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ORIGINAL ARTICLE

Natural recovery from alcohol use disorders in Argentinean university students

Karina Conde[1,2], Aldana Lichtenberger[1,2], Pablo Santángelo[1], and Mariana Cremonte[1,2]

[1]Department of Psychology, National University of Mar del Plata, Mar del Plata, Argentina and [2]National Scientific and Technical Research Council, Mar del Plata, Argentina

Abstract

A significant percentage of people with an alcohol-use disorder (AUD) recover on their own and differ substantially from those who do not. Those who do not seek assistance for AUD include a high proportion of university students. The aim of this study was to describe, in a cohort of Argentinean university students, the differences among drinkers who had never had an alcohol-related problem, those who recovered from an AUD on their own (natural recovery), and those who currently had an AUD. Participants were 1170 randomly selected students from the National University of Mar del Plata. They were assessed regarding the quantity and frequency of alcohol consumption, AUD severity, and sociodemographic variables. Descriptive and multivariate analyses (logistic regressions) were performed. Differences were found primarily in alcohol consumption variables, gender, and age. Natural recovery and current AUD groups drank higher quantities of alcohol and did so more frequently compared with drinkers who had never met any AUD criteria. Students with a current AUD drank higher quantities than did those who were in natural recovery. Students who recovered naturally had less severe AUDs, but many still had an alcohol-related problem. The implications of self-promoted changes in drinking behaviors are discussed.

Keywords

Alcohol-use disorders, natural recovery, university students

History

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Alcohol-use disorders (AUDs) (American Psychiatric Association, 2013) are a diverse group of problems that affect individuals from any sociodemographic, ethnic, or occupational background and may be exhibited in a variety of forms, ultimately causing substantial morbidity and mortality. Among all of the people who could be diagnosed with AUD, only a minority seek formal help or treatment (Kohn et al., 2004), though most of them most likely will recover on their own (Cunningham et al., 1993; Watson & Sher, 1998). The differences between those who seek treatment and those who remained in the general population led previous researchers to describe "two worlds" of alcohol-use problems (Storbjörk & Room, 2008).

Although significant levels of AUDs have been documented in the younger groups of the general population, the minority of this population who receive treatment tend to be older men (35–60 years). It is also known that most of these individuals are unemployed, separated, or divorced; present with more severe problems; and drink higher volumes of alcohol more frequently (Storbjörk & Room, 2008).

It is estimated that between 65% and 90% of people diagnosed with AUD make changes in their consumption behavior without professional or formal help (NIAAA, 2012; Sobell et al., 1996). This "natural recovery" or "self-change" refers to the remission of alcohol-related problems without any treatment (Matzger et al., 2005) and is the chosen path of recovery among many of those who become abstinent or change to moderate consumption (Dawson et al., 2005; Sobell et al., 1996). However, little is known about this group (Bischof et al., 2000), and the majority of studies on the topic come from English-speaking countries.

Adolescents and young adults comprise a high proportion of those who do not seek professional help and meet any of criteria for AUD (Schmidt, 2007). In particular, university students are at greater risk of morbidity and mortality because of their drinking behaviors (Hingson et al., 2002), and they tend to be the most reluctant to recognize they have a problem (Caldeira et al., 2009) or to seek help (Schmidt, 2007). Consistent with our overall findings, a study on the natural recovery of heavy episodic drinking (a characteristic pattern of consumption that refers to the intake of five or more drinks on a single occasion) shows that among college students, those who recovered naturally were older and more likely both to be married or in committed relationships and to attend church (Vik et al., 2003).

Knowledge about the characteristics of those who stopped drinking of their own volition can contribute to the design of effective treatments and preventive interventions that include self-change strategies. It can also provide valuable information about the course of AUD (Watson & Sher, 1998).

Correspondence: Karina Conde, Doctoral Research Fellow, Department of Psychology, National University of Mar del Plata, Deán Funes 3250, Cuerpo V, Nivel III, 7600 Mar del Plata, Argentina. E-mail: kconde@mdp.edu.ar

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The aim of this study is to describe differences among three groups in a cohort of university students of Mar del Plata, Argentina: drinkers who had never had an alcohol-related problem, those who had an AUD in the past, and those who currently had an AUD. We compare the groups based on their alcohol-related characteristics (quantity and frequency of consumption, AUD level of severity) and sociodemographic characteristics (age, sex, employment status, marital status, and socioeconomic level). Additionally, we estimate the number of students who apparently had a natural recovery (i.e., no longer meeting all of the diagnostic criteria for AUD) but still had an alcohol-related problem (meeting one criterion for AUD).

