

SUPPLEMENT



Figure 1 Per cent distribution (vertical axis) for analyzed sample and total population for men and women, by age (years, horizontal axis, for range 18-80 years), England. Total population data from: Office for National Statistics; population estimates for the UK, England and Wales, Scotland and Northern Ireland, for 2018: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>.

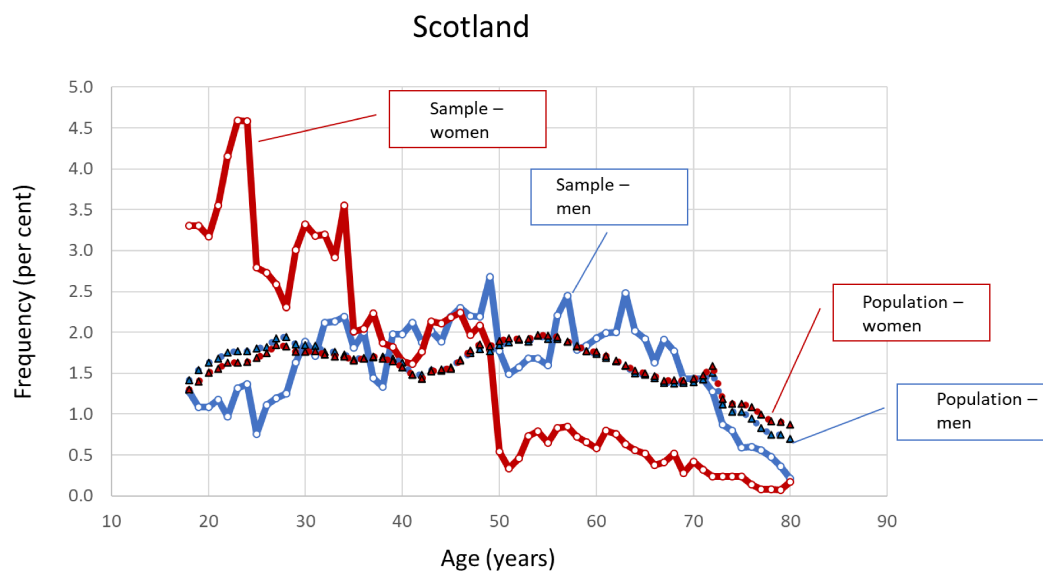


Figure 2 Per cent distribution (vertical axis) for analyzed sample and total population for men and women, by age (years, horizontal axis, for age range 18-80 years), Scotland. Total population data from: Office for National Statistics; population estimates for the UK, England and Wales, Scotland and Northern Ireland, for 2018: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland>.

Calculation of indices of deprivation, England and Scotland

The indices are calculated differently for England and Scotland. In England, the index is estimated at Lower-Layer Super Output Areas, data areas which are a standard statistical geography designed to be of a similar population size, with an average of approximately 1,500 residents or 650 households. In Scotland, 6,976 'data zones', small areas with roughly equal populations, are used. Each local data zone is then ranked according to its deprivation index within all data zones from lowest (most deprived) to highest (least deprived). Data for each data zone can be matched to a full postal code (e.g., OX3 8DT). However, to preserve anonymity, the data set we analysed included truncated postal codes (e.g., OX3), which cover a larger geographical area. Thus, for each truncated postal code, we averaged the full postal code using matched data zone rankings, which, for Scotland, ranged from 472 to 6,493, and for England, ranged from 243 to 31,354; in each jurisdiction the lower the number, the most deprived. The distributions of the rankings of our sample and of the total population were similar for both England and Scotland (see Supplement Figure 3, page 3 below). We rescaled the rankings based on the adjustment of the highest number (i.e., least deprived) in each of England and Scotland to 100. To assess the difference between the original deprivation index at data zone level and the aggregated deprivation index at the truncated postal code level, we checked the dispersion of the aggregated and re-scaled data (see Supplement, Figures 4 and 5, page 4 below). The absolute average difference between the original ranking at data zone level, and the average at the truncated postal code level showed a curvilinear relationship, increasing from the most deprived levels to the mid-range and then decreasing to the least deprived level. In relative terms, the dispersion decreased with decreasing deprivation, overall averaging 0.25 for Scotland and 0.33 for England (being higher in England, as the original score ranges were larger). In Scotland, for example, this means that, on average, the ranking at the truncated postal code level included data zone level rankings that could be, on average, 25% higher or 25% lower. The re-scaled rankings at truncated postal code level were grouped into five deprivation groups (1-20, 21-40, 41-60, 61-80, 81-100) from the most deprived (1) to the least deprived (5). Respondents in the social grade groups AB (relatively 'higher') were more likely to be in deprivation group 5 (least deprived), and those in social grade groups DE ('lower') were more likely to be in deprivation group 1 (most deprived), (see Supplement Figure 6, page 5 below). There was a J-shaped relationship between mean deprivation ranking score and age, with, after the age of 30 years, less deprivation with increasing age (see Supplement, Figure 7, page 5 below).

