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Research report

NAD

Nordic Studies on Alcohol and Drugs
2017, Vol. 34(3) 201–216
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1455072517707879
journals.sagepub.com/home/nad
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Risky consumption of alcohol and drugs among employees at ski resorts

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Abstract

Aim: To evaluate risky consumption of alcohol and drugs among Swedish men and women who are employed at ski resorts. **Methods:** A cross-sectional sample of 611 employees in 48 small and medium-sized enterprises responded to a questionnaire covering alcohol and drug use, social aspects around work and working conditions. Consumption of alcohol and drugs in the study sample was compared to population data. Data were analysed using Mann–Whitney U-tests and logistic regression analyses. **Results:** Compared to the general population, the study group of ski resort employees had higher scores on the Alcohol Use Disorders Identification Test (AUDIT) in all age groups except 35+ for men. Regarding the Drug Use Disorders Identification Test (DUDIT) scores, only men in the 18–24 age group had higher scores compared to the general population. The prevalence of risky alcohol and drug use was higher among seasonally employed individuals;

Submitted: 20 March 2017; accepted: 7 April 2017

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82.9%, compared to 58.0% among other employees for alcohol; 8.3% compared to 2.8% for drugs. The regression analysis indicated that social aspects such as living together with colleagues and having co-workers/friends who are frequently inebriated were the most significant explanatory variables for explaining risk consumption of alcohol (*OR* 16.82 and *OR* 4.33). Risky use of drugs was associated with being younger (*OR* 0.15) and male (*OR* 0.86), as well as with having co-workers/friends who are frequently inebriated (*OR* 4.25). **Conclusions:** The study showed a high prevalence of risky alcohol consumption among ski resort employees compared to the general population, with higher risky drug consumption found only among younger men. Social aspects such as living with colleagues and having co-workers or friends who are often inebriated, were identified as important explanatory factors. Preventive measures should be introduced, targeting norms and work culture surrounding alcohol and drug use among ski resort employees.

Keywords
alcohol, AUDIT, drugs, DUDIT, seasonal employees, ski tourism, social aspects

In Sweden, and in many other countries, the proportion of temporary employees in the labour force is increasing and is currently at a historically high level (Kretsos & Livanos, 2016; Larsson, 2014). Approximately half of the young adults in Sweden, aged 16–24 years, are employed on a temporary basis (Larsson, 2014). Temporary or seasonal employment is defined as "non-permanent paid work that will end at a specified time or in the near future, once the seasonal peak has passed" (Statistics Sweden, 2015). This type of employment is a risk factor for stress-related problems and ill health among employees (De Witte & Näswall, 2003; Lewchuk, Clarke, & De Wolff, 2008). Job insecurity can have negative effects on an individual's life, job satisfaction, and mental and physical health (Cheng & Chan, 2008; Sverke, Hellgren, & Näswall, 2002). Temporary employment has also been described as precarious, because it is generally related to feelings of powerlessness and exclusion from society (Standing, 2014). Recent research shows that individual job insecurity and a climate of job insecurity at a workplace are related constructs: employees may experience a climate of job uncertainty in addition to their own individual job insecurity, which can contribute to negative health consequences for individuals and organisations (Låstad, 2015). Temporary employment and changing jobs have been shown to increase the risk of misusing alcohol (Bush & Autry, 2002). However, a large British study found no association between job insecurity and alcohol consumption measured with a question on drinking over recommended limits (Ferrie, Shipley, Newman, Stansfeld, & Marmot, 2005). This accords with the findings of a large national randomly sampled US survey, where none of the nine alcohol outcomes examined was significantly related to seasonal employment (Frone, 2016). However, seasonal employment accommodates various types of work – such as picking strawberries, working in mines, or working at ski resorts, as in the current study – and the factors associated with alcohol consumption may differ widely. It is therefore important to study seasonal employees' risk consumption of alcohol and drugs in specific industries.