Methods

Participants

Data from this descriptive study came from a random sample of 1708 university students attending first- to third-year courses in different academic departments at the National University of Mar del Plata. Data were collected between April and November 2014. The participation rate was 89% (6% refused participation, 4% left the class, and 1% did not complete most of the questionnaire); 58% were females, with a mean age of 21.57, IC 95% [20.75–22.39], SD = 5.38. From that sample, we selected three groups of students: drinkers who had never had an alcohol-related problem (37%), drinkers who had an AUD in the past (9%, 88% mild, 9% moderate, 3% severe), and drinkers who currently had an AUD (23%, 75% mild, 18% moderate, 7% severe). Groups were exclusive of one another: if a participant currently met the criteria for an AUD, he or she was excluded from the second group, even if he or she had also met the criteria in the past. The exclusion criteria were drinkers who met only one criterion for AUD in the past (diagnostic orphans), lifetime abstainers, and students who had sought help for an alcohol-related problem (7% of the drinkers who had had an AUD in the past and 6% of the drinkers who currently had an AUD). The final sample analyzed here consisted of 1170 university students (see Table 1 for descriptive data).

Measures

Quantity and frequency of alcohol consumption

We measured the self-reported quantity of alcohol consumption by the usual amount of standard units of alcohol (i.e., any alcohol beverage with 11 g of pure alcohol), consumed per occasion over the last 12 months. We evaluated the self-reported frequency of consumption over the last 12 months using the following categories: daily/almost daily, 3–4 times per week, 1–2 times per week, 2–3 times per month, once a month, 11–6 times a year, 5–1 times a year, and never. Quantity and frequency of drinking were taken as separate variables.

Table 1. Sample characteristics of university students, current drinkers, Mar del Plata, 2014, $N = 1170$.

	Never had an alcohol-related problem			AUD natural recovery			Current AUD		
	%	*M*	CI 95%	%	*M*	CI 95%	%	*M*	CI 95%
Gender									
Female	65		55–74	46		35–56	53		43–62
Male	35		26–44	54		44–65	47		38–57
Age		22.42	21.13–23.71		21.69	20.88–22.49		20.51	19.85–21.17
Employment status									
Employed	24		18–30	32		23–40	21		16–26
Student only	59		51–67	53		42–65	57		51–64
Other	2		0–4	2		0–4	1		0–2
Unemployed	15		11–19	13		7–19	21		16–26
Marital status									
Single	92		88–96	92		86–98	97		95–99
Married/married-like relationship	7		4–10	6		2–10	2		0–4
Divorced	1		0–3	2		0–4	1		0–1
Socioeconomic level									
I*	10		7–13	5		1–10	8		3–13
II*	41		37–45	38		30–47	42		37–47
III*	39		35–44	44		35–52	39		34–44
IV*	10		7–14	13		7–19	11		7–15
Quantity of alcohol consumption		2.32	2.12–2.53		3.84	3.53–4.14		5.40	4.71–6.09
Frequency of alcohol consumption									
Daily/almost daily	1		0–1	3		0–5	3		1–5
3–4 times per week	3		1–4	8		4–12	9		4–14
1–2 times per week	21		17–25	37		29–46	51		46–56
2–3 times per month	20		16–23	21		14–28	26		23–30
Once a month	19		15–22	12		9–16	4		2–5
11–6 times a year	9		6–13	6		3–9	3		2–5
5–1 times a year	20		17–23	8		3–13	2		1–3

Note. CI = confidence interval, AUD = alcohol-use disorder. *Graffar scale: I = 4–6, II = 7–9, III = 10–12, IV = 13–16.

Alcohol-use disorder

The presence of an AUD was assessed according to the Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-5) using the Alcohol Section of the Composite International Diagnostic Interview (CIDI). This instrument has demonstrated good psychometric properties in different contexts (Tacchini et al., 1994: The reference "Tacchini et al., 1994" is cited in the text but is not listed in the references list. Please either delete the in-text citation or provide full reference details.). We detected criteria endorsement both prior to the past 12 months and within the past 12 months to create each group (see *Participants*). Later, we categorized AUD as a single variable that had degrees of severity (negative, mild, moderate, severe). For natural recovery group, it was the severity prior to the past 12 months, and for current AUD group the actual severity.