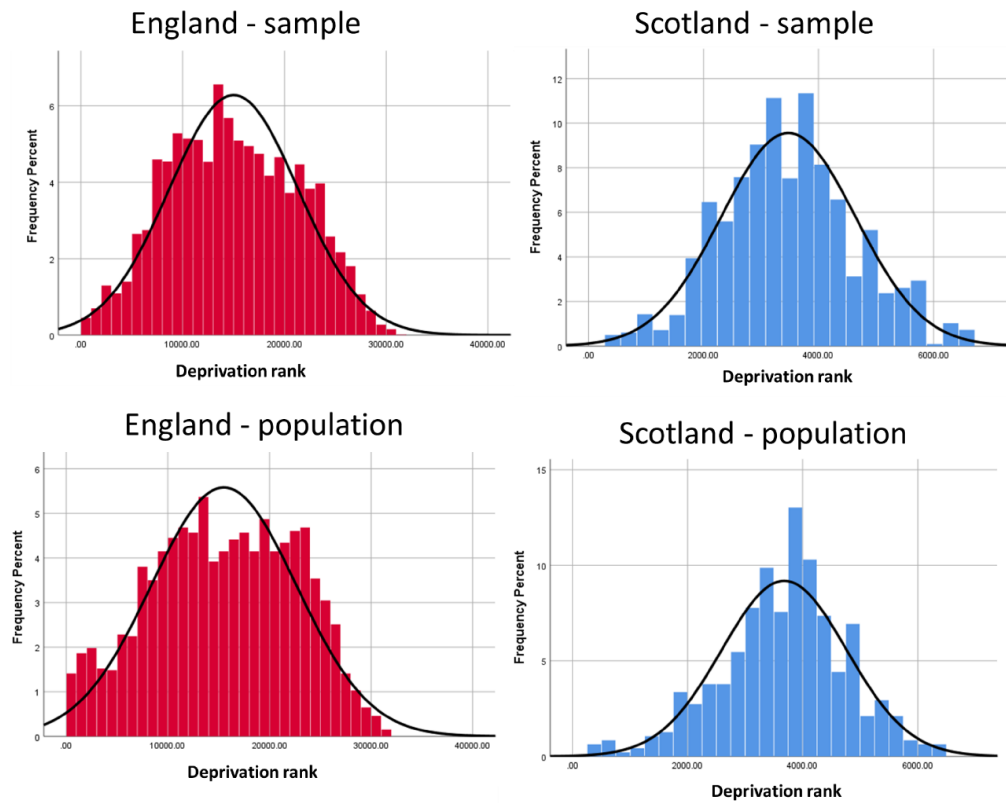


Figure 3 Per cent distribution (vertical axes) for analyzed sample and total population by deprivation rank (horizontal axes), England and Scotland. Data for total population from GOV.UK. National Statistics: English indices of deprivation 2019. <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>; Gov.scot. Scottish Index of Multiple Deprivation (SIMD) 2020 technical notes. 2020. Available from: <https://www.gov.scot/publications/simd-2020-technical-notes/>.

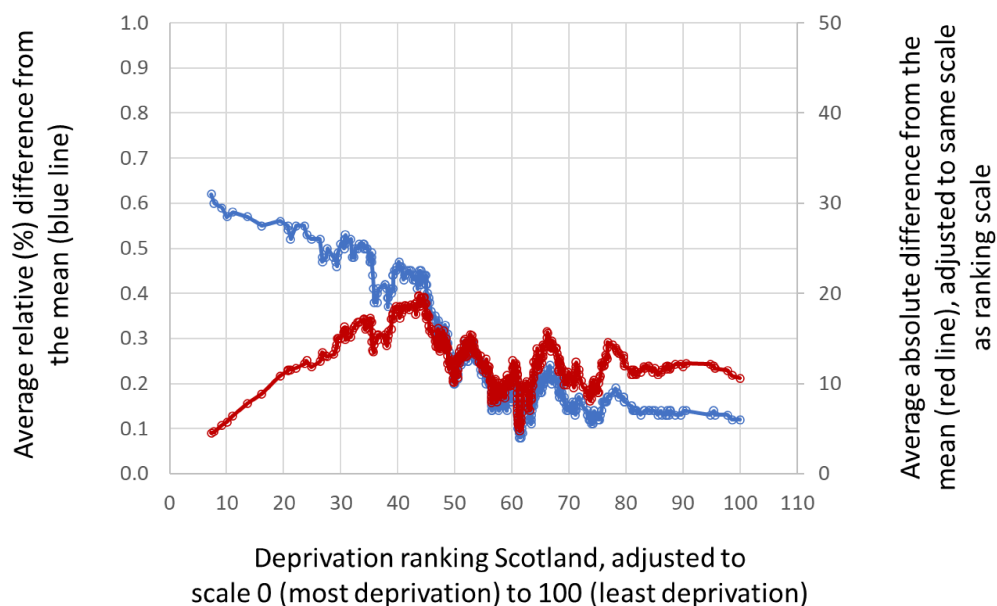


Figure 4 Dispersion of aggregated deprivation ranking, Scotland. The horizontal axis is the ranking from 0 (most deprived) to 100 (least deprived). The red line (right vertical axis) is the average absolute difference of the original ranking at local data zone level from the mean calculated at the truncated postcode level, adjusted to the same scale as the horizontal axis. Thus, for example, at a deprivation ranking of 30 on the horizontal axis, the average absolute difference is 15, a relative difference of 0.5. The blue line (left vertical axis) plots these relative differences (essentially, the right vertical axis divided by the horizontal axis).

