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Alcohol consumption in Spanish mental health patients vs. working population

ORIGINAL RESEARCH

Alcohol consumption in Spanish mental health patients vs. working population

Consumo de alcohol en España en pacientes de unidades de salud mental versus trabajadores en general

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| Abstract |

Introduction: Alcohol consumption has a high prevalence in society and its chronic consumption is one of the main factors related to health condition in an individual, along with other aspects concerning lifestyle. Regarding the health-disease correlation, it is one of the main determinants of health, from an epidemiological point of view, and has been a traditional object of study from different perspectives and in diverse population groups.

Objective: To compare consumption patterns and related variables in two different groups: patients in mental health units and workers in general.

Materials and methods: Cross-sectional study in a population of 1 180 service workers and 304 patients in a mental health unit. Sociodemographic and work aspects, as well as pattern of alcohol consumption were analyzed for both populations.

Results: Differences in both groups were observed regarding the number of consumers, quantity of consumption and type of beverages consumed, differences that disappear, in part, when comparing groups of workers of both population samples.

Conclusions: Differences in the consumption pattern of both populations lead to different preventive-assistance strategies and to the need for implementing coordinated actions by specific programs among those affected.

Keywords: Alcoholism; Public Health; Occupational Health; Mental Health (MeSH).

| Resumen |

Introducción. El consumo de alcohol tiene una elevada prevalencia en la sociedad y su consumo crónico es uno de los principales factores relacionados con el estado de salud de los individuos, junto a otros aspectos concernientes al estilo de vida. Debido a su importancia, este tema ha sido objeto tradicional de estudio desde diferentes perspectivas epidemiológicas y en diversos colectivos poblacionales.

Objetivo. Realizar una comparativa de patrones de consumo y variables relacionadas en dos colectivos diferenciados: pacientes de unidades de salud mental y trabajadores en general.

Materiales y métodos. Estudio transversal realizado en una población de 1 180 trabajadores del sector servicios de la administración pública y 304 pacientes de una unidad de salud mental. Se analizaron variables sociodemográficas y laborales y el patrón de consumo de alcohol.

Resultados. Existen diferencias en ambos colectivos en cuanto al número de consumidores, cantidad de consumo y tipo de bebidas consumidas, diferencias que desaparecen en parte cuando se comparan colectivos de trabajadores de ambas muestras poblacionales.

Conclusiones. Las diferencias en el patrón de consumo de ambas poblaciones orientan hacia actuaciones preventivo-asistenciales distintas en ambos grupos y hacia una necesidad de implementar actuaciones coordinadas entre todos los afectados mediante programas específicos.

Palabras clave: Alcohol; Salud pública; Salud laboral; Salud mental (DeCS).

Introduction

Alcoholic beverages are highly consumed worldwide. Although most adults have a low risk drinking pattern, there are people who present harmful alcohol consumption patterns, which range from daily heavy drinkers to occasional/social risk consumers. Given the danger they pose to health, these types of patterns create a public health and safety issue in almost all countries, with estimated figures of 3.3 million deaths per year attributable to alcohol consumption. (1) Nearly 5.9% of the deaths recorded in 2014 in the world were related to alcohol consumption (7.6% for men and 4% for women). (2)

Bearing in mind that there are different modes of consumption, different types of beverages and different social and cultural characteristics in each subpopulation, morbidity and mortality may vary greatly, since they do not depend only on the amount of alcohol consumed, which may affect the estimates and the methodology used in various studies. (3) If the International Classification of Diseases ICD-10 codes (4) are taken as a basis, it is possible to see that there are more than 30 codes directly related to alcohol. Furthermore, alcohol is a leading cause of disease in more than 200 of them.