Seasonal employees at tourism resorts represent a high-risk population for the use of alcohol, drugs, and other negative lifestyle behaviours such as risky sexual conduct (Kelly, Hughes, & Bellis, 2014). Seasonal employees at a ski resort work in a context where the customers are on holiday and hence frequently use alcohol. Also, many employees return year after year to the resort for renewed seasonal employment (Vinberg & Warne, 2015). For

seasonal employees working in hotels and restaurants there are similarities with working in pubs. According to Sandiford and Seymour (2013), those working in pubs experience a particularly complex relationship between work and leisure. They belong to a culture where drinking is the norm for guests; however, as employees they are responsible for enforcing drinking rules within their workplace. Hotels and restaurants are a main industry at ski resorts, and seasonal employees are overrepresented in these types of workplaces (Larsson, 2014). Studies show that restaurant employees are particularly at risk for high alcohol consumption and have a significantly higher alcohol consumption rates compared with the general population (Norström, Sundin, Müller, & Leifman, 2012). Prior research in Swedish club settings has also shown that drug use among employees is high compared to the general Swedish population (Gripenberg Abdon, Wallin, & Andréasson, 2011).

A case-control study of summer employees and holidaymakers in Ibiza, Spain, showed that young people going abroad for seasonal work in bars and night clubs on holiday resorts more commonly use drugs than holidaymakers at the same place (Hughes, Bellis, & Chaudry, 2004).

Living conditions for the temporarily employed at ski resorts can also influence risky behaviour. At Swedish ski resorts, seasonal employees typically live together in collective housing, which can affect the culture and behaviours that emerge within the group (Vinberg & Warne, 2015). These living and working conditions can contribute to an increased consumption of alcohol and drugs. Aside from their work, seasonal workers at ski resorts are also interested in sports activities during their time at the resort. Snowboarders are attracted by the adventure, new terrain, and social interactions and cultural connections with others (Thorpe, 2012a), but are also a part of a hegemonic party life style with use of alcohol and drugs, for both performance and pleasure (Thorpe, 2012b). This is in line with research about how social norms are created among university students. Social norms among friends, measured by normative beliefs regarding friends' drug use, have been related to more frequent use of cannabis among university students 18–24 years old (Buckner, 2013). Also, in a study of employed adults, substance use was predicted by injunctive norms, such as perceptions of how much others approve of drinking or using illicit drugs in the workplace (Frone & Brown, 2010). Descriptive norms, defined as perceptions of how much others drink or use illicit drugs, predicted alcohol and illicit drug use before and during work among the employees. A study of a national sample of US workers showed a positive relation between workplace alcohol use and perceived physical availability of alcohol at work as well as two dimensions of workplace impairment – workplace intoxication and workplace hangover (Frone & Trinidad, 2012).

Many young men and women are involved in a normalisation process around alcohol and binge drinking behaviour through the retelling of drinking stories (Brown & Gregg, 2012) and viewing drinking behaviour as a pleasurable activity (Lyons & Willott, 2008). Different norms surround and affect alcohol consumption behaviour in men and women. Alcohol consumption has traditionally been seen as part of the construction of masculinity (Willott & Griffin, 1997). If women's and men's actions concerning alcohol consumption are based on social constructs, rather than biological causes, then men and women will act in accordance with the concepts of femininity and masculinity outlined by the culture in which they live (West & Zimmerman, 1987). This reasoning is consistent with studies showing that alcohol consumption is associated with the level of gender equality in a country. Alcohol consumption is more similar between men and women in gender-equal countries than in countries with more traditional norms (Bosque-Prous et al., 2015; Hensing, 2014). Alcohol can help to create an identity and a sense of social belonging; experiences that are likely to be particularly important for young people working as seasonal employees. Therefore, alcohol consumption

can be viewed as a social phenomenon, which is highly influenced by the attitudes and behaviours in a particular environment.

Apart from these factors, psychosocial working conditions such as work demands, social relations, and collaboration can influence seasonal employees' alcohol and drug use. Organisational culture and access to alcohol in the workplace have been found to affect employees' alcohol consumption (Ames, Grube, & Moore, 2000). These researchers compared two workplaces: in one with an articulated alcohol policy and more consistent social control, the use of alcohol in connection to work was considerably lower than in a workplace where policy was lacking. In other studies, it appears that if there is an imbalance between the effort employees put into their work and the rewards they receive, there is an increased risk of high alcohol consumption (Head, Stansfeld, & Siegrist, 2004). Many working hours per week (Virtanen et al., 2015), as well as perceived stress and insufficient psychosocial conditions (Moore, Grunberg, & Green, 2000) are other aspects that can increase the risk of high alcohol consumption. A study by Frone (2016) also showed that work stressors could cause employees to use alcohol heavily for tension reduction among both men and women. To our knowledge, research about the risky consumption of alcohol and drugs among seasonal employees is limited, particularly at ski resorts. In addition, young people are a vulnerable group for temporary employment and negative lifestyle behaviours. The overall purpose of our study is to evaluate the risky consumption of alcohol and drugs among employees at Swedish ski resorts, and compare seasonally employed men and women with permanently employed men and women. More specifically, we address the following research questions:

> What is the prevalence of risky consumption of alcohol and drugs among Swedish men and women employed at ski resorts compared to the general Swedish population?
>
> What associations exist between risky consumption of alcohol and drugs, and terms of employment, living conditions, social aspects, and psychosocial working conditions among ski resort employees?

Methods

Setting and participants

This study is part of an alcohol and drug prevention project, which seeks to reduce risky consumption of alcohol and drugs among seasonal employees at a winter ski resort (Vinberg & Warne, 2015). The study was conducted during the spring of 2014 in northern Sweden where several ski resorts are situated. The key industries in this area are small and medium-sized enterprises in the tourism industry. According to Vinberg and Warne (2015), approximately 2000 individuals are seasonally employed in this area every year, and nearly 60% of them live temporarily in the municipality during the season.

The study sample

Enterprises with five or more employees (around 90 enterprises in the ski resort area) were invited to participate in the study, and 48 agreed to participate. They represented different sectors and enterprise sizes. All employees ($n = 1313$) at the participating enterprises were invited to fill in a questionnaire with 43 questions concerning alcohol and drug use, social aspects, psychosocial working conditions, and health. In this study we used questions related to age, gender, alcohol (measured by the Alcohol Use Disorder Identification Test [AUDIT]; Babor, Higgins-Biddle, Saunders, & Monteiro, 1989), drugs (measured by the Drug Use Disorder Identification Test [DUDIT]; Berman, Bergman, Palmstierna, & Schlyter, 2005), terms of employment, living conditions, social aspects, and psychosocial working conditions. The employees were employed in small and medium-sized

Table 1. Distribution of each item for men and women in the study group ($N = 601$).

Item	Response choice	Men % (*n*)	Women % (*n*)
Terms of employment			
	Permanently employed	28.4 (77)	19.3 (62)
	Temporarily employed	8.5 (23)	7.5 (24)
	Seasonally employed	63.1 (171)	73.2 (321)
Living conditions: "With whom do you share accommodation when working at the ski resort?"			
	Nobody	21.9 (60)	17.2 (55)
	Parents/siblings	4.7 (13)	3.8 (12)
	Husband/wife/partner	36.1 (99)	35.3 (113)
	Other adults/colleagues	36.5 (100)	42.2 (135)
	Children	0.7 (2)	1.6 (5)
"How common is it that your friends are inebriated?"			
	Often	46.0 (122)	35.1 (111)
	Sometimes	34.3 (91)	46.5 (147)
	Seldom	17.4 (46)	16.5 (52)
	Never	2.3 (6)	1.9 (6)
Number of employees in the company			
	5–9	9.7 (26)	6.0 (19)
	10–19	21.6 (58)	17.6 (56)
	20–49	21.6 (58)	23.5 (75)
	50 or more	47.2 (127)	53.0 (169)
Type of industry			
	Hotel and restaurant	45.3 (126)	61.3 (200)
	Trading	12.2 (34)	12.6 (41)
	Transport	5.5 (15)	1.2 (4)
	Entertainment	5.1 (14)	0.9 (3)
	Other (piste machine, lift system, ski school etc.)	19.9 (56)	21.5 (70)
		Mean	**Mean**
Decent work demands scale 3–31		17.0	17.4
Good cooperation scale 0–12		10.0	10.1

enterprises (with 5–250 employees), mainly in hotels and restaurants. Half of the respondents in the study sample said that they were employed at enterprises with more than 50 employees. The other respondents were distributed as follows: 23% in enterprises with 20–49 employees, 19% in enterprises with 10–19 employees and 8% in enterprises with 5–9 employees (Table 1). In total, 611 participants (46.4% men and 53.6% women) responded to the questionnaire. The response rate for the total sample was 46.5%. Of the participants, 147 individuals (24%) were permanent employees, while 464 individuals (76%) were temporary or seasonal employees. The largest group were 18–24 year olds (51%), and there were significantly more women (61%) than men in this group. Of the seasonal employees, 47% of the men and 38% of the women lived permanently at the ski resorts, while the other seasonal employees lived temporarily at the ski resorts.

