Socio-demographic, smoking and drinking characteristics in GB: A comparison of independent telephone and face-to-face Smoking and Alcohol Toolkit surveys conducted in March 2022

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Funding: Data collection for the Smoking and Alcohol Toolkit Studies is supported by Cancer Research UK (PRCRPG-Nov21\100002). Authors are supported by the UK Prevention Research Partnership (MR/S037519/1), an initiative funded by UK Research and Innovation Councils, the Department of Health and Social Care (England), and the UK devolved administrations and leading health research charities.

Potential competing interests: Authors are members of the UK Prevention Research Partnership, an initiative funded by UK Research and Innovation Councils, the Department of Health and Social Care (England), and the UK devolved administrations and leading health research charities. JB reports receiving grants from Cancer Research UK during the conduct of the study and receiving unrestricted research funding from pharmaceutical companies who manufacture smoking cessation medications to study smoking cessation outside the submitted work. LS reports receiving honoraria for talks, receiving an unrestricted research grant and travel expenses to attend meetings and workshops by pharmaceutical companies that make smoking cessation products (Pfizer and Johnson & Johnson), and acting as a paid reviewer for grant-awarding bodies and as a paid consultant for health care companies. LK, HTB and SJ have no competing interests to declare

Abstract

Background: Due to the COVID-19 pandemic, from April 2020 data collection for the Smoking and Alcohol Toolkit Study (STS/ATS) shifted from a face-to-face to a telephone survey. In March 2022 a parallel face-to-face survey was conducted alongside the telephone survey to explore whether the change in data collection to telephone affected key sociodemographic, smoking alcohol use indicators.

Methods: Cross-sectional representative surveys (one telephone and one face-to-face) of adults aged 16+ in Great Britain. We estimated unweighted statistics and 95% confidence intervals for sociodemographic date. We estimated weighted prevalence statistics and 95% confidence intervals for selected smoking and alcohol use measures for Great Britain, England, Scotland and Wales separately, except nicotine product use, which was assessed for the overall Great Britain sample only.

Results: In March 2022, 2,607 and 2,064 adults aged 16+ participated in respective telephone and face-to-face surveys for the STS/ATS. The unweighted age profile of the face-to-face wave was younger than the telephone wave but similar according to other sociodemographic variables. Weighted estimates in the telephone and face-to-face surveys differed by around one percentage point or less for response categories of daily smoker, non-daily smoker, pipe/cigar smoker, and stopped last year. There were differences in the estimates for never smoking and stopped more than a year ago between the surveys but the combined estimate for never or long-term ex-smoking was similar. Data on use of nicotine products by past-year smokers were similar between survey modalities. The estimates for people reporting an AUDIT score of 8 or higher, or an AUDIT-C score of 5 or higher, and attempting to cut down on drinking were similar between modalities. A higher proportion of respondents reported never drinking during the past year in the face-to-face survey compared with the telephone survey.

Conclusion: A parallel telephone and face-to-face survey wave of the STS/ATS yielded similar estimates for key sociodemographic, smoking and alcohol use measures. Differences between estimates are generally within expected limits given the uncertainty of month-to-month surveys.

Introduction

In March 2020, to deal with the rapidly growing number of seriously ill COVID-19 patients, the UK government introduced a set of measures to limit mixing between households (UK Government, 2020). Along with other household surveys, the methodology of the monthly Smoking and Alcohol Toolkit Study (STS/ATS - surveys conducted by Ipsos Mori) adapted quickly and switched from face-to-face to telephone interviewing in April 2020. This ensured that data collection continued during the COVID-19 pandemic. Due to successive waves of COVID-19 infections, telephone data collection for the STS/ATS is still being done by telephone in 2022.

It is possible that the change in data collection to telephone affected key indicators of smoking and alcohol use for at least two reasons. First, a participant might give different answers to the same question when asked via telephone rather than face-to-face. For instance, participants may be less willing to disclose sensitive information over the phone, or more likely respond they “don’t know”. Secondly, the characteristics of participants recruited for telephone interviews might differ systematically from those recruited face-to-face (Ellis and Krosnick, 1999). In March 2022, Ipsos Mori conducted an independent face-to-face survey in parallel to the ongoing telephone survey.