Sociodemographic variables

We estimated age (in years), gender (male, female), employment status (employed, unemployed, student, other), marital status (single, married/married-like relationship, separated or divorced, widowed), and socioeconomic level (I = 4–6, II = 7–9, III = 10–12, IV = 13–16) using a modified version of the Graffar scale. Mendez-Castellano Graffar scale was designed for Latin-American countries, with an acceptable internal consistency, corrected total-item correlation, and time stability of each segmentation, as well as validation by external variables (Méndez Castellano and De Méndez, 1994). For the total sample of university students, internal consistency was 0.70, IC 95% [0.68–0.72], and corrected total-item correlation values were between 0.32 and 0.62.

Procedure

We recruited participants in different course classrooms. Administration of the questionnaire took place during class and lasted approximately 20 minutes. Researchers were present to answer questions or doubts regarding the questionnaire, but the working hypothesis was concealed. There was no link between those who were responsible for data collection and the participants. The project was approved by the Ethics Committee of the National Institute of Epidemiology in Mar del Plata. Participation was voluntary and anonymous, and informed consent was obtained. A handout that presented general information about the study, researchers' contact details, and care centers for alcohol problems in the area was given to each participant.

Data analyses

We performed descriptive and multivariate analyses. Descriptive analyses were adjusted for the number of clusters (i.e., each Department or Faculty). We used multinomial logistic regression to evaluate differences among the three groups: (drinkers who had never met the criteria for AUD = 1, those who had met the criteria for AUD in the past but did not currently = 2, and those who currently met the criteria = 3). The variables included the quantity and frequency (lower frequency had lower numeric values) of alcohol consumption; the sociodemographic variables of age and gender (male = 2, female = 1); employment status (employed = 4, student = 3, other = 2, unemployed = 1); marital status (single = 1, married = 2, separated or divorced = 3, widowed = 4); and socioeconomic level (I = 1, II = 2, III = 3, IV = 4, V = 5). We performed binomial logistic regressions between drinkers who had had an AUD in the past (2) and those who currently had an AUD (3) to estimate differences in the severity of AUDs (mild = 2, moderate = 3, severe = 4), controlling for all of the sociodemographic variables. We used SPSS 12.0 and Epidat 4.1 for Windows for the analyses.

Results

The results of the multinomial logistic regressions (shown in Table 2) showed the differences primarily in the alcohol consumption variables (Nagelkerke's pseudo-R^2 = 0.36). Adjusted for sociodemographic variables, those in the natural recovery group drank 20% greater quantities with a 70% higher frequency than did those in the group of drinkers who had never met a criterion for an AUD. In contrast, those in the current AUD group drank 44% greater quantities with a 70% higher frequency than did those who never met AUD criteria. Comparisons among those who currently met the criteria for AUD and those in the natural recovery group

Table 2. Comparisons of alcohol consumption and sociodemographic variables in university students who had never had an alcohol-related problem, had a natural recovery from AUD, or currently have AUD, Mar del Plata, 2014, $N = 1170$.

	Never had an alcohol-related problem vs AUD natural recovery			Never had an alcohol-related problem vs current AUD			AUD natural recovery vs current AUD		
	p	OR	CI 95%	*p*	OR	CI 95%	*p*	OR	CI 95%
Quantity of alcohol consumption	**0.001**	**1.24**	1.13–1.37	**0.001**	**1.44**	1.33–1.56	**0.001**	**1.16**	**1.07–1.26**
Frequency of alcohol consumption	**0.001**	**1.68**	1.51–1.88	**0.001**	**1.71**	1.53–1.90	0.360	1.02	0.98–1.05
Gender	**0.005**	**1.78**	1.20–2.66	0.635	1.08	0.78–1.50	**0.016**	**0.61**	**0.40–0.91**
Age	0.079	0.96	0.91–1.00	**0.001**	**0.92**	0.87–0.96	0.132	0.96	0.90–1.01
Employment status	0.718	1.00	0.99–1.01	0.546	1.00	0.99–1.00	0.387	1.00	0.99–1.01
Marital status	0.136	1.79	0.83–3.85	0.721	1.16	0.52–2.58	0.352	0.65	0.26–1.62
Socioeconomic level	0.411	1.00	0.99–1.00	0.322	1.00	0.99–1.00	0.971	1.00	0.99–1.01

Notes. CI = confidence interval, AUD = alcohol-use disorder, **bold** = $p<0.05$. Variables measurement: quantity (number of standard drinks), frequency (lower frequency = lower numeric values), gender (male = 2, female = 1), age (in years), employment status (employed = 4, student = 3, other = 2, unemployed = 1); marital status (single = 1, married = 2, separated or divorced = 3, widowed = 4); and socioeconomic level (I = 1, II = 2, III = 3, IV = 4, V = 5).