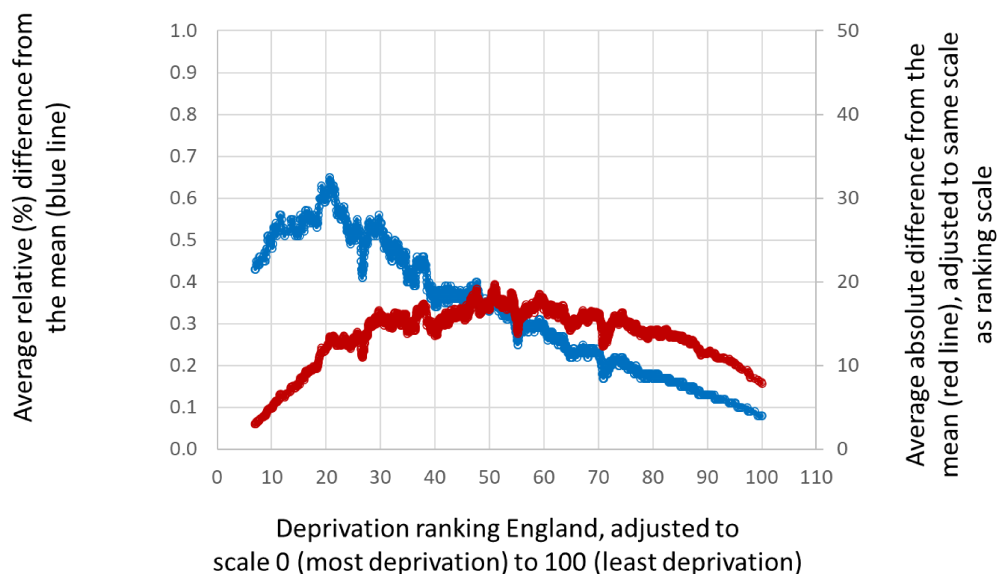


Figure 5 Dispersion of aggregated deprivation ranking, England. For explanation, see legend to Figure 4.

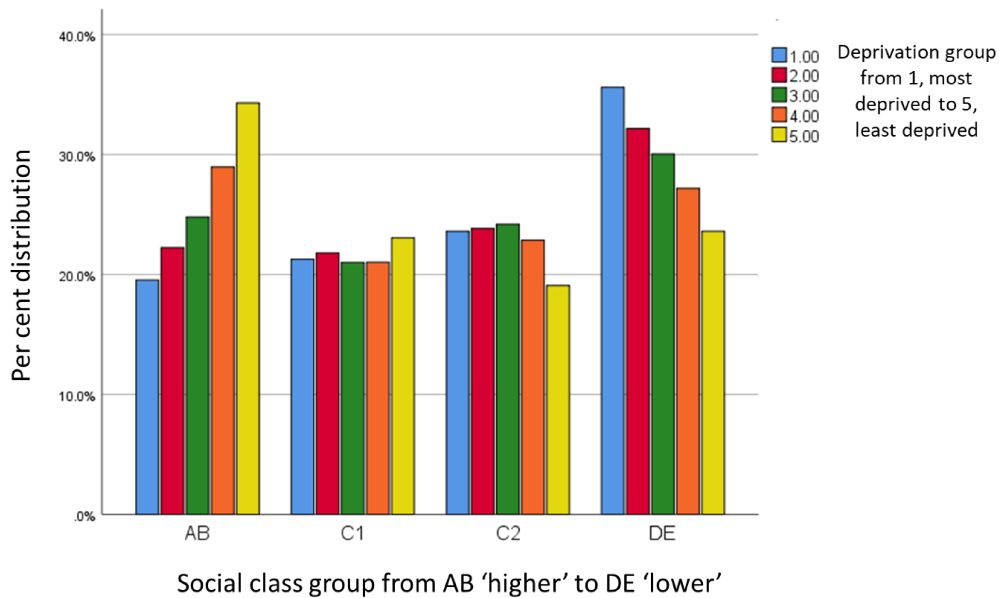


Figure 6 Distribution of deprivation group (from 1, most deprived to 5, least deprived) within social class groupings from AB, relatively higher to DE, relatively lower. Social class groups based on National Readership Survey; 2019. <http://www.nrs.co.uk/nrs-print/lifestyle-and-classification-data/social-grade/>.

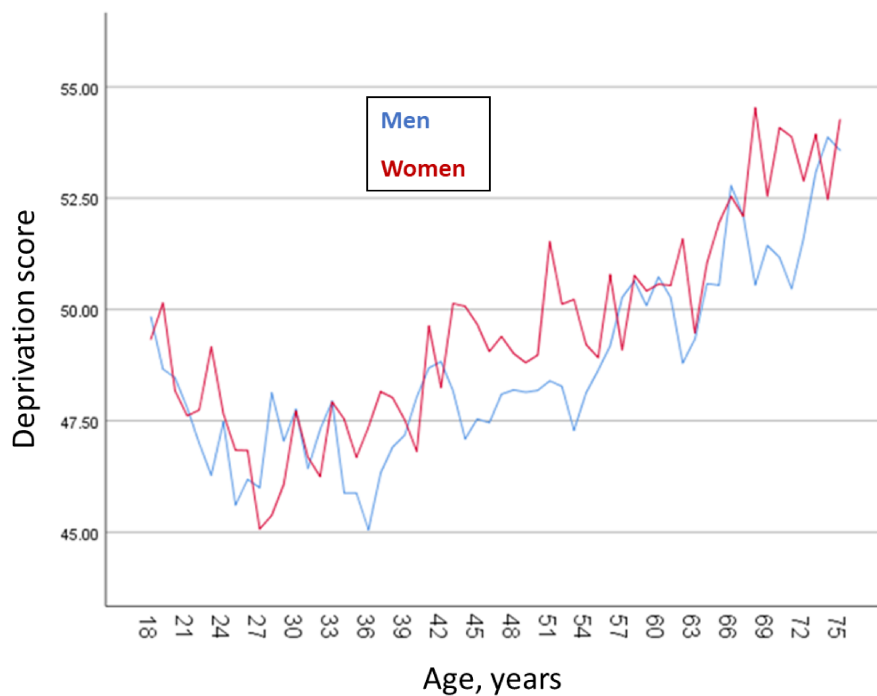


Figure 7 Plot of mean deprivation score (higher the score, the least deprived) by age and gender.

