decreased among older military personnel. These results coincide with those obtained by other authors (Engels, Knibbe, de Vries, Drop and van Breukelen, 1999), which indicates that the paternal model plays a relevant role in greater consumption of drugs. It is true that in the longitudinal study of Engels et al. (1999) the participants were adolescents (the sample had a mean age of 12.4 years in the first data collection and an average of 17.4 in the last), so it would be interesting to confirm in future investigations if this factor increases drinking among the military population. With regard to the age variable, similar results were obtained in a study by Iversen et al. (2007) of the military population, with alcohol consumption being lower in the older group.

The variable that was associated with increased smoking was to have parents who were smokers, and the variable related to a lower likelihood of use was having a university education. That is to say, participants who had studied at university were less likely to smoke than those with only primary education. As with alcohol consumption, in a longitudinal study by Brook et al. (2009) with a non-military population, it was found that the father's smoking was associated with an increase in one's own tobacco consumption. Another important variable, in this case associated with protection, is to have a higher education. Similar results were found in a civilian study where participants with a higher educational level were less likely to smoke (Schnohr et al., 2004). Therefore, educational level is a relevant factor to take into account; in the present study only 9.1% of the participants had higher studies.

Cannabis use was less likely when participants lived in urban settings, belonged to the forces support group, were older and had more social support. An increase in consumption occurred when parents smoked or their friends used illicit drugs. These results are consistent with the findings of Coomber et al. (2011), who found that living in urban settings reduced the likelihood of cannabis use. Of the variables specifically related to the military context, the participants who belonged to the forces support group had a lower probability of consumption compared to those belonging to the forces group. In addition, it is again observed that parents who smoke or are older are variables associated with drug use, the former with an increase and the second with a decrease in the use of cannabis. The report prepared by the Observatorio Español de la Droga y las Toxicomanías (2015) found a similar trend in the Spanish civilian population with cannabis consumption being less widespread among older people. Another factor that seems to be important is the consumption of illicit drugs by friends, confirming peer group influence in the use of the drug, as has been revealed in other studies with non-military population (Rudzinski et al., 2014). Social support was another relevant variable, as increased social support was associated with a decrease in the likelihood of cannabis use. Similar results have been found with civilian populations where social support was inversely linked to the use of cannabis (Chauchard, Septfons, & Chabrol, 2013).

The likelihood of amphetamine use was greater among those participants whose friends used illicit drugs, and lower in older soldiers or with more social support. Similar results have been found in other groups (Observatorio Español de la Droga y las Toxicomanías, 2015; Rice, Milburn, Rotheram-Borus, Mallett & Rosenthal, 2005).

Some military-specific variables were associated with cocaine use. Apparently, participants with a forces support function are less likely to consume this drug than those belonging to the forces group. Similar results were obtained when comparing the group belonging to headquarters with the forces group, with a lower consumption reported among headquarters personnel. In the study conducted by Donoso Rodríguez (2012), a lower consumption was also found among officers. Perhaps these results are due to the fact that force-trained personnel have been trained to behave in a somewhat more reckless manner in order to meet the challenges posed by critical missions and thus have a more uninhibited attitude than headquarters personnel and support services, which are dedicated almost exclusively to decision making and logistical tasks; uninhibited behavior and attitudes that could be generalized to other aspects of life, such as in this case breaking the non-use of illicit drugs rule. A variable that was associated with an increase in cocaine consumption was having friends who used illicit drugs, while having greater social support was linked to a decrease in their use. Other studies with

non-military populations have also obtained an association of these variables with cocaine use (Bohnert, German, Knowlton & Latkinc, 2010).

In relation to the consumption of other substances, the predictor variables were the two that have been relevant to all illicit drug use: having friends who use illegal drugs increases the likelihood of using other substances, and greater social support decreases consumption.

The present study has several limitations, among them: a) participants from only a single area of multinational operations were included since the demands of the different deployment areas could require different professional and psychological resources; b) the reliability value for the social support scale is very close to the recommended minimum; c) the transversal design does not allow the assessment of changes in consumption; d) drug use was only measured subjectively. Therefore, it would be advisable in future investigations to evaluate military personnel assigned to different areas of multinational operations and compare them with the non-deployed Spanish military population using similar consumption measures. It would also be desirable to apply longitudinal designs in order to enable the assessment of drug use at different times and also to accompany subjective evaluations with other objective measures that can provide unequivocal information regarding consumption using, for example, blood and urine tests.