Different consumption patterns give way to very different outcomes in relation to the health condition of different population groups. Therefore, this work aims to define the consumption patterns in two well-differentiated populations: a population of workers in general and a population of patients-users of a mental health unit (MHU), regarding the quantity of measured consumption and the subjective perception of said consumption. Both concepts will be expanded to explain more precisely the impact of alcohol consumption and, in this way, identify harmful consumption patterns as quickly as possible and propose differentiated interventionist strategies. This type of intervention is recommended among psychiatric patients depending on their diagnoses. (5)

Methodology

Cross-sectional observational study in which data were collected from two different groups: workers of public administration companies in the Balearic Islands and the Valencian Community (Spain) and patients of a MHU of the Balearic Islands (Spain). In the workers population, the study was carried out during the application of specific health surveillance surveys by the companies; this procedure was carried out between January and November 2011. Informed consent was obtained from all the people involved, who participated voluntarily. Sampling was randomly obtained and it was brought to the attention of the health and safety committees. Data of MHU patients were collected between February and October 2014 during a clinical interview made by a psychiatrist, without previous selection, with voluntary participation, random sampling and informed consent for subsequent epidemiological use.

Age, sex, educational attainment (elementary, secondary and higher education), type of work (manual and non-manual) and social class (1: high, 2: medium and 3: low) were studied in both groups —as proposed by the working group of the Spanish Society of Epidemiology and the Spanish Society of Family and Community Medicine (6)—, days of consumption per week, drinks consumed and type of alcohol (wine, beer, spirits and various/all, both fermented and distilled beverages). In the case of MHU patients, social and work conditions were established (housewife, unemployed, retired, permanent worker and casual worker).

To quantify consumption, standard drinking units (SDU) were used to measure consumption/day/person. (7) The Spanish Scientific Society for Research on Alcohol, Alcoholism and Other Drug Addictions established that a SDU is equivalent to 10g of pure alcohol. (8) It should be noted

that, in countries such as the USA, drinks express their alcohol content in grams of ethanol/100mL of beverage, instead of 1mL of ethanol/100mL of beverage (mL%), a formula used in almost all countries, which lowers figures by 20%. Based on this, three consumption profiles are defined: *low risk* (<14 SDU/week in women and <21 SDU/week in men), *risky* (14-20.9 SDU/week in women and 21-34.9 SDU/week in men) and *abusive* (>21 SDU/week in women and >35 SDU/week in men).

Diagnoses of MHU patients were grouped according to the ICD-10 chapters F00-F09, Organic, including symptomatic, mental disorders; F10-F19, Mental and behavioral disorders due to psychoactive substance use; F20-F29, Schizophrenia, schizotypal and delusional disorders; F30-F39 Mood [affective] disorders; F40-49, Neurotic, stress-related and somatoform disorders; F50-59, Behavioral syndromes associated with physiological disturbances and physical factors; F60-69, Disorders of adult personality and behavior; F70-79, Mental retardation; F80-89, Disorders of psychological development; and F90-98, Behavioral and emotional disorders with onset usually occurring in childhood and adolescence.

Non-drinkers were separated into abstainers and ex-drinkers (those who quit drinking within the past year). To assess the perception of consumption, the validated version of the AUDIT questionnaire was applied (9) and a descriptive analysis was carried out using frequency tables for categorical variables and descriptive statistics (mean, median, quartiles and standard deviation) for quantitative variables. A bivariate analysis was carried out for statistical inference, using the t-Student and Wilcoxon tests for continuous variables, depending on the nature of the variables.

Normality hypotheses were verified using Kolmogorov-Smirnov or Shapiro-Wilk test. In the case of categorical variables, the Chi-square or Fisher test was used depending on whether applicability conditions for the expected values were met or not. Regression models (logistic or linear) were used for multivariate analysis.

Results

The population sample included 1 180 workers and 304 patients from a MHU. The characteristics of both samples are described in Table 1.

Table 1. Characteristics of the sample.

