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Article:

Solitary Drinkers in Great Britain: How Do Their Sociodemographic Characteristics, Consumption Patterns, and Drinking Occasions Differ From Those Who Drink With Others?

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ABSTRACT. **Objective:** Inequalities in alcohol-related harm may arise partly from differences in drinking practices between population groups. One underresearched practice associated with harm is consuming alcohol alone. We identify sociodemographic characteristics associated with drinking alone and the occasion-level characteristics associated with occasions when people drink alone. **Method:** A cross-sectional analysis of 1-week drinking diaries collected between 2015 and 2019 was conducted using event-level data on 271,738 drinking occasions reported by 83,952 adult drinkers in Great Britain. Our two dependent variables were a binary indicator of reporting at least one solitary drinking occasion in the diary week at the individual level and a binary indicator of drinking alone at the occasion level (event level). **Results:** Individual-level characteristics associated with solitary drinking were being a man (odds ratio [OR] = 1.88, 95% CI [1.80, 1.96]), age greater than 50 years (OR = 2.60, 95% CI [2.40, 2.81]), not in a relationship (OR = 3.39, 95% CI [3.20, 3.59]), living alone (OR = 2.51, 95% CI [2.37, 2.66]), and being a high-risk drinker (OR = 1.54, 95% CI [1.52, 1.59]). Occasion-level characteristics associated with solitary drinking were that they were more likely to occur in the off-trade (OR = 3.08, 95% CI [2.95, 3.21]), Monday–Thursday (OR = 1.36, 95% CI [1.27, 1.47]), and after 10 P.M. (OR = 1.36, 95% CI [1.27, 1.47]) controlling for geographic region and the month the interview took place. **Conclusions:** Characteristics of solitary drinking largely align with characteristics we associated with drinking problems. Those who partake in at least one solitary drinking occasion are overall more likely to consume alcohol at risky levels; however, the number of drinks consumed on each occasion was lower during a solitary drinking occasion. (*J. Stud. Alcohol Drugs, 86,* 39–47, 2025)

SOLITARY DRINKING is a practice in which an individual consumes alcohol, either at home or in public, on their own. It has been identified as a potential risk factor for alcohol use disorder and, as such, has been described as an informative divergence from normative behavior (Creswell et al., 2014; Skrzynski & Creswell, 2021). More generally, solitary drinking is often problematized and is associated with both heavy episodic use and alcohol-related problems (Bilevicius et al., 2018; Bourgault & Demers, 1997; Creswell et al., 2014; Holyfield et al., 1995; Skrzynski et al., 2018). A recent systematic review (Skrzynski & Creswell, 2021) found that adult solitary drinking was associated with greater quantity and frequency of alcohol consumption (Corbin et al., 2020; Engels et al., 2005; Glynn et al., 1983; Victorio-Estrada & Mucha, 1997; Waddell et al., 2021), as well as drinking problems or hazardous use among emerging adults (Arpin et al., 2015; Keough et al., 2018; Sacco et al., 2015; Walker et al., 2012). Research on solitary drinking among young adults and college/university students has also found evidence linking solitary drinking to both heavy episodic use and alcohol-related problems (Bilevicius et al., 2018; Corbin et al., 2020; Creswell et al., 2014; Holyfield et al., 1995; Skrzynski et al., 2018). It is therefore important to understand which groups in society are more likely to participate in solitary drinking to understand whether it can contribute to our understanding of inequalities in alcohol-related harm.

There is a growing body of literature using quantitative event level methods and the analysis of data on drinking occasions to identify and characterize drinking practices, their prevalence, and those participating in them (Ally et al., 2016; Mäkelä et al., 2022). For example, evidence from Great Britain used latent class analyses to identify eight distinct types

of drinking occasions between 2009 and 2011 (Ally et al., 2016). The findings indicated that drinking at home alone accounted for 13.6% of occasions and that 19.7% of adults reported this occasion type in the last week. However, few such studies have examined specific drinking practices, such as drinking alone, in greater detail.

This study used a large sample of data on drinking occasions among adults ages 18 years and older in Great Britain to identify the individual- and event-level characteristics associated with solitary drinkers and solitary drinking occasions. Similarly to the previous literature, this study examined the characteristics associated with being a solitary drinker; however, we expanded on this work with the investigation of what factors are associated with solitary drinking occasions. Solitary drinkers were defined as individuals who drink alcohol not in the company of anybody else, and solitary drinking occasions were characterized as occasions involving the consumption of alcohol in occasions with only one participant.