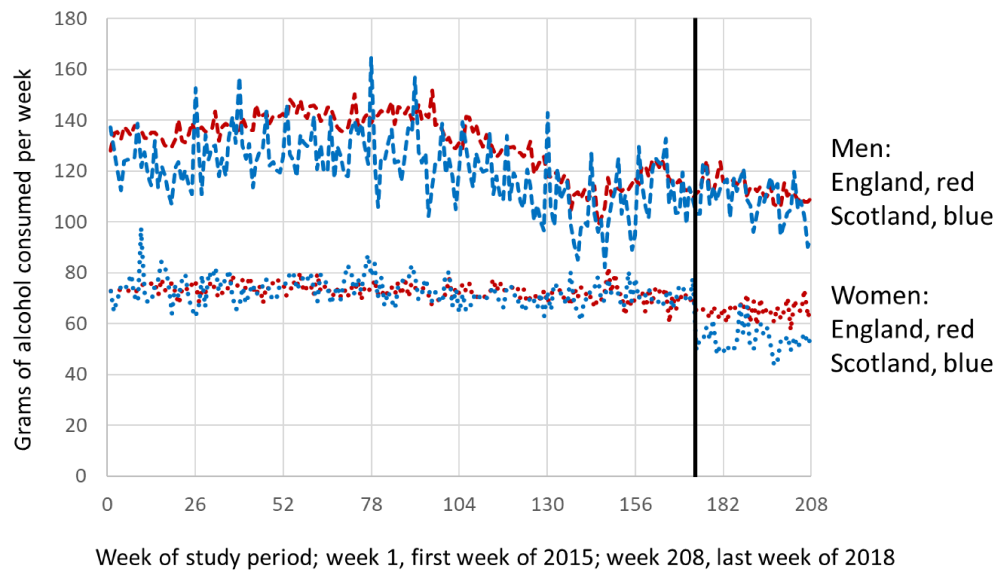


Figure 8 Plots of adjusted dependent variables (grams of alcohol consumed per week), seasonally adjusted using the ratio-to-moving-average method, over time (study week) by England and Scotland for men and women. Vertical black line: introduction of MUP.

Table 1 shows the results testing for parallel lines between Scotland and England prior to the introduction of MUP, separately for men and women; the coefficient for the interaction term, country*time indicates that the plots are parallel.

Table 1 Results of separate regression analyses for men and women (coefficients and 95% CI; and p values) for the time period prior to the introduction of MUP. Dependent variable: grams of alcohol consumed per week. Independent variables: country (Scotland or England); time (weeks of study period); and interaction, country* time)

	Men		Women	
	B (95% CI)	P value	B (95% CI)	P value
(Intercept)	131.411 (128.334 to 134.488)	.000	75.622 (74.314 to 76.929)	.000
Scotland	-13.948 (-18.300 to -9.597)	.000	0.601 (-1.249 to 2.450)	.524
England (reference category)	0 ^a	.	0 ^a	.
Time (Weeks)	-0.129 (-0.160 to -0.099)	.000	-0.034 (-0.047 to -0.021)	.000
Scotland * Time	0.033 (-0.010 to 0.076)	.135	-0.007 (-0.026 to 0.011)	.429
England * Time (reference category)	0 ^a	.	0 ^a	.