In this report we describe key socio-demographic, smoking and alcohol use indicators obtained via the telephone and face-to-face surveys to explore the possible impact that the change in survey modality may have had on key estimates. Data on core socio-demographic (age, sex, social grade and region), smoking (including nicotine product use) and alcohol measures are presented first for the overall sample in Great Britain and then within each nation (England, Scotland and Wales).

Methods

Sample and Recruitment

Data were drawn from the ongoing Smoking and Alcohol Toolkit Study (STS/ATS), a monthly repeated cross-sectional survey of a representative sample of adults (aged 16+) in Great Britain. Each month, a form of random location in combination with quota sampling is used to select a new sample of approximately 2400 adults aged 16 years and older. Further details on the design of the STS, including face-to-face and telephone sampling techniques, can be found elsewhere (Kock *et al*., 2021). Sample weighting uses the rim (marginal) weighting technique to match the Great Britain sociodemographic population profile relevant to the time each monthly survey was collected. Thus, respondents with characteristics that are under-represented receive a larger weight, while those who are over-represented receive a smaller weight. Comparisons with sales data and other national surveys show that the STS recruits a representative sample of the population with regard to key demographic variables and smoking indicators (Fidler *et al*., 2011; Jackson *et al*., 2019). The sample dataset consists of STS/ATS respondents recruited during parallel telephone and face-to-face survey waves in March 2022.

Measures

The following measures were assessed among all respondents: age, sex, social grade, geographic region, smoking status and alcohol use (Alcohol Use Disorder Identification Test, AUDIT). Among past-year smokers, the use of nicotine products (nicotine replacement therapy, electronic cigarettes, heated tobacco products and nicotine pouches) was assessed. Specific wording for each measure is provided in the study protocol, registered on the Open Science Framework (OSF) at https://doi.org/10.17605/OSF.IO/2Z3TE.

Analyses

We estimated unweighted statistics and 95% confidence intervals for age, sex, social grade and region. We also estimated weighted prevalence statistics and 95% confidence intervals for each measure for Great Britain, England, Scotland and Wales separately, except nicotine product use, which was assessed for the overall Great Britain sample only due to small samples from Scotland and Wales.

Results

In March 2022 in Great Britain, 2,607 and 2,064 adults aged 16 and older participated in respective telephone and face-to-

face surveys for the STS/ATS.

Great Britain

Sociodemographic characteristics

The unweighted age profile of the face-to-face wave (age 16-24: 16.72%) was younger than the telephone wave (16-24: 10.48%) (Table 1). There were more respondents from social grade C1 (44.11%) and fewer from social grade D (6.95%) in the telephone compared with face-to-face wave (C1: 38.95%; D: 13.03%), while sex distribution was similar (Table 1). The weighting procedure applied to both is designed to produce samples that match the population on these dimensions, and consequently the weighted estimates were very similar (Table 1).

Table 1. Socio-demographic characteristics of the telephone and face to face (F2F) waves (Great Britain)

	Tel unweighted % (n)	**95% CI**	**F2F unweighted % (n)**	**95% CI**	**Tel weighted % (n)**	**F2F weighted % (n)**
Characteristic	**N = 2,607**		**N = 2,064**		**N = 2,607[1]**	**N = 2,064[2]**
Age						
16-24	10.48% (273)	9.34, 11.73	16.72% (345)	15.14, 18.41	13.45%, (350.33)	13.37%, (276.02)
25-34	14.32% (373)	13.01, 15.74	15.55% (321)	14.03, 17.20	16.79%, (437.31)	16.61%, (342.90)
35-44	11.67% (304)	10.47, 12.98	15.12% (312)	13.61, 16.75	15.50%, (403.65)	15.50%, (319.97)
45-54	18.00% (469)	16.56, 19.55	13.76% (284)	12.32, 15.34	16.58%, (431.83)	16.59%, (342.48)
55-64	17.12% (446)	15.70, 18.64	16.38% (338)	14.82, 18.06	14.94%, (389.23)	15.08%, (311.33)
65+	28.41% (740)	26.69, 30.19	22.48% (464)	20.71, 24.36	22.75%, (592.66)	22.83%, (471.31)
Unknown	2				2	
Sex						
Men	48.33% (1260)	46.40, 50.27	49.66% (1025)	47.48, 51.84	48.51%, (1,264.65)	48.96%, (1,010.54)
Women	50.71% (1322)	48.77, 52.65	50.34% (1039)	48.16, 52.52	50.53%, (1,317.35)	51.04%, (1,053.46)
In another way	0.96% (25)	0.63, 1.43	-	-	0.96%, (25.00)	0.00%, (0.00)
Social grade						
AB	23.13% (603)	21.53, 24.81	19.77% (408)	18.08, 21.57	26.41%, (688.59)	26.38%, (544.41)
C1	44.11% (1150)	42.20, 46.04	38.95% (804)	36.85, 41.10	29.63%, (772.46)	29.58%, (610.55)
C2	15.19% (396)	13.84, 16.64	17.97% (371)	16.35, 19.72	20.26%, (528.08)	20.34%, (419.85)
D	6.94% (181)	6.01, 8.00	13.03% (269)	11.63, 14.58	14.50%, (378.06)	14.57%, (300.78)
E	10.63% (277)	9.48, 11.89	10.27% (212)	9.01, 11.68	9.20%, (239.81)	9.13%, (188.41)