Method

Data

This study used data from the Alcovision survey, a commercial product collected by the market research company Kantar that has been used in previous occasion-level research (Ally et al., 2016; Holmes et al., 2021; Sasso et al., 2022). Alcovision is a continuous, cross-sectional, monthly, online diary survey with an annual representative sample of approximately 30,000 individuals per year ages 18 and older and resident in Great Britain.

Alcovision is sampled from Kantar's online market research panels using quotas based on age, gender, social class, and geographic region. Invitations to participate are delivered on dates set to ensure that surveys are completed throughout each month and that every day of the year is included in the fieldwork. The survey oversamples Scotland residents and 18- to 34-year-olds to allow detailed analyses of these populations. More details on the Alcovision survey can be found online (https://www.kantarworldpanel.com/en/Sectors/alcohol). The research team for this study constructed sampling weights to improve representativeness using a raking technique described elsewhere (Stevely et al., 2021).

In addition to providing data on the sociodemographic characteristics of each participant and basic information on their alcohol consumption, Alcovision respondents were asked to complete a detailed, 1-week, retrospective drinking diary. In this diary, participants reported on the characteristics of each of their drinking occasions over the last week, including the location, timing, companions, and the alcohol consumed during the occasion. Alcovision defines an occasion for participants as a significant period, such as lunchtime, early evening, or late evening. Off-trade (i.e.,

consumption of alcohol purchased in shops) and on-trade (i.e., consumption of alcohol purchased on the premises, such as at bars or restaurants) drinking occasions are reported separately, and participants were able to report detailed information on two off-trade and two on-trade occasions per day. Because participants are asked to report earlier occasions first, it is likely that any occasions omitted because of this limit occurred later in the day.

This study pooled Alcovision data from 2015 to 2019 to create a single cross-sectional data set containing information on 271,738 drinking occasions nested within 83,952 respondents who reported drinking alcohol during the survey week.

Measures

Within each occasion, participants reported the drinks they consumed at brand level (e.g., Budweiser Light), the serving or packaging sizes, and the amount consumed in "serves." We converted serves into U.K. units of alcohol (1 unit = 8 g ethanol) using additional information we collected online on products' alcoholic strength or alcohol by volume. We then calculated individuals' weekly alcohol consumption by summing the number of units consumed on each occasion during the diary week. Because a small number of respondents reported unrealistically high values of alcohol consumption, we capped the number of units consumed using thresholds informed by consultation with clinicians. The data were structured as brands, nested within occasions, nested within days, and nested within weeks. Following on from previously published work (Sasso et al., 2022; Stevely et al., 2021), we capped brands, occasions, and days at 320 g of alcohol (40 U.K. units). This means each diary week cannot involve drinking more than 2,240 g (280 U.K. units). In this analysis, 3,264 drinking occasions (1.2% of the sample) were over this threshold; we therefore capped their consumption to 2,240 g of alcohol (280 U.K. units).

Independent variables

Individual level. Our first set of analyses used the data at the individual level. The independent variables are the sociodemographic information available in the Alcovision data set, specifically sex (*men, women*), age groups (*18–24, 25–34, 35–49, ≥50*), annual household income (*<£20,000, £20,000–£34,999, £35,000–£54,999, ≥£55,000*), marital status (*married living with partner, not married [not in a relationship], not married [in a relationship]*), work status (*working, retired, unemployed, full-time education, other*), and living alone (*yes, no*).

In addition to using sociodemographics to best inform our understanding of solitary drinkers, we also considered weekly alcohol consumption. Using the U.K. Chief Medical Officers' guidelines for low-risk alcohol consumption and

other standard U.K. definitions (Burton et al., 2016), we used the capped continuous number of units consumed in a week variable to categorize respondents in Alcovision into three groups based on their level of drinking. We defined *moderate drinking* as consumption below or equal to 14 units per week for both men and women, *increasing-risk drinking* as consuming 15 to <35 units a week for women and 15 to <50 units for men, and *high-risk drinking* as 35 or more units a week for women and 50 or more units a week for men.