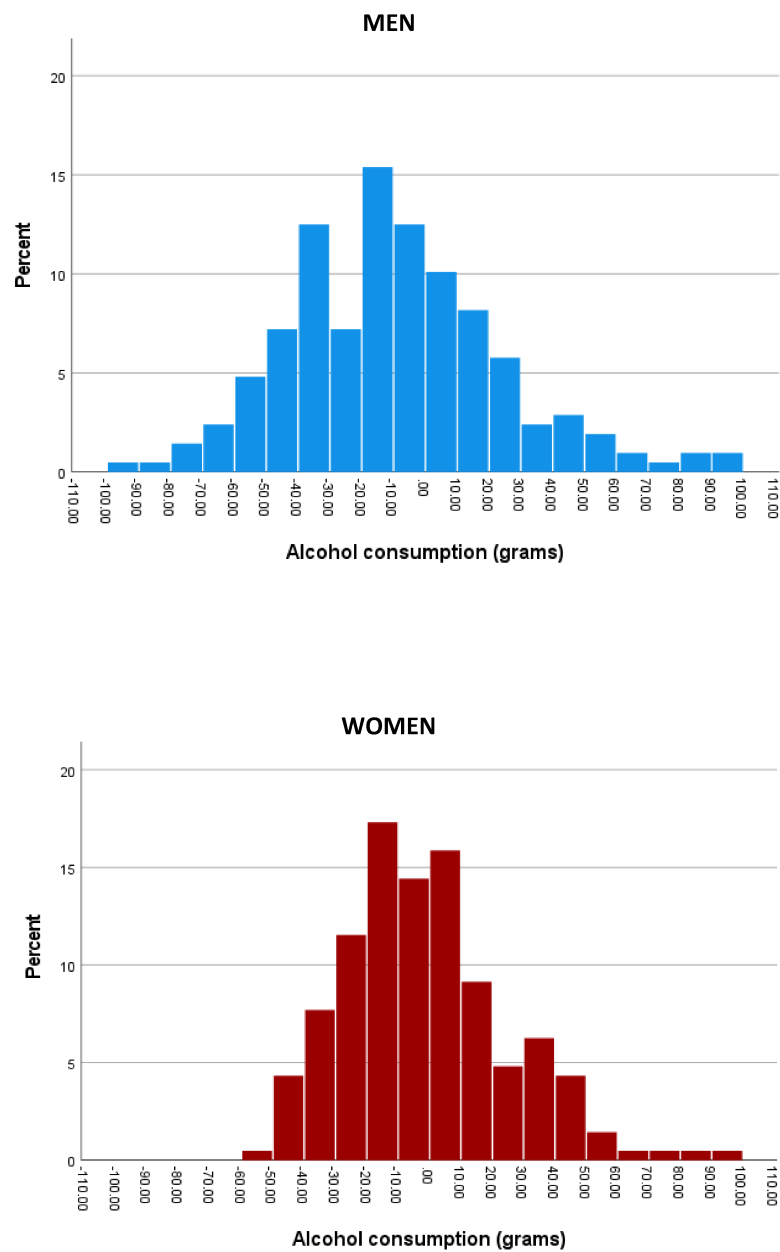


Figure 9 Plots of distributions of differences in total alcohol consumption (grams), Scotland minus England for men (top) and women (bottom).

Box 1**Primary Interrupted Time Series Analysis Regression Equation 1 to test overall impact of MUP**

Difference in consumption (Scotland minus England, net effect) = intercept + time + event + error where time is weeks 1 through week 208, and the event is the dummy-coded variable for the introduction of MUP.

SPSS SYNTAX:

```
GENLIN grams (difference, Scotland minus England) WITH event week
  /MODEL event week INTERCEPT=YES
  DISTRIBUTION=NORMAL LINK=IDENTITY
  /CRITERIA SCALE=MLE COVB=MODEL PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012
  ANALYSISTYPE=3(WALD)
  CILEVEL=95 CITYPE=WALD LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
```

Run separately for:

Total consumption, off-trade consumption, and on-trade consumption for total sample
 Total consumption, off-trade consumption, and on-trade consumption for men
 Total consumption, off-trade consumption, and on-trade consumption for women
 Total consumption, off-trade consumption and on-trade consumption by each age group, social grade group, and deprivation group, separately for men and women
 Total consumption by each consumption percentile, separately for men and women

SPSS SYNTAX to test for differential impact of MUP between men and women:

```
GENLIN grams (difference, Scotland minus England) by sex WITH event week
  /MODEL event sex event*sex week INTERCEPT=YES
  DISTRIBUTION=NORMAL LINK=IDENTITY
  /CRITERIA SCALE=MLE COVB=MODEL PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012
  ANALYSISTYPE=3(WALD)
  CILEVEL=95 CITYPE=WALD LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
```

Box 2**Secondary Before and After Analyses Regression Equation 2 to explore in more detail impact of MUP by age and deprivation score**

Natural log (consumption) = intercept + event + country + age/or/deprivation score as dummy-coded variables for each individual age and for each individual deprivation score + event*country + event*age/or/deprivation score + country* age/or/deprivation score + event*country*age/or/deprivation score + time + error,

Where:

time is weeks from 1 to 208;

event is the dummy coded variable for the introduction of MUP;
country is England or Scotland; and,
Age is the dummy coded variables for each individual age; deprivation score is the dummy coded variable for each individual deprivation score (rounded to an integer), ranging from 0 to 100.

SPSS SYNTAX

```
GENLIN grams BY country age/or/deprivationscore WITH event week
  /MODEL country event age/or/deprivationscore country*event country*age/or/deprivationscore
  event*age/or/deprivationscore country*event*age/or/deprivationscore week
  INTERCEPT=YES DISTRIBUTION=NEGBIN (1) LINK=LOG
  /CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL MAXITERATIONS=100 MAXSTEPHALVING=5
  PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95
  CITYPE=WALD
  LIKELIHOOD=FULL
  /EMMEANS TABLES= country*event*age/or/deprivationscore SCALE=ORIGINAL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
```

Box 3**Before and After Analysis Regression Equation 4 to test direction and size of slopes**

Differences in consumption, Scotland minus England (as derived from data of y-axes of Figures 4 and 5) = intercept + age/or/deprivation score (data from x-axes of Figures 4 and 5) + error.

SPSS SYNTAX

```
GENLIN 'differences in consumption, Scotland minus England (as derived from data of y-axes of
  Figures 4 and 5)' WITH age/or/deprivationscore
  /MODEL age/or/deprivationscore/ INTERCEPT=YES
  DISTRIBUTION=NORMAL LINK=IDENTITY
  /CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL MAXITERATIONS=100 MAXSTEPHALVING=5
  PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95
  CITYPE=WALD
  LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
```

SPSS SYNTAX to test if slopes differ between men and women

```
GENLIN 'differences in consumption, Scotland minus England (as derived from data of y-axes of
  Figures 4 and 5)' by sex WITH age/or/deprivationscore
  /MODEL sex age/or/deprivationscore sex*age/or/deprivation score/ INTERCEPT=YES
  DISTRIBUTION=NORMAL LINK=IDENTITY
  /CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL MAXITERATIONS=100 MAXSTEPHALVING=5
  PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95
  CITYPE=WALD
  LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
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Box 4**Before and After Analysis Regression Equation 4 to test if slopes by age differ by deprivation group**

Differences in consumption, Scotland minus England (as derived from data of y-axes of Figures 4 and 5) = intercept + age + deprivationgroup + error.

SPSS SYNTAX

```
GENLIN 'differences in consumption, Scotland minus England (as derived from data of y-axes of
Figures 4 and 5)' WITH age deprivationgroup
  /MODEL age deprivationgroup age*deprivationgroup/ INTERCEPT=YES
  DISTRIBUTION=NORMAL LINK=IDENTITY
  /CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL MAXITERATIONS=100 MAXSTEPHALVING=5
  PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95
  CITYPE=WALD
  LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
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Box 5**Before and After Analysis Regression Equation, testing for differences in slopes by type of normalization (natural log or square root) of consumption data**

Differences in consumption, Scotland minus England (as derived from data of y-axes of Figures 4 and 5) and Supplement Figures 17 and 18) = intercept + 'type of normalization (natural log or square root)' age/or/deprivationscore + 'type of normalization'*age/or/deprivationscore + error.