“Unknown” includes those who refused to answer who answered “don’t know”

Smoking

Weighted estimates in the telephone and face-to-face surveys differed by around one percentage point or less for response categories of daily smoker, non-daily smoker, pipe/cigar smoker, and stopped last year (Table 2), which meant key estimates of current cigarette smoking (tel: 14.44%%; f2f: 15.91%), current smoking (tel: 16.47%; f2f 16.70%:), past-year smoking (tel: 18.45%; f2f:18.21%) and quit rate in past-year smokers (tel: 10.8%. f2f: 9.0%) were all similar between the surveys. There were differences in the estimates for never smoking and stopped more than a year ago between the surveys but the combined estimate for never or long-term ex-smoking was similar.

Table 2. Smoking and alcohol measures in Great Britain (weighted)

	Tel weighted % (n)	**95% CI (%)**	**F2F weighted % (n)**	**95% CI**
Characteristic	**N = 2,607[1]**		**N = 2,064[2]**	
Smoking				
Smoking status				
Don't know	1.47%, (38.33)	0.97, 2.23	0.39%, (8.14)	0.19, 0.83
Daily smoker	11.25%, (293.24)	9.74, 12.96	12.38%, (255.44)	10.98, 13.92
Non-daily smoker	3.19%, (83.13)	2.38, 4.26	3.53%, (72.85)	277, 4.48
Pipe/cigar	2.03%, (52.97)	1.42, 2.90	0.79%, (16.36)	0.48, 1.31
Stopped last year	1.98%, (51.62)	1.35, 2.89	1.52%, (31.31)	1.06, 2.17
Stopped >1 year	21.15%, (551.27)	19.32, 23.10	16.56%, (341.86)	14.95, 18.32
Never smoked	58.94%, (1,536.45)	56.54, 61.29	64.83%, (1,338.05)	62.64, 66.96
Past-year smokers				
Quit attempt in past	30.89% (160.38)	25.83, 36.44	31.10% (119.46)	26.46, 36.15
Unknown	80		37	
Quit success	18.97% (30.42)	11.61, 29.41	14.39% (17.19)	9.05, 22.12
Alcohol				
AUDIT 8 or higher	16.97%, (410.16)	14.02, 17.61	14.28%, (294.72)	12.77, 15.93
Unknown	189		31	
AUDIT-C 5 or higher	29.63% (772.34)	27.47, 31.88	25.58% (527.89)	23.66, 27.60
Unknown	142		29	
Trying to cut down*	22.12% (132.63)	18.20, 26.61	26.11 (84.92)	21.32, 31.54
Unknown	143		29	
Never drinker	23.70% (617.83)	21.68, 25.85	30.51% (629.79)	28.48, 32.63
Unknown	53		24	

[1] Unweighted N (Tel) = 2,607

[2] Unweighted N (F2F) = 2,064
*Among those with AUDIT score of 8 or higher
"Unknown" includes those who refused to answer who answered "don't know"

Nicotine product use among past-year smokers

Data on use of nicotine products by past-year smokers were broadly similar between the telephone and face-to-face survey (Table 3). Although point estimates were generally higher for product use among the face-to-face respondents, the lower bound of the 95% confidence intervals overlapped with the upper bound for the respective estimate of the telephone survey.