In conclusion, there is drug use in the area of multinational operations, and this use appears to increase when friends also take illicit drugs, but decreases with greater social support. Therefore it would be important to implement preventive measures taking into account that such consumption could affect the adequate performance of the missions with which they are entrusted. For example, it would be necessary to increase the availability of healthy leisure and free time activities, especially if one takes into account the number of free hours available outside the hours dedicated to professional tasks.

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Conflict of interests

There are no conflicts of interest.

References

- Bohnert, A. S. B., German, D., Knowlton, A. R. & Latkinc, C. A. (2010). Friendship networks of inner-city adults: A latent class analysis and multi-level regression of supporter types and the association of supporter latent class membership with supporter and recipient drug use. *Drug and Alcohol Dependence*, 107, 134–140. doi:10.1016/j.drugalcdep.2009.09.012.
- Brook, J. S., Saar, N. S., Zhang, C. & Brook, D. W. (2009). Familial and non-familial smoking: Effects on smoking and nicotine dependence. *Drug and Alcohol Dependence*, 101, 62–68. doi:10.1016/j.drugalcdep.2008.11.003.
- Chauchard, E., Septfons, A. & Chabrol, H. (2013). Motivations et stratégies lors d'arrêt spontané de la consommation de cannabis: quel impact sur les rechutes? *L'Encéphale*, 39, 385–392. doi:10.1016/j.encep.2013.03.008.
- Coomber, K., Toumbourou, J. W., Miller, P., Staiger, P. K., Hemphill, S. A. & Catalano, R. F. (2011). Rural adolescent alcohol, tobacco, and illicit drug use: A comparison of students in Victoria, Australia, and Washington state, United States. *The Journal of Rural Health*, 27, 409–415. doi:10.1111/j.1748-0361.2010.00360.x.
- Cucciare, M. A., Sadler, A. G., Mengeling, M. A., Torner, J. C., Curran, G. M., Han, X. & Booth, B. M. (2015). Associations between deployment, military rank, and binge drinking in active duty and reserve/national guard US servicewomen. *Drug and Alcohol Dependence*, 153, 37–42. doi:10.1016/j.drugalcdep.2015.06.013.
- Donoso Rodríguez, D. (2012). Epidemiología en drogas. Análisis de tendencias de consumo de sustancias psicotrópicas en el ejército de tierra (1997-2007). En D. Donoso Rodríguez (Ed.), *Psicología en las Fuerzas Armadas* (pp. 207-228). Madrid, España: Ministerio de Defensa.
- Engels, R. C. M. E., Knibbe, R. A., de Vries, H., Drop, M. J. & van Breukelen, G. J. P. (1999). Influences of parental and best friends' smoking and drinking on adolescent use: A longitudinal study. *Journal of Applied Social Psychology*, 29, 337–361. doi:10.1111/j.1559-1816.1999.tb01390.x.
- Iversen, A., Waterdrinker, A., Fear, N., Greenberg, N., Barker, C., Hotopf, M., ... Wessely, S. (2007). Factors associated with heavy alcohol consumption in the U.K. armed forces: Data from a health survey of Gulf, Bosnia, and era veterans. *Military Medicine*, 172, 956–961. doi:10.7205/MILMED.172.9.956.
- Jacobson, I. G., Ryan, M. A. K., Hooper, T. I., Smith, T. C., Amoroso, P. J., Boyko, E. J., ... Bell, N. S. (2008). Alcohol use and alcohol-related problems before and after military combat deployment. *JAMA*, 300, 663–675. doi:10.1001/jama.300.6.663.
- Kelsall, H. L., Wijesinghe, M. S. L., Creamer, M. C., McKenzie, D. P., Forbes, A. B., Page, M. J. & Sim, M. R. (2015). Alcohol use and substance use disorders in Gulf War, Afghanistan, and Iraq War veterans compared with nondeployed military personnel. *Epidemiologic Reviews*, 37, 38–54. doi:10.1093/epirev/mxu014.
- Martínez, M., Alonso, V., Taranco, M. & Gutiérrez, C. (2010). Encuesta sobre drogas a los militares de tropa y marinería de las Fuerzas Armadas españolas. *Sanidad Militar*, 66, 70–82.
- Martínez-González, J. M., Trujillo-Mendoza, H. M. & Robles-Lozano, L. (2007). *Factores de riesgo, protección y representaciones sociales sobre el consumo de drogas: implicaciones para la prevención*. Sevilla, España: Consejería para la Igualdad y el Bienestar Social de la Junta de Andalucía.
- Melchior, M., Chastang, J.-F., Goldberg, P. & Fombonne, E. (2008). High prevalence rates of tobacco, alcohol and drug use in adolescents and young adults in France: Results from the GAZEL youth study. *Addictive Behaviors*, 33, 122–133. doi:10.1016/j.addbeh.2007.09.009.
- Miquel, L., Rodamilans, M., Giménez, R., Cambras, T., Canudas, A. M. & Gual, A. (2015). Evaluación del consumo de riesgo de alcohol en estudiantes universitarios de la Facultad de Farmacia. *Adicciones*, 27, 190–197. doi:10.20882/adicciones.705.
- Motos Sellés, P., Cortés Tomás, M.T., Giménez Costa, J. A. & Cadaveira Mahía, F. (2015). Predictores del consumo semanal de alcohol y sus consecuencias asociadas en universitarios consumidores intensivos de alcohol. *Adicciones*, 27, 119–131. doi:10.20882/adicciones.700.
- Mounteney, J., Griffiths, P., Sedefov, R., Noor, A., Vicente, J. & Simon, R. (2016). The drug situation in Europe: an overview of data available on illicit drugs and new psychoactive substances from European monitoring in 2015. *Addiction*, 111, 34–48. doi:10.1111/add.13056.
- Newcombe, R. G. (1998). Two-Sided Confidence Intervals for the Single Proportion: Comparison of Seven Methods. *Statistics in Medicine*, 17, 857–872. doi:10.1002/(SICI)1097-0258(19980430)17:83.0.CO;2-E.
- Observatorio Español sobre Drogas (2013). *Encuesta escolar sobre uso de drogas en estudiantes de Enseñanzas Secundarias (ESTUDES) 2012-2013*. Madrid, España: Ministerio de Sanidad, Servicios Sociales e Igualdad.
- Observatorio Español de la Droga y las Toxicomanías (2015). *Informe 2015. Alcohol, tabaco y drogas ilegales en España*. Madrid, España: Ministerio de Sanidad, Servicios Sociales e Igualdad.
- Observatorio Europeo de las Drogas y las Toxicomanías (2014). *Informe europeo sobre drogas. Tendencias y novedades*. Luxemburgo, Luxemburgo: Observatorio Europeo de las Drogas y las Toxicomanías.
- Rice, E., Milburn, N. G., Rotheram-Borus, M. J., Mallett, S. & Rosenthal, D. (2005). The effects of peer group network properties on drug use among homeless youth. *The American Behavioral Scientist*, 48, 1102–1123. doi:10.1177/0002764204274194.
- Rudzinski, K., Dawe, M., McGuire, F., Shuper, P. A., Rehm, J. & Fischer, B. (2014). Reflections regarding future can-