SPSS SYNTAX

```
GENLIN 'differences in consumption, Scotland minus England BY 'type of normalization' WITH
age/or/deprivationscore
  /MODEL 'type of normalization' age/or/deprivationscore 'type of
normalization'*age/or/deprivationscore / INTERCEPT=YES
  DISTRIBUTION=NORMAL LINK=IDENTITY
  /CRITERIA METHOD=FISHER(1) SCALE=1 COVB=MODEL MAXITERATIONS=100 MAXSTEPHALVING=5
  PCONVERGE=1E-006(ABSOLUTE) SINGULAR=1E-012 ANALYSISTYPE=3(WALD) CILEVEL=95
  CITYPE=WALD
  LIKELIHOOD=FULL
  /MISSING CLASSMISSING=EXCLUDE
  /PRINT CPS DESCRIPTIVES MODELINFO FIT SUMMARY SOLUTION.
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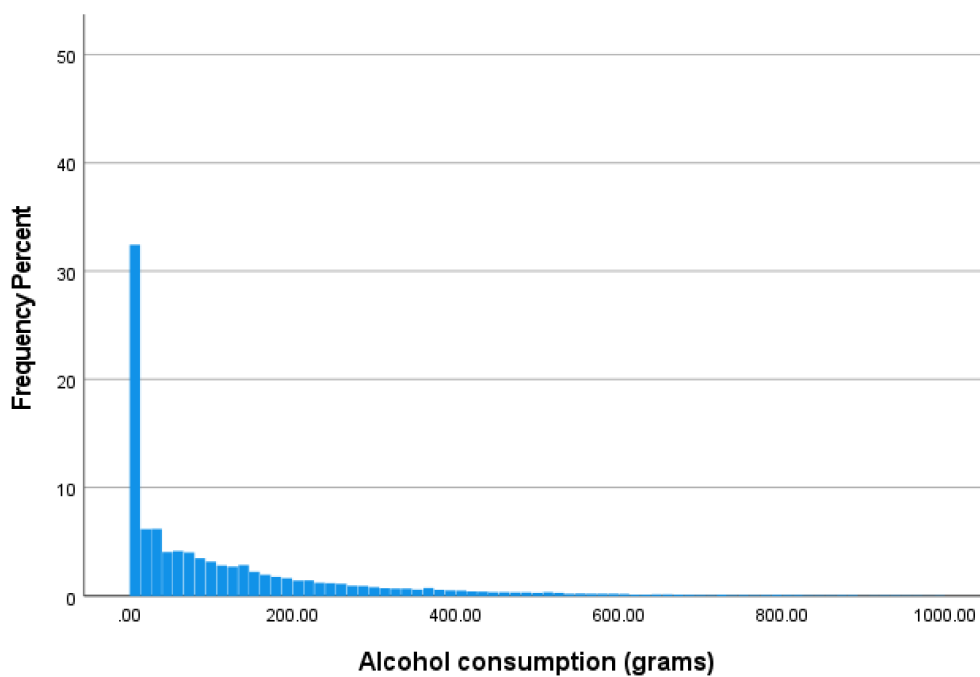


Figure 10 Distribution of weekly alcohol consumption, men.

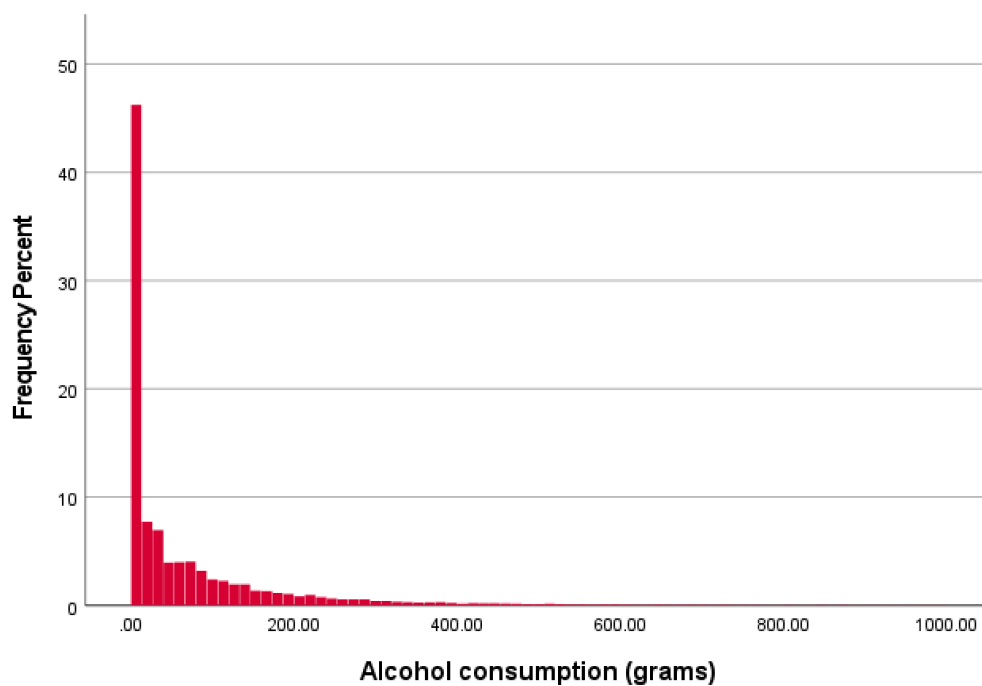


Figure 11 Distribution of weekly alcohol consumption, women.

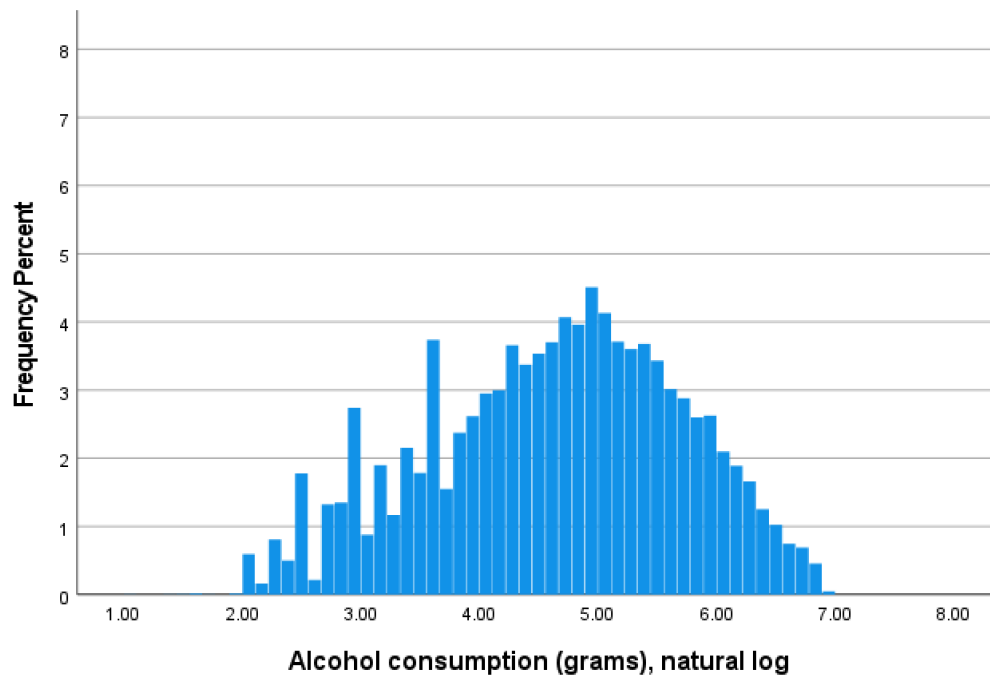


Figure 12 Distribution of weekly alcohol consumption (natural log), men who consumed alcohol during previous week.

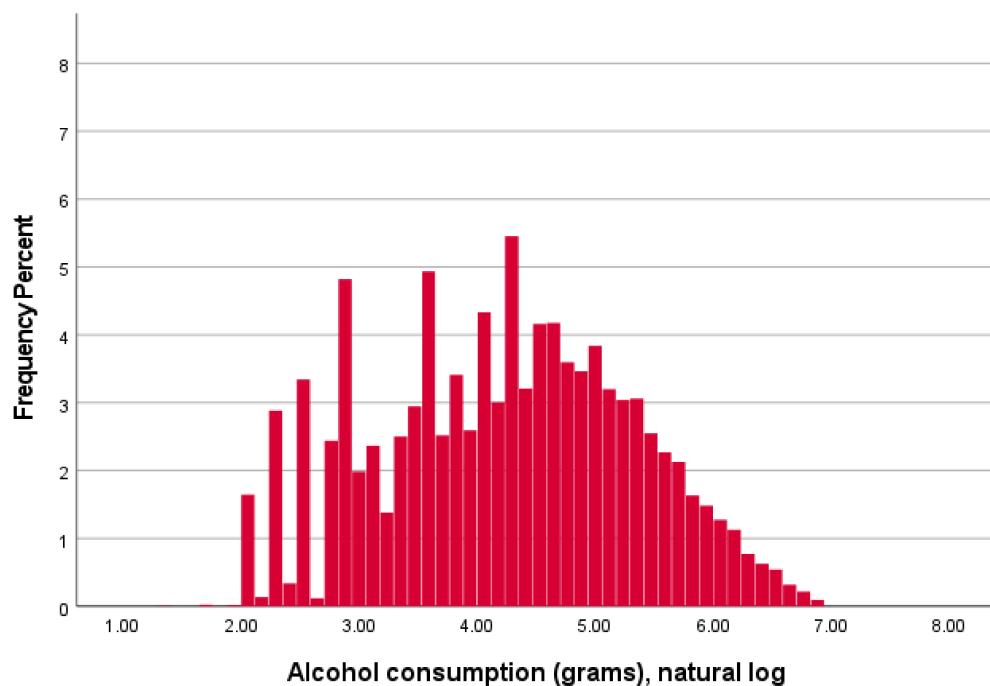


Figure 13 Distribution of weekly alcohol consumption (natural log), women who consumed alcohol during previous week.

Power calculations

For the interrupted time series analyses, we had 173 time points before and 25 time points after the intervention. The intervention was modelled as an abrupt effect with two control series. According to Beard et al.,²¹ this should be more than sufficient power to detect small effects of level changes. For the before and after analyses, we used regression analyses and based the analyses on a total of 106,490 respondents. This sample size is sufficient to detect very small effect sizes in the definition of Cohen $d = 0.1$ with $> 90\%$ power.²⁴

Table 2 Numbers of respondents by country, before and after the introduction of MUP and by socio-demographic characteristics. Drink diaries were completed by 106,490 respondents from England and Scotland during the four years from 2015 to 2018, with an average of 512 diaries per week, (SD=173), a rate which remained stable over the four-year period (F=0.544, p=0.462).

		Before introduction of MUP				Introduction of MUP and after			