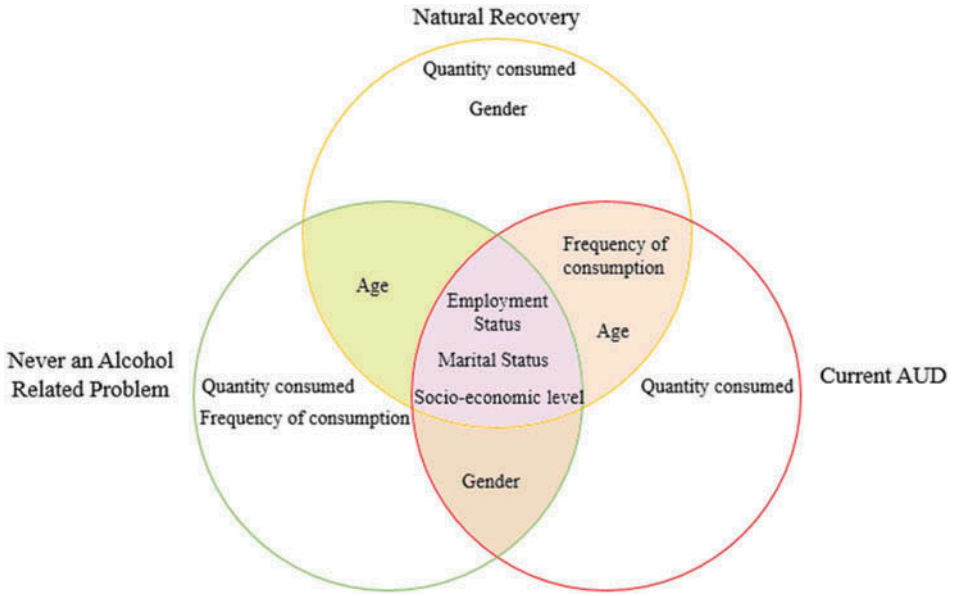

Figure 1. Characteristics shared and unshared between those who had never had an alcohol-related problem, natural recovery from AUD, and current AUD. University students, Mar del Plata, 2014.

showed that the former tended to drink slightly greater quantities per occasion, with no differences in frequency. Regarding sociodemographics, while adjusting for consumption variables, those in the natural recovery group had a higher probability of being male than did those who had never met a criterion for AUD; those with a current AUD were more likely to be younger than those who had never met an AUD criterion and were less likely to be male than were those in the natural recovery group. Differences among the groups are illustrated in Figure 1.

Adjusted binomial logistic regressions between those who had a natural recovery from AUD and those who currently had an AUD detected differences in the severity (mild, moderate, and severe) of AUD ($p = 0.003$, OR = 1.97, CI 95% [1.27–3.06]) (not shown).

Of those in the group of natural recovery from AUD, 59% (CI 95% [54–64]) still had a current alcohol-related problem (i.e., met one AUD criterion).

Discussion and conclusions

Youth is the stage of life in which the first symptoms of AUDs appear (Harford et al., 2005); however, a proportion of people recover without formal help (Bischof et al., 2000). The purpose of this work was to describe some differences in the latter group, including those drinkers who currently had an AUD and those who had never met AUD criteria, among Argentinean university students.