Characteristics		WP (n=1180)		MHUP (n=304)	
Age		minimum 22; maximum 67; average 46.03		minimum 19; maximum 85; average 47.81	
Sex	Women	438	37.12%	175	57.57%
	Men	742	62.88%	129	42.43%
Educational attainment	Elementary	309	26.19%	179	58.88%
	Secondary	729	61.78%	122	40.13%
	Higher	142	12.03%	3	0.99%
Type of job	Manual	778	65.93	86	28.29%
	Not manual	402	34.07	40	13.16%
	Unemployed	0	0%	178	58.55%
Social class *	I	184	15.59	9	2.96%
	III	941	79.75	31	10.20%
	VII	55	4.66	86	28.29%

WP: working population; MHUP: mental health unit patients.
* Class I: directors/managers, university professionals, athletes and artists; class II: intermediate occupations, self-employed workers, unemployed individuals; Class III: unskilled workers.
Source: Own elaboration based on the data obtained in the study.

Considering the classification described above, according to the National Occupational Classification 2011 (NOC-11), differences were found in both populations regarding the characteristics of alcohol consumption. It is worth noting that the working population consumes alcohol by 81.19%, with a weekend consumption pattern, and mainly wine and beer, while 57.24% of MHU patients report not consuming alcohol in the past year (Table 2).

Furthermore, a striking discrepancy was observed regarding the subjective perception of alcohol consumption, since MHU patients, despite having a lower quantified alcohol consumption in comparison to the working population, have a greater consumption perception, in other words, they are more aware and accurate when it comes to assessing alcohol consumption (Figure 1). Moreover, differences were found in relation to the type of beverage consumed in both population groups (Figure 2).

Table 2. Levels of consumption among the population.

| Variable		WP		MHUP	
		n	%	n	%
Frequency	Never	215	18.22%	174	57.24%
	Monthly	164	14.40%	43	14.14%
	Weekly	4	0.34%	17	5.59%
	Weekends	472	40.00%	17	5.59%
	3 days/week	29	2.46%	7	2.30%
	Every day	298	25.25%	46	15.13%
Number of drinks/day	0	215	18.22%	174	57.24%
	1	280	23.73%	59	19.41%
	2	599	18.22%	34	11.18%
	3	70	5.93%	16	5.26%
	>3	16	23.73%	21	6.91%
Type of alcohol	Beer	450	38.14%	55	18.09%
	Wine	322	27.29%	33	10.86%
	Spirits	41	3.47%	15	4.93%
	Several/all of them	152	12.88%	27	8.88%
	None	215	18.22%	174	57.24%
SDU score	Low risk	97	10,05%	104	80%
	Risky consumption	349	36.17%	15	11.54%
	Abusive consumption	519	53.78%	11	8.46%