		England		Scotland		England		Scotland	
		Men	Women	Men	Women	Men	Women	Men	Women
Age group	18-24	4861	10327	490	1608	878	2495	102	283
	25-44	14389	16407	2091	2870	2775	3293	364	597
	45-64	12839	9005	2442	1196	2487	1458	416	236
	65+	6359	2684	1057	269	1342	564	251	55
	Total	38448	38423	6080	5943	7482	7810	1133	1171
Social grade group	AB	10860	9197	1728	1453	878	2495	102	283
	C1	7529	8641	1179	1429	1370	2040	160	340
	C2	8607	8656	1351	1309	2274	1943	316	372
	DE	11452	11929	1822	1752	2960	1332	555	176
	Total	38448	38423	6080	5943	7482	7810	1133	1171
Deprivation group (1=most deprived; 5=least deprived)	1.00	3112	2945	191	172	618	681	30	23
	2.00	10689	10771	1254	1200	2218	2287	259	269
	3.00	12999	13252	2420	2410	2504	2572	471	484
	4.00	9326	9165	1697	1644	1729	1805	286	324
	5.00	2322	2290	518	517	413	465	87	71
	Total	38448	38423	6080	5943	7482	7810	1133	1171

Table 3 Proportion of respondents (95% confidence intervals) who are women by country and before or after introduction of MUP

Country	Event	Mean	95% Confidence Interval	
			Lower	Upper
England	Before MUP	0.500	0.496	0.503
	After MUP	0.511	0.503	0.519
Scotland	Before MUP	0.494	0.485	0.503
	After MUP	0.508	0.488	0.529

In a generalized linear regression equation, [GENLIN Proportion of respondents who are women BY event country/MODEL event country country*event INTERCEPT=YES], the coefficient of the interaction term country*event (introduction of MUP) indicated that any differences between Scotland and England in the proportion of respondents that were women before the introduction of MUP did not change following the introduction of MUP (coefficient=0.003 (95%CI=-0.021 to 0.027)).

Table 4 Mean age of respondents (95% confidence intervals) by country and before or after introduction of MUP

Sex of respondent	Country	Event	Mean	95% Confidence Interval	
				Lower	Upper
Men	England	Before MUP	45.323	45.159	45.488
		After MUP	46.049	45.677	46.422
	Scotland	Before MUP	47.983	47.569	48.396
		After MUP	49.265	48.307	50.222
Women	England	Before MUP	37.171	37.020	37.322
		After MUP	35.822	35.487	36.157
	Scotland	Before MUP	35.565	35.180	35.949
		After MUP	36.450	35.585	37.315