The questionnaires were distributed by the project leader from the municipality to the managers of the enterprises, who handed them out to their employees. Participation was voluntary. Employees who participated could choose to leave the questionnaire in a sealed envelope with their manager or to send it by post to the researchers.

The comparative national AUDIT and DUDIT samples

Data from a 2014 assessment of alcohol consumption in the population, as measured with the AUDIT (Källmén, Wennberg, Ramstedt, & Hallgren, 2015), were used to compare alcohol habits of the study sample with those of the general Swedish population. In this population study, a random sample of 1459 people (50% male) living in Sweden was drawn from an official national register of addresses for all Swedish citizens (Dafa/Spar). Participants ranged between 17 and 80 years in age. The 2014 sample size was equivalent to the number of participants in previous AUDIT investigations (Bergman & Källmén, 2002; Källmén, Wennberg, Berman, & Bergman, 2007; Källmén, Wennberg, Leifman, Bergman, & Berman, 2011; Källmén et al., 2015). The response rate after two reminders were sent (three data waves) was 59% ($n = 863$). Ninety-seven respondents did not disclose their gender, which resulted in a final distribution of 344 men (45%) and 422 women (55%). The prevalence of risky alcohol habits was 15.2% for men and 12.3% for women in 2014.

The comparative data for the DUDIT was taken from a 2011 national study that assessed alcohol and drug use using the Internet or Interactive Voice Response (IVR) methods (Sinadinovic, Wennberg, & Berman, 2011). The sample consisted of 5000 individuals who were randomly selected from the Swedish general population. Participants were contacted by post and were invited to complete the AUDIT and DUDIT questionnaires using the Internet or IVR. In total, 1861 individuals participated in the study (37.2% response rate), where 1089 did so via the Internet and 772 through IVR. The DUDIT sample was 1833 individuals. The Internet administration method yielded a higher response rate (38.1%) compared to the IVR method (33.9%). A sub-set of the respondents was given a choice between the Internet and IVR, yielding a higher response rate (43.2–46.6%). Problematic alcohol and drug use occurred among 21.1% and 2.8% of the sample respectively, with no significant differences between the two administration methods. The total gender distribution was 856 men (46.7%) and 977 women (53.3%).

Dependent variables

The AUDIT was used as an outcome variable to measure hazardous drinking, because it has been shown to have good psychometric qualities for this population in terms of both reliability and validity (Babor et al., 1989; Bergman & Källmén, 2002; Reinert & Allen, 2002, 2007). The AUDIT questionnaire consists of 10 items on alcohol consumption and alcohol-related problems, each of which can give a maximum of four points (the total score range is 0–40 points). Items 1 to 8 are scored 0–4, and items 9–10 are scored 0, 2, and 4. The cut-off value used to indicate hazardous drinking was eight points for men and six for women (Berman, Wennberg, & Källmén, 2012). In this article, study participants with at least hazardous drinking levels were defined as persons with risky consumption of alcohol.

The DUDIT variable was used to measure the use of illicit drugs and medications not prescribed by a physician (Berman et al., 2005). The DUDIT questionnaire contains 11 questions, where items 1 to 4 assess consumption and items 5 to 11 assess drug-related problems (the total score range is 0–44). The first nine items are scored 0–4, and items 10 and 11 are scored 0, 2, and 4. The DUDIT has been shown to have good psychometric qualities in terms of internal consistency, specificity, and sensitivity. The cut-off value used to indicate

the use of illicit drugs was six points for men and two for women (Berman et al., 2012). Participants with at least the cut-off value were defined as persons with risky consumption of drugs.

Independent variables

A variable describing *terms of employment* was measured by a question with the following three alternatives: permanent employment, temporary employment, and temporary employment as a seasonal employee. This variable was dichotomised in the following way: permanently employed or temporarily/seasonally employed. Two items were used to measure *social aspects*. The first question was: "With whom do you share accommodation when working at the ski resort?" The response alternatives for the first question were: nobody, parents/siblings, husband/wife/partner, other adults/colleagues, and children. This variable was dichotomised in the following way: living with other adults/colleagues or all other answer alternatives. The second question was: "How common is it that your friends are inebriated?" The response alternatives were: often, sometimes, seldom and never, which was dichotomised as often or sometimes/seldom/never. "Friends" in this question is often similar to co-workers because the employees live together and spend their leisure time with each other.