Occasion level. For our analysis of drinking occasions, we examined the characteristics of drinking occasions reported in Alcovision; specifically the location (*on-/off-trade*), beverage type, day of the week (*Monday–Thursday, Friday–Saturday, Sunday*), length of occasion *(<1 hour, 1–3 hours, 4–5 hours, ≥6 hours*), and start time (before 2 P.M., 2–6 P.M., 6–8 P.M., 8–10 P.M., and 10 P.M. onward), as well as whether the individual was eating a meal during the occasion (*yes/no*). We also included the number of units consumed on each occasion as well as the preferred beverage of choice (*beer, cider, wine, spirits, and RTDs* [ready-to-drink beverages, also known as alcopops or pre-mixed beverages]) based on the number of drinks consumed of that type of alcohol during the occasion.

Dependent variables

The analyses used two dependent variables: whether an occasion was a "solitary drinking occasion" and whether an individual was a "solitary drinker." A *solitary drinking occasion* was defined as an occasion reported during the diary week in which the participant consumed an alcoholic drink and where nobody other than the participant was present. This binary outcome variable was created using information from six binary variables in Alcovision that indicated who was present, if anyone, during each occasion (i.e., family, friends, spouse or partner, colleagues, other, and alone). For clarity, this is a deterministic definition different from the probabilistic definition derived from the latent class model reported by Ally et al. (2016) using earlier years of this data set. Findings from this article are therefore not comparable with those for *drinking at home alone* occasions in Ally et al. A *solitary drinker* was defined as anybody who reported at least one drinking occasion on which they consumed an alcoholic drink alone during the diary week.

Data analysis

We analyzed the data separately at the individual and occasion levels, using both descriptive and logistic regressions in each case, in which we implemented both a bivariate and a multivariate approach. First, we produced descriptive analysis at the individual and occasion levels. Second, we used logistic regression to model the odds ratio (OR) of an individual being a solitary drinker using the individual-level

variables. Finally, we used logistic regression to model the OR of an occasion being a solitary drinking occasion using the occasion-level variables.

In addition to running the models on the whole population, we also estimated each model separately for men and women because previous research suggests that solitary drinking occasions vary markedly between men and women (Ally et al., 2016; Babb et al., 2012; Bourgault & Demers, 1997; Fortin et al., 2015; Mäkelä et al., 2012; Meier et al., 2021).

To account for the non-independence of sampling units, as occasions are clustered within individuals, we clustered the standard errors of our drinking occasion analysis at the individual level. We applied sampling weights to our regressions to control for the selection of specific observations with unequal probabilities. In addition, we added monthly and government office region dummies to both sets of analyses to control for seasonality and regional differences in drinking across the country.

The logistic regressions were fitted in Stata/MP4 Version 16 software (StataCorp LP, College Station, TX).

Results

Descriptive statistics

Table 1 provides a descriptive summary of the sociodemographic characteristics of the study population stratified by solitary drinking. Among the study population, 27.6% reported at least one solitary drinking occasion during their diary week. A greater proportion of men were classified as solitary drinkers, with 33.5% reporting at least one solitary occasion during the study week, compared with 21.5% of women (*p* < .01). Solitary drinkers were also more likely to live alone (56.9%) and more likely to be unmarried (i.e., not in a relationship; 50.4%) than to be in a relationship or married.

Solitary drinkers were more prevalent in older age bands. In age bands 18–24 and 25–34 years, 21.2% and 23.2% of respondents were solitary drinkers, respectively, whereas the prevalence in age bands 35–49 and ≥50 was 30.7% and 30.5%, respectively. Solitary drinkers were also more prevalent in the lowest income group (<£20,000) than in higher income groups.

Among respondents, 50.8% were characterized as moderate drinkers, 34.8% were classified as increasing-risk drinkers, and 14.4% were high-risk drinkers. Of the 50.8% of moderate drinkers, 23.5% were categorized as solitary drinkers. This percentage share increases to 31.1% and 37.5% for increasing-risk and high-risk drinkers, respectively.