WP: working population; MHUP: mental health unit patients; SDU: standard drinking units.
Source: Own elaboration based on the data obtained in the study.
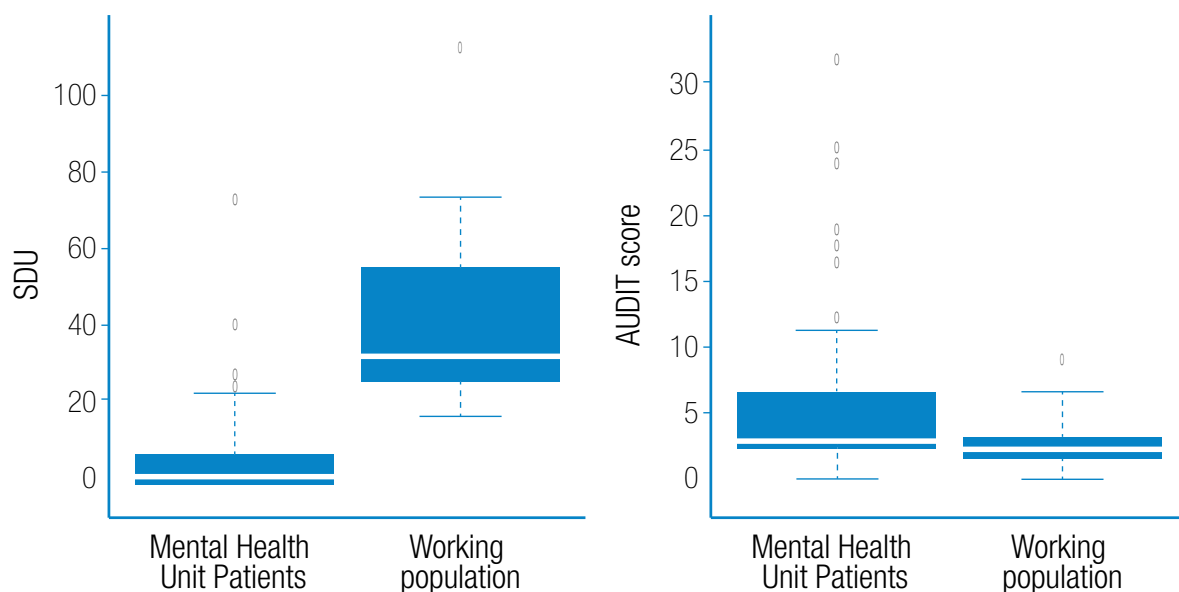
Figure 1. Quantified consumption (SDU) versus perceived consumption (AUDIT) in both populations.
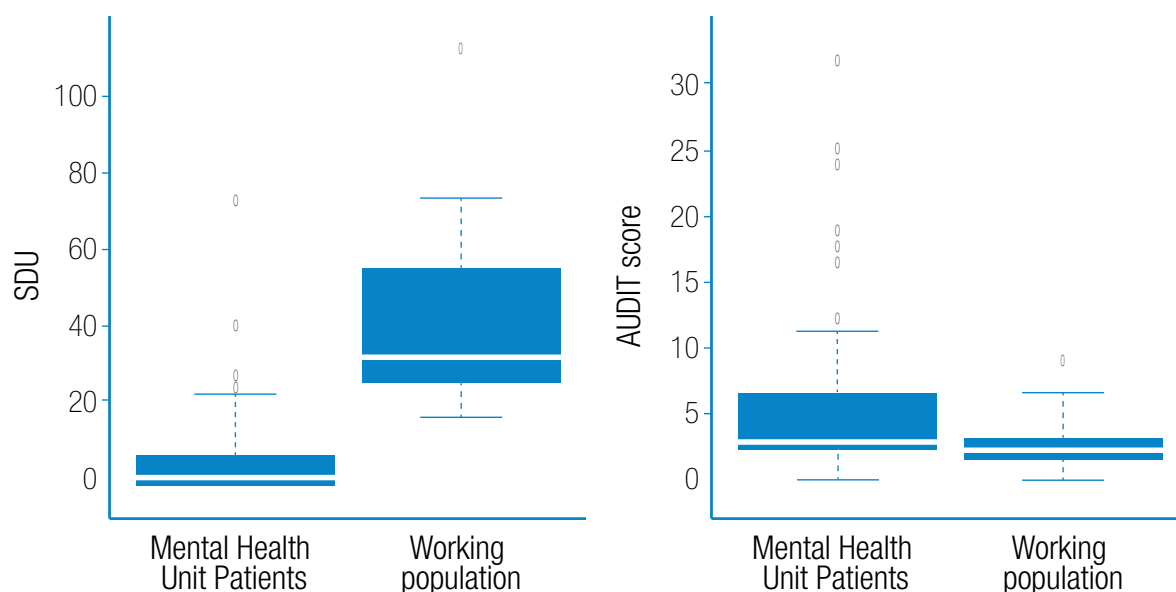Source: Own elaboration based on the data obtained in the study.
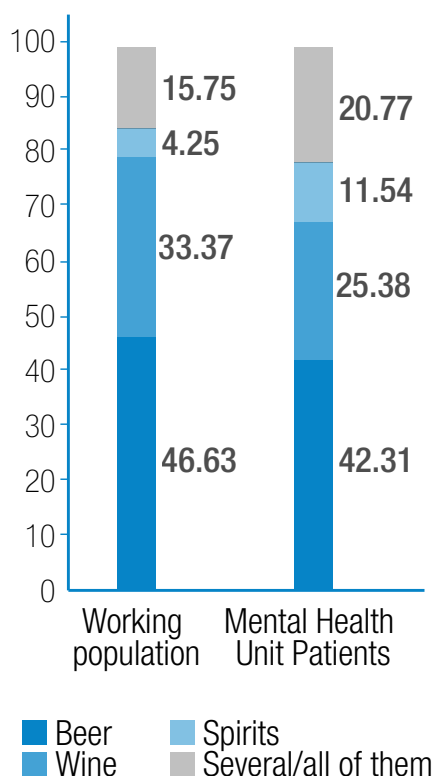
Figure 2. Comparison of type of alcohol consumed in both populations.
Source: Own elaboration based on the data obtained in the study.