Psychosocial working conditions were measured by seven questions about work demands and three questions about cooperation, which have been validated in earlier studies (Christensen et al., 2012). Work demands covered questions about working fast, work requires quick decisions, work tasks are difficult, complicated, and demand maximal attention. A summation index for decent work demands was created with a range of 3–31 (Cronbach's alpha 0.71). Cooperation covered questions about atmosphere between colleagues, cooperation at the workplace, and feeling of being part of the company. A summation index for good cooperation was created with a range of 0–12 (Cronbach's alpha 0.87). The distribution for each item is presented in Table 1.

Statistical analysis

All analyses were performed using SPSS 22.0 and STATA 13.0 software. Chi-square tests were conducted to compare the study and national sample. The Shapiro–Wilks test showed a non-normal distribution of the AUDIT and DUDIT; therefore, the Mann–Whitney U-test was used to evaluate the ranks of the AUDIT and DUDIT scores by gender and age in the study group and the Swedish population group. Logistic regression analyses were used to explain the risky consumption of alcohol and drugs. All explanatory variables were entered simultaneously and controls for clustered data were conducted by calculating cluster robust standard errors. The main effects of age, gender, seasonal employment, co-worker/friend often inebriated, living with colleagues, decent work demands, and good cooperation were evaluated for risky consumption of both alcohol and drugs.

Results

Alcohol and drug consumption

The means and standard deviations for the AUDIT in the study and general population samples are shown by age group and gender in Table 2.

Men from the study sample in the 18–24 and 25–34 age groups scored higher on mean AUDIT scores compared to the general population sample. Women in the study sample scored higher on the AUDIT compared to women from the general population in all three age groups. The percentages of risky consumption (RC) in each age group for both samples are also shown in Table 2. The proportion of risky consumption was higher for both genders in the study sample compared with the general Swedish population in all age groups except men aged 35 years and older. The overall

Table 2. Means and standard deviations for male and female AUDIT and DUDIT scores in the study sample and Swedish population, Mann–Whitney U-test for significant differences between ranks of raw scores. Percentage with risk consumption (RC) of alcohol and drugs.

		Study sample $N = 601$				Population sample $N = 766$				Differences			Study sample $N = 601$				Population sample $N = 1833$				Differences
AUDIT	Ages	*N*	Mean	*SD*	RC	*N*	Mean	*SD*	RC	*p*-value	DUDIT	Ages	*N*	Mean	*SD*	RC	*N*	Mean	*SD*	RC	*p*-value
Male											Male										
	18–24	117	10.95	6.14	70.9	16	7.62	4.98	43.7	**0.03**		18–24	110	1.15	2.54	5.5	105	0.90	3.12	6.7	**0.02**
	25–34	79	8.66	5.18	51.9	41	5.39	3.38	26.8	**<0.01**		25–34	77	0.64	2.44	2.6	140	0.54	2.10	2.9	0.41
	35+	81	4.67	3.01	12.3	282	3. 99	3.50	12.1	0.11		35+	80	0.05	0.27	0.0	587	0.13	1.10	0.5	0.77
Female											Female										
	18–24	186	8.67	4.03	78.5	27	6.52	5.39	51.9	**<0.01**		18–24	183	0.36	1.46	7.7	129	0.61	2.45	7.8	0.91
	25–34	79	5.01	3.50	41.8	59	3.88	3.45	27.1	**0.04**		25–34	78	0.03	0.23	1.3	162	0.14	0.84	3.1	0.40
	35+	59	3.12	2.31	8.5	332	2.75	1.76	6.6	**0.02**		35+	59	0.05	0.29	0.0	658	0.17	1.12	3.2	0.85

Notes. AUDIT = Alcohol Use Disorders Identification Test; DUDIT = Drug Use Disorders Identification Test.
Missing cases: Study sample DUDIT = 14 individuals, Population sample AUDIT = 9 individuals, Population sample DUDIT = 52 individuals.
Significant level on $p < 0.05$.

prevalence of risky consumption of alcohol among seasonal workers in the study sample was 82.9% (95% CI 0.764–0.894) and 58.0% among other employees (95% CI 0.508–0.652) (not shown in any Table).