Table 2 presents a descriptive summary of drinking occasions. Solitary drinking occasions were relatively infrequent but still accounted for 20.8% of all drinking occasions, including 10.3% of all on-trade occasions and 24.9% of all off-trade occasions. The average number of units consumed

TABLE 1.　Summary statistics of characteristics associated with solitary drinkers

| | | Population | | Men | | Women | |
| | All, column % | Nonsolitary, row % | Solitary, row % | Nonsolitary, row % | Solitary, row % | Nonsolitary, row % | Solitary, row % |
Variable							
Population	100.0	72.4	27.6				
Gender							
Women	44.8	78.5	21.5				
Men	55.2	66.5	33.5				
Age band, in years							
18–24	11.5	78.8	21.2	74.3	25.7	84.2	15.8
25–34	18.5	76.8	23.2	71.9	28.1	83.1	16.9
35–49	27.8	69.3	30.7	62.1	37.9	78.5	21.5
≥50	42.1	69.5	30.5	64.9	35.1	74.9	25.1
Income group							
<£20,000	31.7	63.3	36.7	57.8	42.2	68.8	31.2
£20,000–£34,999	31.8	74.1	25.9	67.7	32.3	81.7	18.3
£35,000–£54,999	24.1	78.3	21.7	72.8	27.2	86.0	14.0
≥£55,000	12.5	75.4	24.6	69.8	30.2	85.6	14.4
Marital status							
Married, living with partner	62.2	83.0	17.0	77.1	22.9	89.1	10.8
Not married (not in a relationship)	28.8	50.4	49.6	47.1	52.9	66.6	33.4
Not married (in a relationship)	9.0	63.3	36.7	58.3	41.7	76.5	23.6
Employment status							
Working	61.0	71.8	28.3	66.8	33.1	79.0	21.0
Retired	20.5	70.8	29.2	68.4	31.6	73.6	26.4
Unemployed	4.5	59.8	40.2	54.5	45.5	69.3	30.7
Full-time education	4.3	78.0	22.0	72.7	27.3	84.2	15.9
Other	9.7	77.6	22.4	61.7	38.3	83.5	16.5
Characteristics							
Lives alone	23.3	43.3	56.9	39.5	60.5	47.8	52.2
Risk category[a]							
Moderate risk	50.8	76.5	23.5	71.6	28.4	81.1	18.9
Increasing risk	34.8	68.9	31.1	65.0	35.0	76.6	23.4
High risk	14.4	62.5	37.5	54.9	45.1	71.4	28.6
Observations	83,952	61,109	22,843	30,662	15,658	30,447	7,185

[a]Categorize the capped continuous number of units consumed in a week variable into "moderate risk" (men: <14 units, women: <14 units), "increasing risk" (men: 14–50 units, women 14–35 units), and "high-risk" (men: ≥50 units, women: ≥35 units).

across all occasions was 6.5, but nonsolitary drinking occasions had an average of 6.8 units consumed compared with 5.6 for solitary drinking occasions. There were differences in both the time and place in which solitary and social occasions took place. Off-trade venues were the most common location for both solitary and nonsolitary occasions.

Solitary drinking occasions were most likely to occur on Monday–Thursday, with 25.6% of drinking occasions on Monday–Thursday being solitary compared with 17.6% on Friday–Saturday 17.6% and 18.4% on Sunday.

In Table 2 we also present the summary of occasions grouped by sex. A greater proportion of drinking occasions reported by men were solitary occasions, accounting for 23.8% of men's occasions but only 16.2% of those of women. Solitary drinking was particularly unlikely in the on-trade for women, accounting for only 3.3% of their on-trade drinking occasions as compared with 14% for men.

Sociodemographic characteristics associated with solitary drinkers

To test whether sociodemographic characteristics were significantly associated with being a solitary drinker, we estimated a multivariate logistic regression. Table 3 provides results for models for the whole population and for men and women separately.

The whole population model shows that the participants' gender was significantly associated with being a solitary drinker, with men being almost twice as likely to be categorized as solitary drinkers when compared with women (OR = 1.88, 95% CI [1.80, 1.96], $p < .01$).

The older the respondents, the more likely they were to be solitary drinkers. Respondents in the age band 35–49 have the highest odds ratio (OR = 2.63, 95% CI [2.44, 2.82], $p < .01$) followed by those in the age category ≥50 years (OR = 2.60, 95% CI [2.40, 2.81], $p < .01$). Although not statistically different from one another at the 5% level, these age categories are statistically different than the 18–24 and 25–34 age groups ($p < .01$).