The differences were modified when the workers of both samples were compared selectively by types of beverage consumed (Figure 3).

However, differences in consumption perception between both populations studied remained (Figure 4).

Figure 3. Comparison of workers of both populations. Quantified consumption (SDU) vs. Perceived Consumption (AUDIT).
Source: Own elaboration based on the data obtained in the study.

The comparison of current MHU consumers and the status of former drinkers before the study can be seen in Figure 5.

Discussion

The main objective of this study is to compare alcohol consumption and the perception of consumption in two well-differentiated groups

of the Spanish population: working population in general and MHU patients. It is based on the hypothesis that there are qualitative and quantitative differences between them that are related to their personal, cultural, social and work conditions —in the case of those who are part of the work force. (10)

The findings of this research show high alcohol consumption among workers, which coincides with other previous investigations

with different study groups; in consequence, higher consumption figures are obtained in the hotel or construction industry, than those obtained here. (11) Aspects assessed as occasional do not coincide either, since other studies consider aspects related to work stress or work shifts —which were not assessed in this research— as predisposing factors for greater consumption. (12)
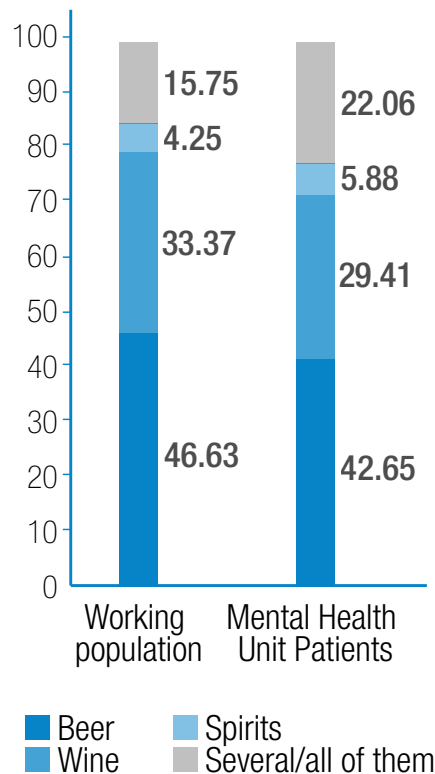
Figure 4. Comparison of type of alcohol consumed by the workers of both populations.
Source: Own elaboration based on the data obtained in the study.
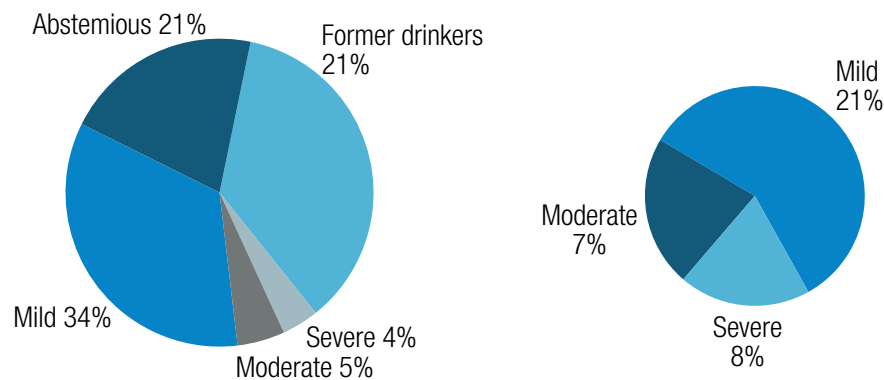
Figure 5. Comparison of consumption in former drinkers at the mental health unit: quantified consumption (SDU) versus perceived consumption (AUDIT) in workers of both populations.
Source: Own elaboration based on the data obtained in the study.