Regarding the DUDIT scores, the only significant difference between the study sample and the general population occurred in the male 18–24 age group, which showed higher scores in the study group (Table 2). The overall prevalence of risky consumption of drugs in the study sample among the seasonally employed was 8.3% (CI 5.0–11.6) and 2.8% (CI 1.7–3.9) among other employees (not shown in any Table).

Associations between predictors and risky consumption of alcohol and drugs

Two logistic regression analyses were performed using a model that included seven variables (age, gender, seasonally employed, living with colleagues, co-workers/friends often inebriated, decent work demands, good cooperation). One analysis covered risky consumption of alcohol and the other risky consumption of drugs. Both analyses explained a moderate proportion of the variance in risky consumption (Pseudo $R^2 = 0.28$ for alcohol and 0.20 for drugs). The results, shown in Table 3, indicated that gender, living together with colleagues, co-workers/friends often inebriated, decent work demands, and good cooperation were the most significant explanatory variables for risky consumption of alcohol. The variables living with colleagues and co-workers/friends often inebriated had the highest odds ratios (16.8 and 4.3). The odds ratio of 0.5 for gender meant that women had a significantly lower risky consumption of alcohol than men. Decent work demands were significantly negatively associated, while good cooperation was positively associated with risky consumption of alcohol. Being seasonally employed was not significantly associated with risky consumption of alcohol. For risky drug consumption as an outcome variable, age, gender, and co-workers/friends often inebriated were significantly associated. The variable of having co-workers/friends who were often inebriated had the highest odds ratio ($OR = 4.3$). Age and gender were negatively associated with risky drug consumption (i.e., older individuals and women used drugs to a lesser degree).

Discussion and conclusions

The overall purpose of this study was to compare employees at Swedish ski resorts to the general Swedish population regarding consumption of alcohol and drugs and to evaluate the associations between such consumption and age, gender, terms of employment, living conditions, social aspects, and psychosocial working conditions. The study sample was dominated by seasonal and temporary employees (around 75%). The focus of this study is an important research area due to the lack of knowledge concerning alcohol and drug problems in tourist resorts in season, and because temporary and seasonal employment can contribute to work-related ill health (Virtanen et al., 2015) and negative lifestyle behaviours such as high alcohol and drug consumption (Kelly et al., 2014).

We found that all employees at the ski resorts, except men aged over 35 years, consumed more alcohol than the general Swedish population, and that risky consumption of alcohol was associated with the variables of living with colleagues, co-workers/friends often inebriated, male gender, good cooperation at work, and decent work demands (negative association). The patterns were somewhat different concerning risky consumption of drugs. Only males in the 18–24 age group showed a higher score in the study group compared to the Swedish population. Risky consumption of drugs was associated with the variables co-workers/friends often inebriated, male gender, and age (negative association). Also, ski resort workers with seasonal employment had a higher nominal prevalence of risky alcohol and drug consumption compared to other workers, although

Table 3. Multiple logistic regression analyses of risky consumption of alcohol and drugs. Regression coefficient, 95% confidence interval (CI) for regression coefficients, cluster robust standard error (*SE*), *Z*-value, *p*-value, odds ratio (*OR*), 95% confidence interval for *OR*.

Risky use of alcohol Main effects	Regr. coeff	CI	Robust *SE*	*Z*	*p*-value	*OR*	CI for *OR*	Risky use of drugs Main effects	Regr. Coeff	CI	Robust *SE*	*Z*	*p*-value	*OR*	CI for *OR*
Age	–0.14	–0.31–0.04	0.09	–1.56	0.120	0.87	0.73–1.04		–1.86	–3.27–(–0.46)	0.71	–2.61	0.009	0.15	0.04–0.63
Gender	–0.71	–0.78–(–0.64)	0.04	–18.76	<0.001	0.49	0.46–0.53		–0.15	– 0.26–(–0.05)	0.05	–2.85	0.004	0.86	0.77–0.95
Seasonally employed	0.32	–0.11–0.74	0.22	1.45	0.146	1.37	0.90–2.10		0.09	–0.65–0.83	0.38	0.23	0.820	1.09	0.52–2.30
Living with colleagues	2.82	2.04–3.61	0.40	7.03	<0.001	16.82	7.66–36.95		0.22	–0.59–1.03	0.41	0.54	0.590	1.25	0.56–2.81
Co-workers/ friends often inebriated	1.46	0.80–2.13	0.34	4.34	<0.001	4.33	2.23–8.40		1.45	0.73–2.16	0.36	3.97	<0.001	4.25	2.08–8.69
Decent work demands	–0.08	–0.1–(– 0.06)	0.01	6.39	<0.001	0.92	0.90–0.94		–0.04	–0.12–0.05	0.04	–0.90	0.369	0.96	0.88–1.05
Good cooperation	0.20	0.11–0.30	0.05	4.43	<0.001	1.23	1.12–1.34		–0.22	–0.47–0.20	0.12	–1.80	0.071	0.80	0.62–1.02