Although there is no clear evidence of a gradient between being a solitary drinker and income group, our results suggest that those in the reference group—the lowest income group (less than £20,000)—are more likely to be solitary drinkers than those in any other income group (OR = 0.90, 95% CI [0.86, 0.95] and OR = 0.91, 95% CI [0.86, 0.96]).

TABLE 2. Summary statistics of factors associated with solitary drinking occasions

		Population		Men		Women	
Variable	All, column %	Nonsolitary, row %	Solitary, row %	Nonsolitary, row %	Solitary, row %	Nonsolitary, row %	Solitary, row %
Population	100.0	79.2	20.8	76.2	23.8	83.8	16.2
Drink							
Number of units	6.5 [6.5, 6.5]	6.8 [6.7, 6.8]	5.6 [5.5, 5.6]	7.3 [7.3, 7.4]	6.0 [5.9, 6.0]	6.0 [6.0, 6.0]	4.8 [4.7, 4.8]
Channel							
Off-trade	71.8	75.1	24.9	71.8	28.2	79.7	20.4
On-trade	28.2	89.7	10.3	86.1	14.0	96.7	3.3
Occasion day							
Monday–Thursday	37.8	74.4	25.6	71.6	28.4	78.9	21.1
Friday–Saturday	46.5	82.4	17.6	79.2	20.8	86.8	13.2
Sunday	15.7	81.6	18.4	78.9	21.1	85.7	14.3
Start time							
Before 2 P.M.	9.8	76.7	23.3	71.4	28.6	87.0	13.0
2–6 P.M.	18.1	80.2	19.8	76.5	23.5	86.3	13.7
6–8 P.M.	32.8	82.0	18.0	79.9	20.1	84.7	15.3
8–10 P.M.	29.8	79.9	20.1	78.0	22.1	82.5	17.5
10 P.M. onward	9.4	68.4	31.7	64.5	35.5	75.9	24.1
Duration							
<1 hour	29.6	70.3	29.7	66.2	33.8	76.1	23.9
1–3 hours	61.1	82.8	17.2	80.2	19.8	86.8	13.2
4–5 hours	7.3	85.0	15.0	82.9	17.1	88.5	11.5
≥6 hours	2.0	81.0	19.0	75.7	24.3	90.2	9.8
Main beverage							
Beer	34.6	76.8	23.2	74.8	25.2	86.4	13.7
Cider	11.1	78.1	21.9	73.1	26.9	86.4	13.6
Wine	33.4	81.9	18.2	80.3	19.7	82.9	17.1
Spirits	18.4	78.5	21.5	75.9	24.1	81.9	18.1
RTDs	2.5	88.3	11.7	87.0	13.1	89.3	10.7
Eating a meal							
Yes	53.8	73.4	26.6	70.1	29.9	79.9	20.1
No	46.2	84.1	15.9	82.4	17.6	86.2	13.8
Observations	271,738	218,727	53,011	124,340	39,058	94,387	13,953

Notes: 95% confidence intervals in brackets. RTDs = ready-to-drink beverages.

Marital status as well as living status were clear indicators of solitary drinking. Participants who are not married (not in a relationship) are three times more likely to be solitary drinkers (OR = 3.39, 95% CI [3.20, 3.59], $p < .01$). This result holds true for both the separate male and female models.

With respect to employment status, our results showed that individuals who were retired (OR = 0.86; 95% CI [0.80, 0.92]), in full-time education (OR = 0.83, 95% CI [0.75, 0.91]), and of other status (i.e., maternity/paternity leave or housewife/househusband; OR = 0.90,; 95% CI [0.84, 0.97]) were all less likely to be solitary drinkers than those who were employed. In addition, we found no significant difference in the odds of being a solitary drinker if individuals were unemployed relative to being employed (OR = 1.00, 95% CI [0.92, 1.09]). Living alone was also a large predictor of being a solitary drinker (OR = 2.51, 95% CI [2.37, 2.66], $p < .01$).