Low consumption perception observed in the workers group had already been pointed out by other authors, who were oriented towards educational interventions to support prevention. (13) Regarding the type of beverage consumed as a priority in both groups (wine and beer), there are coincidences with other researches, both in men and women (14), although Finnish authors highlight greater consumption of wine and beer among men and other types of liqueurs in women. (15)

Furthermore, the so-called *blue collar worker* is another common point in relation to greater consumption among manual workers of both groups, which coincides with other works; this may be caused by greater permissiveness and lack of skills on the part of supervisors regarding the management of abusive consumption and to the lower

work risks increased by consumption. Additionally, it is pointed out that the greater the isolation of these workers, the greater the consumption of alcohol. (16)

Knowing about consumption perception favors more effective preventive actions on predictive factors. (17) In MHU patients, there was a significant ratio of non-consumers at the time of the interview (regarding consumption in the past year). However, among alcohol consumers, high levels of consumption —above the working population in general— were detected, at the expense of high-alcohol-content beverages, although beer and wine are the most common.

The correlation with greater vulnerability to alcohol consumption in psychiatric patients had already been evidenced in previous

studies and had been oriented towards coordinated actions between psychiatrists and addictologist to achieve better results. (18) However, proper consumption perception among MHU patients contrasts with the low perception among workers in general.

After inquiring about previous alcohol consumption, it was possible to see that there was a high previous consumption among the patients, being higher in lower educational levels. During the visit paid to the patients, the psychiatrist usually advised them to quit drinking, which would explain the high percentage of former drinkers. It must be taken into account that the association of both pathologies hinders the prognosis in the psychiatric process that motivates consultation and delays recovery. (19) In fact, the psychiatric pathology itself can lead to a relapse in alcohol consumption or in other types of addictions, so the psychiatric interview should consider these aspects altogether based on structured clinical interviews. (20)

Among working population in general, consumption levels are lower, but the perception of consumption is also lower, which may hinder the effectiveness of intervention programs in this group as it is considered a *falsely healthy population* and include alcohol consumption in their daily life habits.

The perception of alcohol consumption is relevant to establish prevention programs and avoid side effects and even associated deaths. Most alcohol users are unaware of health service programs or social services and, in most cases, interventions are linked to the mediation of legal services. Better management for early detection and assessment of problems associated to consumption is necessary in the light of guidelines based on evidence. (21) American authors advocate interventions from primary health services and from public health in high-risk consumers, where intervention strategies are implemented and incorporated as a routine in primary care and preventive medicine. (22-24)

The differences observed regarding consumption in relation to social class support the hypotheses of other works that seek to initiate combined actions to reduce alcohol consumption, in which additional measures are included to facilitate reaching all social groups. (25)

Differences found in this work, in terms of alcohol consumption based on social status, had already been exposed in other studies. However, in order to understand better the mechanisms and pathways that influence the differential risk among people in low and high socioeconomic statuses, all authors suggest the need for more research to characterize better the correlation between alcohol consumption, socioeconomic status and risk of disease attributable to alcohol. (26)

One of the strengths of this work is the comparison made between quantified and perceived alcohol consumption and the conditioning factors studied. Also, the comparison between two distinctly different population groups and the scores of a "healthy" population versus a group of "patients" is highlighted.

On the other hand, individual information provided by the worker or by the MHU patient is a limitation as a reference for consumption, since it may be subjective and may lead to bias of the results. Additionally, the impossibility of extrapolating the results to the working population in general is also considered a limitation since all participants are subject of the same work sector.

Conclusions

Knowledge on alcohol consumption, as well as on the subject's perception of how much they consume and the variables that influence said consumption provide basic information to design preventive strategies and more effective interventions. Future research should include other groups and aspects not covered in this work in order to modulate the results obtained here.

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