seasonal employment did not significantly predict risky alcohol or drug consumption. Younger age was related to higher drug consumption among men and women in both the study sample and the Swedish general population. The results on the consumption of alcohol and drugs in the study group are in line with those of a previous study (Kelly et al., 2014). To our knowledge, few studies have explored alcohol and drug consumption in this group based on their terms of employment. However, the cross-sectional design of this study does not suggest that seasonal employment per se is related to risky alcohol and drug consumption. Nonetheless, in view of the significantly higher prevalence of risky alcohol use in the study sample, heavy consumers of alcohol may prefer to work at ski resorts, which relates to the seasonal, holiday-making character of the resorts.

Several possible explanations can be proposed regarding the differences in the study related to alcohol and drug consumption among ski resort employees. One explanation might be that the availability of alcohol is relatively higher than the availability of drugs at ski resorts. Frone (2013) discussed alcohol and illicit drugs from a theoretical standpoint, suggesting that alcohol and illicit drug use increases with the availability of a substance in society – at a workplace, for example – and presented two dimensions of this theory. The first concerns the physical availability of alcohol and drugs, e.g., alcohol at a restaurant, while the second pertains to the social availability. Both these dimensions are probably relevant for the employees in this study, in light of the focus on alcohol consumption among ski resort holidaymakers, and the identified importance of living with colleagues and their being often inebriated, for the overuse of alcohol and drugs (regarding co-workers/colleagues being frequently inebriated). These dimensions should thus be considered when developing preventive strategies in the tourism industry. An explanation for the discrepancy we found between risky consumption of alcohol versus drugs might be that the use of alcohol is an accepted part of general Swedish culture, whereas the cultural norms surrounding the use of drugs are different: drugs are not socially accepted in the same way as alcohol (Aldridge, Measham, & Williams, 2011). Similar to many other countries, drug use and possession is against Swedish law, which may also contribute to the decreased consumption of drugs.

A significant study result in terms of variables that highly influence risky alcohol and drug consumption was that employees who have co-workers/friends that often are inebriated and/or those who live together with colleagues were more likely to report risky consumption of alcohol than were employees in other circumstances. Employees with co-workers/friends who were often inebriated were also more likely to report a risky consumption of drugs than were other employees. This finding is in line with previous research about descriptive norms of drinking behaviours during and after work (Frone & Brown, 2010). It is difficult for workers to refrain from participating in social activities including alcohol when they are living together in apartments with shared kitchens and living rooms. For example, it is not possible to leave your home in the same way that you could leave a party if you did not want to participate any longer. This living situation may contribute to heavy drinking behaviour. Also, the results are in accordance with another study concerning young students living together in halls of residence (Ståhlbrandt, Johnsson, & Berglund, 2012), which indicated that the environment of the hall is a key factor in the students' alcohol habits. A main finding by Ståhlbrandt and colleagues (2012) was that the halls with climate factors such as high distance (e.g., intolerance, coolness, or aggressive) or high expressiveness (e.g., liveliness, rush, and wild) had higher AUDIT values compared to halls with lower distance or expressiveness. It is also possible that a permissive subculture develops among ski resort employees, which leads to a higher consumption of drugs. This line of reasoning is supported by Thorpe in her research on young snowboarders (Thorpe,

2012a, 2012b), which found that snowboarders tended to create a subculture around their sport where drugs were one component. Young people living and working together in an environment characterised by a culture of leisure and partying may be influenced by behaviours and attitudes regarding alcohol and drug use. Aldridge et al. (2011) showed in a British qualitative study that the main reasons young people drink and use drugs included socialising for enjoyment, to have a good time, to increase confidence, and to get merry/drunk. In addition, Johansson and Wirbing (2005) discussed the social dimension of alcohol from a more positive approach, arguing that alcohol can serve as a "building block" to create different social worlds based on local cultures and social meanings. Alcohol can help to create an identity and a sense of social belonging, experiences likely to be relevant to young people who work as seasonal employees. As Johansson and Wirbing (2005) argue, alcohol consumption can therefore be viewed as a social phenomenon, which is highly influenced by the attitudes and behaviours in the environment.