Our results show that the odds of being a solitary drinker increased with the drinker risk category. Relative to moderate drinkers, increasing-risk drinkers were 1.43 times more likely to be solitary drinkers (OR = 1.43, 95% CI [1.37, 1.49]), whereas high-risk drinkers were twice as likely to be (OR = 2.06, 95% CI [1.95, 2.18], $p < .01$). The pattern was consistent when we analyzed men and women separately; women had higher odds ratios than men for both increasing risk (men: OR = 1.38, 95% CI [1.31, 1.45]; women: OR = 1.55, 95% CI [1.42, 1.69], $p < .01$) and high risk (men: OR = 2.06, 95% CI [1.92, 2.19]; women: OR = 2.13, 95% CI [1.93, 2.34], $p = .05$).

Drinking occasion characteristics associated with solitary drinkers

Table 4 presents the multivariate logistic regression of occasion characteristics associated with solitary drinking. As above, we reported models for all drinking occasions and separate models for occasions reported by men and women separately.

We found little difference between the average number of units consumed during a solitary drinking occasion and drinking with at least two people present (OR = 0.99, 95% CI [0.99, 1.00]). Off-trade occasions were significantly associated with increased odds of solitary drinking compared with on-trade occasions for both men and women. The effect was particularly large for off-trade occasions reported

TABLE 3. Multivariable logistic regression analysis of characteristics associated with solitary drinkers

Variable	Population	Men	Women
Gender			
Women	1 [1, 1]		
Men	1.88*** [1.80, 1.96]		
Age band, in years			
18–24	1 [1, 1]	1 [1, 1]	1 [1, 1]
25–34	1.57*** [1.46, 1.70]	1.59*** [1.44, 1.76]	1.49*** [1.34, 1.65]
35–49	2.63*** [2.44, 2.82]	2.81*** [2.55, 3.09]	2.18*** [1.96, 2.42]
≥50	2.60*** [2.40, 2.81]	2.69*** [2.43, 2.97]	2.27*** [2.01, 2.57]
Income group			
Less than £20,000	1 [1, 1]	1 [1, 1]	1 [1, 1]
£20,000–£34,999	0.90*** [0.86, 0.95]	0.92*** [0.87, 0.98]	0.95 [0.86, 1.04]
£35,000–£54,999	0.91*** [0.86, 0.96]	0.91*** [0.85, 0.97]	0.96 [0.86, 1.07]
≥£55,000	1.06* [0.99, 1.14]	1.08* [1.00, 1.16]	1.03 [0.89, 1.19]
Marital status			
Married/living with partner	1 [1, 1]	1 [1, 1]	1 [1, 1]
Not married (not in a relationship)	3.39*** [3.20, 3.59]	2.89*** [2.70, 3.09]	4.55*** [4.09, 5.05]
Not married (in a relationship)	2.24*** [2.07, 2.42]	1.95*** [1.78, 2.14]	2.82*** [2.47, 3.22]
Employment status			
Working	1 [1,1]	1 [1,1]	1 [1,1]
Retired	0.86*** [0.80, 0.92]	0.82*** [0.76, 0.88]	0.90 [0.78, 1.03]
Unemployed	1.00 [0.92, 1.09]	1.03 [0.94, 1.13]	1.07 [0.92, 1.24]
Full-time education	0.83*** [0.75, 0.91]	0.90 [0.79, 1.04]	0.73*** [0.64, 0.83]
Other	0.90*** [0.84, 0.97]	0.98 [0.89, 1.08]	0.96 [0.86, 1.06]
Living status			
Lives alone	2.51*** [2.37, 2.66]	2.27*** [2.12, 2.42]	2.90*** [2.62, 3.20]
Risk category[a]			
Moderate risk	1 [1, 1]	1 [1, 1]	1 [1, 1]
Increasing risk	1.43*** [1.37, 1.49]	1.38*** [1.31, 1.45]	1.55*** [1.42, 1.69]
High risk	2.06*** [1.95, 2.18]	2.06*** [1.92, 2.19]	2.13*** [1.93, 2.34]
Region	✓	✓	✓
Month of interview	✓	✓	✓
Observations	83,952	46,320	37,632

Notes: Exponentiated coefficients; 95% confidence intervals in brackets. [a]Categorize the capped continuous number of units consumed in a week variable into "moderate risk" (men: < 14 units, women: <14 units), "increasing risk" (men: 14–50 units, women 14–35 units), and "high-risk" (men: ≥50 units, women: ≥35 units).
*p < .10; **p < .05; ***p < .01.

by women, which were almost 6.9 times more likely to be solitary than on-trade occasions (OR = 6.88, 95% CI [6.12, 7.74], p < .01).