Table 3: Overall prevalence of nicotine product use among past-year smokers in Great Britain (weighted)

	Tel weighted	95% CI (%)	F2F weighted	95% CI (%)
Characteristic	**N = 519[1]**		**N = 384[2]**	
NRT	6.41%, (33.29)	4.12, 9.84	11.06%, (42)	8.23, 14.71
Unknown	38		8	
E-cigarette	18.27%, (94.88)	14.18, 23.22	24.17%, (92.85)	20.01, 28.89
Unknown	38		8	
HTP	1.14%, (5.91)	0.26, 4.85	0.81%, (3.11)	0.20, 3.23
Juul	1.02%, (5.30)	0.25, 4.12	1.61%, (6.19)	0.74, 3.49
Pouch	1.01%, (5.27)	0.28, 3.55	2.16%, (8.28)	1.00, 4.58

[1] Unweighted N (Tel) = 469

[2] Unweighted N (F2F) = 392
"Unknown" includes those who refused to answer who answered "don't know"

Alcohol use

The estimates for people reporting an AUDIT score of 8 or higher, or an AUDIT-C score of 5 or higher, were similar between waves (Table 2). However, a higher proportion of data were missing for AUDIT scores in the telephone (7.2%) than the face-to-face (1.5%) survey. This was unusually high – the mean for missing data between April 2020 and Feb 2022 on AUDIT assessed by telephone has been more similar to face-to-face at ~4%. The percentages of respondents with an AUDIT score of 8 or higher who reported attempting to cut down on drinking were similar in the telephone and face-to-face surveys (Table 2). A higher proportion of respondents reported never drinking during the past year in the face-to-face survey compared with the telephone survey (Table 2).

Within nation (England, Scotland and Wales)

As with the overall Great Britain sample, in England the unweighted age profile was younger in the face-to-face than in the telephone survey (Table 4). The age profiles of the telephone and face-to-face samples from Scotland and Wales were similar (Table 6 and Table 8). Other sociodemographic indicators were similar between modalities for each nation (Tables S1, S3 and S5).

For England, the weighted estimates for smoking and alcohol indicators followed a similar pattern to the overall Great Britain sample, with differences in the estimates for never smoking and stopped more than a year ago, and for never drinkers, between telephone and face-to-face surveys.

In Scotland and Wales the estimates were also broadly similar, albeit with greater uncertainty around the point estimates due to smaller sample sizes for these nations (Tables S2, S4 and S6).

Discussion

A parallel telephone and face-to-face survey wave of the Smoking and Alcohol Toolkit Study yielded broadly similar estimates for key sociodemographic, smoking and alcohol use measures. Differences between smoking and alcohol estimates are generally within expected limits given the uncertainty of month-to-month estimates (https://smokinginengland.info/graphs/monthly-tracking-kpi).

Regarding sociodemographic characteristics, compared with face-to-face sampling, the unweighted telephone samples were similar with the exception that the telephone sample in England overrepresented older age-groups, and those from social grade C1. However, the weighting achieved a representative sample, and we have shown previously the weighting is similar between survey modalities (Jackson *et al*., 2020, 2021).

Regarding smoking-related indicators, there were differences in the estimates for never smoking and stopped more than a year ago between the surveys. There is a high degree of variability in this estimate between months even when the modality of assessment is constant because there is a proportion of ex-smokers who do not consistently give the same response; sometimes they report being long-term ex-smokers, while other times they report being never smokers. For example, the standard deviation in monthly estimates for never smoking in 2019 assessed face-to-face was 2.09 (compared with 0.78 for daily smoker).

A higher proportion of respondents reported never drinking in the past year in the face-to-face survey compared with the telephone survey. It is possible that, as with never smokers, there is variability in the responses given by former/infrequent drinkers. It is also worth noting that we compared a large number of indicators informally and therefore did not correct for multiple testing. Importantly, estimates for the key indicators of harmful drinking (AUDIT and AUDIT-C) were similar.

The nature of face-to-face interviewing may have changed as a result of the COVID-19 pandemic, and as a result the comparisons here may not reflect the pre-pandemic period of face-to-face interviewing. In addition, there may have been differences in responses to the telephone versus face-to-face surveys that we did not detect. Because data were collected during one wave, it is possible that observed differences reflect natural monthly variation in responses that would not be present if data were collected over a longer time period.

Authorship

LK and JB designed the study, LK conducted the analysis and wrote the article. JB, SJ, LS and HTB contributed to the final manuscript.

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