- nabis use among high-frequency users in a Canadian university student population. *Journal of Research on Adolescence*, 24, 598–607. doi:10.1111/jora.12087.
- Schnohr, C., Højbjerg, L., Riegels, M., Ledet, L., Larsen, T., Schultz-Larsen, K., ... Grønbaek, M. (2004). Does educational level influence the effects of smoking, alcohol, physical activity, and obesity on mortality? A prospective population study. *Scandinavian Journal of Public Health*, 32, 250-256. doi:10.1080/14034940310019489.
- Sordo, L., Indave, B. I., Pulido, J., Molist, G., Rosales-Statkus, M. E., Ruiz-García, M. & Barrio, G. (2015). Epidemiología del abuso de alcohol entre la población inmigrante en España. *Adicciones*, 27, 132-140. doi:10.20882/adicciones.697.
- Teachman, J., Aderson, C. & Tedrow, L. M. (2015). Military service and alcohol use in the United States. *Armed Forces & Society*, 41, 460-476. doi:0.1177/0095327X14543848.
- Unidad de Estadística del Órgano Central (2016). *Estadística del personal militar de complemento, militar de tropa y marinería y reservista voluntario 2015*. Madrid, España: Ministerio de Defensa.
- Wilkinson, L. & APA Task Force on Statistical Inference. (1999). Statistical methods in psychology journal: Guidelines and explanations. *American Psychologist*, 54, 594-604. doi:10.1037/0003066X.54.8.594.