Drinking occasions occurring on Fridays, Saturdays, or Sundays were less likely to involve solitary drinking compared with those on Monday to Thursday. Occasions lasting 1–3 hours were negatively associated with solitary drinking relative to those lasting less than 1 hour (OR = 0.61, 95% CI [0.58, 0.64], p < .01]. This was also consistent for occasions lasting 4–5 hours (OR = 0.57, 95% CI [0.52, 0.62]) and 6 or more hours (OR = 0.69, 95% CI [0.6, 0.78]). This was consistent across all solitary drinking occasions and when we estimated occasions with a male/female participant separately.

We also examined the start time of each drinking occasion. We found that solitary drinking occasions were more likely to start before 2 P.M. (reference group) and after 10 P.M. (OR = 1.36, 95% CI [1.27, 1.47]).

Beer was most likely to be the dominant beverage in solitary drinking occasions, followed by cider, spirits, wine, and RTDs. This pattern was consistent for men, which was as expected because they have more solitary drinking occasions. In contrast, women's preferred beverages for solitary

drinking were spirits, followed by wine, beer, cider, and RTDs. However, cider was not statistically significant at any recognized level for either men or women. Eating a meal was also less likely to occur during a solitary drinking occasion (OR = 0.44, 95% CI [0.42, 0.46]). This was consistent for men and women.

Discussion

Our study provides a deeper understanding of solitary drinkers and solitary drinking occasions in Great Britain. Solitary drinkers are more likely to be men, older, living alone, not in a relationship, and have a low income. They are also more likely to drink at increasing-risk or high-risk levels. Previous evidence has shown that lower socioeconomic groups bear a disproportionate burden of additional negative alcohol-related consequences despite often reporting lower average levels of alcohol consumption (Collins, 2016; Probst et al., 2020).

Solitary drinking occasions are more likely to occur in the off-trade, between Monday and Thursday, in the morning, or late at night. These characteristics may reflect that these times and days rarely provide the opportunity to drink

TABLE 4. Multivariable logistic regression analysis of factors associated with solitary drinking occasions

Variable	Population	Men	Women
Drinking			
Number of units	0.99*** [0.99, 1.00]	0.99*** [0.99, 1.00]	0.97*** [0.97, 0.98]
Location			
On-trade	1 [1, 1]	1 [1, 1]	1 [1, 1]
Off-trade	3.08*** [2.95, 3.21]	2.58*** [2.46, 2.70]	6.88*** [6.12, 7.74]
Day of the week			
Monday–Thursday	1 [1, 1]	1 [1, 1]	1 [1, 1]
Friday–Saturday	0.65*** [0.63, 0.66]	0.68*** [0.66, 0.70]	0.61*** [0.57, 0.64]
Sunday	0.65*** [0.62, 0.67]	0.66*** [0.64, 0.69]	0.62*** [0.58, 0.67]
Duration			
< 1 hour	1 [1, 1]	1 [1, 1]	1 [1, 1]
1–3 hours	0.61*** [0.58, 0.64]	0.60*** [0.57, 0.63]	0.68*** [0.62, 0.75]
4–5hours	0.57*** [0.52, 0.62]	0.54*** [0.50, 0.59]	0.76*** [0.63, 0.93]
≥6 hours	0.69*** [0.61, 0.78]	0.74*** [0.64, 0.85]	0.67*** [0.50, 0.90]
Start time			
Before 2 P.M.	1 [1, 1]	1 [1, 1]	1 [1, 1]
2–6 P.M.	0.78*** [0.74, 0.83]	0.76*** [0.71, 0.81]	0.92 [0.78, 1.09]
6–8 P.M.	0.63*** [0.59, 0.67]	0.57*** [0.53, 0.60]	0.88 [0.75, 1.03]
8–10 P.M.	0.73*** [0.69, 0.78]	0.66*** [0.61, 0.70]	1.05 [0.89, 1.23]
10 P.M. onward	1.36*** [1.27, 1.47]	1.29*** [1.19, 1.40]	1.63*** [1.35, 1.96]
Primary beverage			
Beer	1 [1, 1]	1 [1, 1]	1 [1, 1]
Cider	0.84*** [0.79, 0.89]	0.98 [0.92, 1.05]	0.98 [0.84, 1.13]
Wine	0.60*** [0.57, 0.63]	0.59*** [0.55, 0.62]	1.12* [1.00, 1.26]
Spirits	0.75*** [0.71, 0.79]	0.77*** [0.72, 0.81]	1.29*** [1.12, 1.47]
RTDs	0.42*** [0.38, 0.47]	0.43*** [0.38, 0.50]	0.79*** [0.67, 0.94]
Eating a meal	0.44***[0.42, 0.46]	0.41***[0.39, 0.44]	0.53***[0.47, 0.59]
Region	✓	✓	✓
Month of interview	✓	✓	✓
Observations	271,738	163,398	108,340