One of the main findings was the relationship between the quantity and frequency of alcohol intake. Natural recovery and current AUD groups drank higher quantities and did so more frequently than did those who had never met AUD criteria. Although the link between the quantity and frequency of consumption and related problems is not linear (Holly & Wittchen, 1998), this was an expected finding because those with problems are likely to drink higher quantities (Daeppen et al., 2013). In contrast, comparisons of those who currently met criteria for an AUD with those in the natural recovery group showed that the former tend to drink slightly higher quantities per occasion, with no differences in frequency. Because Argentina is a country with a wet-drinking culture, drinking frequently (sometimes in low quantities) is common and is thus not necessarily related to problematic use (Cremonte et al., 2012). The lower consumption levels observed among those who had previously had an AUD might also indicate that the decreasing quantities consumed may lower the level of related problems. In this regard, evidence from other sociocultural contexts suggests that nearly half of such remissions could be achieved by low-risk consumption (Klingemann et al., 2010). Nonetheless, over half of the students who were in natural recovery from an AUD still had an alcohol-related problem. This finding supports the idea that although they may have changed their consumption (by reducing quantities consumed), those changes were not sufficient to reach non-risky consumption, and it suggests a certain stability of alcohol problems. In agreement with this notion, longitudinal research from other contexts has found that some people presenting with natural recovery ultimately end up seeking treatment for AUD (Dawson et al., 2012).

Interestingly, those who recovered naturally seem to have had less severe AUDs compared with those who currently met the diagnostic criteria. The literature indicates that people with AUD who seek treatment tend to have more severe problems (Storbjörk & Room, 2008). Conversely, those who do not seek assistance have been shown to present with fewer drinking problems and negative life events and with more resources, positive experiences, and improved coping skills (Laudet & Hill, 2015; Moos & Moos, 2006). Along the same lines, some authors have hypothesized that those who suffer less severe problems are not attracted to formal treatment programs (Klingemann et al., 2010), which may also explain our findings.

Regarding sociodemographic characteristics, males were more likely to have spontaneously recovered than to have

never met AUD criteria but were less likely to have a current AUD. Although the former could be consistent with other findings, i.e., males tend to meet higher levels of AUD criteria and drinking problems (Conde et al., 2015), the latter results were quite surprising. In general, studies have found women to have a higher probability of a natural recovery and men to be more likely to seek treatment (Cohen et al., 2007; Grella & Stein, 2013; Laudet & Hill, 2015). This discrepancy might be related to population characteristics. Treatment seekers have been found to have a lower educational level (Cohen et al., 2007; Laudet & Hill, 2015); however, in this study, we addressed only university students, who were mostly females. It should also be noted that young highly educated women have been shown to drink higher volumes of alcohol (Day et al., 1993) and might thus have more severe alcohol-related problems. Finally, those with a current AUD were more likely to be younger than those were who had never met AUD criteria, which was expected because AUD peaks in youth (Harford et al., 2005).

Along with some of the aspects mentioned here, topics for future research might include the context in which natural recovery occurs and how it can be maintained. Evidence seems to indicate the role of social context in achieving and maintaining change in both treated and untreated alcoholics, especially support from family and friends (Crespo et al., 2008). The elements involved in such change (e.g., personal decisions, institutional regulations, social structure) have led to the consideration of natural recovery-based interventions. These types of interventions could be aimed at reducing high-risk alcohol consumption in university students (Misch, 2007). Such efforts would include aspects of brief interventions but would be carried out as community actions and would promote either self-change or orientate unwilling individuals with AUD to engage in formal treatment (Sobell et al., 2002). Enhancing one's motivation to quit could be an interesting field in which to intervene because quitting attempts seem to be infrequent among people with AUD (Chiappetta et al., 2014) and because those who spontaneously change their consumption continue to exhibit alcohol-related problems, as demonstrated by our results. On the other hand, in order to further study some of these relationships, structural equation modeling and other complex statistical methods might be performed.

Limitations

A methodological problematic issue identified in other studies refers to the question used to determine whether the participant had sought help. The different wording of this question would allow diverse interpretation (Bischof et al., 2002), for instance, including or not including non-formal programs such as self-help groups. In this study, we used a question on whether the participant had ever attempted to obtain any type of help or treatment for an alcohol-related problem. Additionally, some authors (Caetano & Babor, 2006) have cautioned about a measurement error in AUD criteria among youth, specifically, misinterpreting the criterion that evaluates withdrawal by confusing it with hangover effects. If that had been the case, it may have had an influence on the prevalence of current and former AUD. This issue, although it merits further study, is beyond the purpose of this work. New lines of work might also address some relevant aspects of natural recovery not included in this article, such as specific criteria related to natural recovery, the role of age of onset, and the presence of comorbidity. Despite those limitations, our results signal differences in drinking patterns and sociodemographic characteristics among three groups of drinkers and suggest a stability of alcohol problems. We believe that these results represent a novel and important contribution to a poorly studied topic in a population at risk relative to alcohol consumption.

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Declaration of interest

The authors declared no conflict of interest.

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