Although the prevalence of risky consumption of both alcohol and drugs was higher among seasonal employees compared to other employees, seasonal employment did not contribute significantly to risky consumption in the regression analyses. This finding suggests that it is not primarily the terms of employment that are problematic for risky consumption of alcohol and drugs. Instead, it seems that social aspects such as living with colleagues and friends often being inebriated are key factors for a risky consumption. This is in line with other studies that found no association between, on the one hand, alcohol consumption, and on the other hand, job insecurity and seasonal employment (Ferrie et al., 2005; Frone, 2016).

The results showing that female gender was associated with lower risky consumption of both alcohol and drugs are in accordance with the notion that consumption has traditionally been viewed as part of the construction of masculinity (Willott & Griffin, 1997). Also, men in general have a higher consumption of alcohol than women (Bosque-Prous et al., 2015; Hensing, 2014). Some research shows relations between stress-related factors and alcohol consumption (Frone, 2016; Virtanen et al., 2015). However, the relatively small contribution of the psychosocial working conditions in the regression analyses suggests that these conditions are less important for employees working temporarily at ski resorts during the active season compared to other employees.

Strengths and limitations

A strength of this study is that it is the first study in Sweden to estimate the prevalence of the risky consumption of alcohol and drugs among ski resort employees. The use of the validated questionnaires and index construction from previous studies is also a strength. However, there are some limitations. One is the large proportion of non-responders. Only about half of the employees at the participating enterprises responded to the questionnaire, which makes extrapolation of the results uncertain. In addition, the population means for the youngest age groups were estimated from relatively few observations. In the study sample, the opposite occurred, where the means of the older age groups were estimated from fewer observations. Due to the cross-sectional design, no conclusions can be drawn regarding the causality of the associations in the regression analyses. Another limitation is that workplace norms are captured with a limited number of questions. The results cannot be generalised in full to employees' alcohol and drug use at other ski resorts. However, our study contributes to important knowledge in an area where previous research is limited.

Conclusions and implications

The results show that employees at ski resorts are a high-risk group, particularly in terms of their drinking behaviours and in relation to their seasonal employment for more than one season.

Social aspects such as living with colleagues and having co-workers/friends who are often inebriated are associated with risky alcohol consumption. These social aspects were also associated with risky drug consumption, but only in relation to having co-workers/friends who are often inebriated. Taken together, the results suggest that preventive measures are needed for the study group, and it is important to target norms and the work culture concerning alcohol and drug use among the group both at the societal and organisational level. Efforts should be directed toward changing the culture and standards surrounding alcohol and drug use. Employers who provide an alternative to the standard "party culture" have the opportunity to influence the prevailing norms. These alternative options might be related to health trends in today's society. Another important issue is the living conditions of the employees. The results suggest that a drinking culture is created in company housing where many seasonal employees stay during the season. Here, employers should provide other types of accommodation for those who prefer to avoid the drinking culture. Restrictions for alcohol and zero tolerance for drugs could be set up for those who reside in company housing.

Because several workplaces at ski resorts are small enterprises, they could successfully integrate work-related alcohol and drug problems with occupational health and safety issues. There is also a need for more supportive management to handle the integration of work and leisure among seasonal employees and increase leadership competencies concerning alcohol and drug use. The limited knowledge about alcohol and drug problems among young seasonal employees at ski resorts indicates the need for increased quantitative and qualitative research studies. It is important to develop more longitudinal questionnaire studies to study changes in consumption and determine how employment relations and social aspects are related to the consumption of both alcohol and drugs. It is also important to study how, for example, work stress factors and workplace social control might interact with social aspects and social norms in relation to alcohol and drug use. Future research should thus include more developed measures of workplace norms. Qualitative approaches such as interviews or focus groups with seasonal employees could provide a deeper knowledge of the mechanisms of risky consumption. Further, comparisons of conditions and consumption at different ski resorts could provide additional knowledge about the influence of different contextual factors.

Acknowledgements

We gratefully acknowledge the participating employees who made this study possible.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

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