Notes: Exponentiated coefficients; 95% confidence intervals in brackets. RTDs = ready-to-drink beverages.
*p < .10; **p < .05; ***p < .01.

socially because of other commitments, such as childcare and work schedules.

From a clinical perspective, our findings suggest the need to focus on an individual's reliance on drinking and drinking alone. Solitary drinking is an easily observable behavior that can be assessed with a yes/no question as part of a screening program. The assessment of solitary drinking may be ideal as a brief screening instrument because this might be a lighter-touch approach to identifying those at risk. For example, it could be a conversation starter by a family doctor without having to ask directly how much the person drinks in the first instance. In addition, solitary drinking occasions may also be more amenable to being cut down because there is less social pressure when drinking alone.

Our study provides detailed evidence of the characteristics of solitary drinkers and is the first study to model solitary drinking occasions drawing on a large-scale, nationally representative data set. We analyzed solitary drinking at the individual and occasion levels to identify the individual- and event-level characteristics associated with solitary drinking. Our work extends the growing evidence base on solitary drinking by providing new evidence on drinking occasions. However, our work is not without limitations. Alcovision is primarily collected as a market research tool. Therefore, it does not include information on negative motivations for

drinking or harmful consequences. As a result, we cannot explore some associations that would be important for public health. In addition, Alcovision is a continuous monthly retrospective online diary survey; one improvement to the study would be to use longitudinal data on individuals to understand if the behaviors surrounding solitary drinking change over time and over the life course. This would allow us to identify and understand potential patterns and indicators that may be associated with problem drinking and harmful consequences.

Previous research has found that adult solitary drinkers were associated with a greater quantity and frequency of alcohol consumed (Bilevicius et al., 2018; Corbin et al., 2020; Engels et al., 2005; Glynn et al., 1983; Holyfield et al., 1995; Skrzynski et al., 2018; Victorio-Estrada & Mucha, 1997). Our evidence finds that both increasing-risk and high-risk drinkers are more likely to report a solitary drinking occasion in their drinking diary. However, when we conducted our analysis at the occasion level, we found that the average number of units consumed in a solitary drinking occasion is not statistically different from nonsolitary drinking occasions and that solitary drinking occasions themselves are seldom risky. The characteristics of solitary drinking that we found fit with a pattern of drinking in addition to more social occasions rather than instead of them. Although we found that

solitary drinking occasions are often not heavy drinking occasions, solitary drinkers supplement socially normative drinking with additional occasions that add to their overall consumption.

This research focused on individuals who identified as drinking alone on at least one occasion in their retrospective drinking diary. Further research could seek to unravel the behaviors and attitudes of other drinking groups or occasions such as pre/post loading drinking occasions as well as the motivations behind drinking occasions to see if there are specific drinking practices related to a particular individual or drinking occasion. We found that solitary drinking is commonly done in the home and, if future evidence finds that it is associated with alcohol-related harm, this necessitates interventions that tackle alcohol that is purchased in the off-trade and consumed in the home. In addition, future work could also use techniques such as latent class analysis to identify distinct types of solitary drinking occasions based on their characteristics (Holmes et al., 2024). This may help to identify those forms or patterns of solitary drinking that are most associated with alcohol problems.

This study was the first to look specifically at the characteristics of solitary drinkers and solitary drinking occasions in the Great British population and was able to identify characteristics associated with individuals drinking alone and solitary drinking occasions. It provides a detailed insight into an underresearched subgroup in Britain's drinking culture. This article shows that drinkers who consume alcohol at risky levels are more likely to report a solitary drinking occasion; however, these solitary drinking occasions have roughly the same number of units consumed as social drinking occasions.

Acknowledgments

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