In a generalized linear regression equation, [GENLIN Age of respondents BY event country/MODEL event country country*event INTERCEPT=YES], the coefficient of the interaction term country*event (introduction of MUP) indicated that any differences between Scotland and England in the mean age of respondents before MUP did not change for men following the introduction of MUP (coefficient=0.556 (95%CI=-0.563 to 1.675), but did for women (coefficient=2.234 (95%CI=1.219 to 3.250), indicating that, whereas Scottish women were, on average, a little younger than English women before MUP, they were a little older than English women after MUP.

Table 5 Mean deprivation score of respondents (95% confidence intervals) by country and before or after introduction of MUP

Sex of respondent	Country	Event	Mean	95% Confidence Interval	
				Lower	Upper
Men	England	Before MUP	48.014	47.814	48.215
		After MUP	47.182	46.727	47.636
	Scotland	Before MUP	53.842	53.338	54.346
		After MUP	52.644	51.476	53.812
Women	England	Before MUP	47.997	47.798	48.195
		After MUP	47.090	46.650	47.531
	Scotland	Before MUP	53.562	53.057	54.068
		After MUP	52.440	51.301	53.578

In a generalized linear regression equation, [GENLIN deprivation score of respondents BY event country/MODEL event country country*event INTERCEPT=YES], the coefficient of the interaction term country*event (introduction of MUP) indicated that any differences between Scotland and England in the mean deprivation score of respondents before MUP did not change for men (coefficient=-0.365 (95%CI=-1.731 to 1.000) or for women (coefficient=-0.217 (95%CI=-1.553 to 1.119), following the introduction of MUP.

Table 6 Alcohol consumption (grams) by sex, country and before and after introduction of MUP.

Sex	Country	phase	Proportion did not drink during previous week	Mean (total sample)	Median (total sample)
Men	England	Before MUP	0.2842	130.6012	60.8967
		After MUP	0.3142	110.9788	45.9614
	Scotland	Before MUP	0.3156	117.9299	55.3889
		After MUP	0.3575	102.5637	33.5750
Women	England	Before MUP	0.4057	72.5175	18.7625
		After MUP	0.4342	66.3174	15.1957
	Scotland	Before MUP	0.4158	72.5313	18.1157
		After MUP	0.4731	55.9706	9.0578

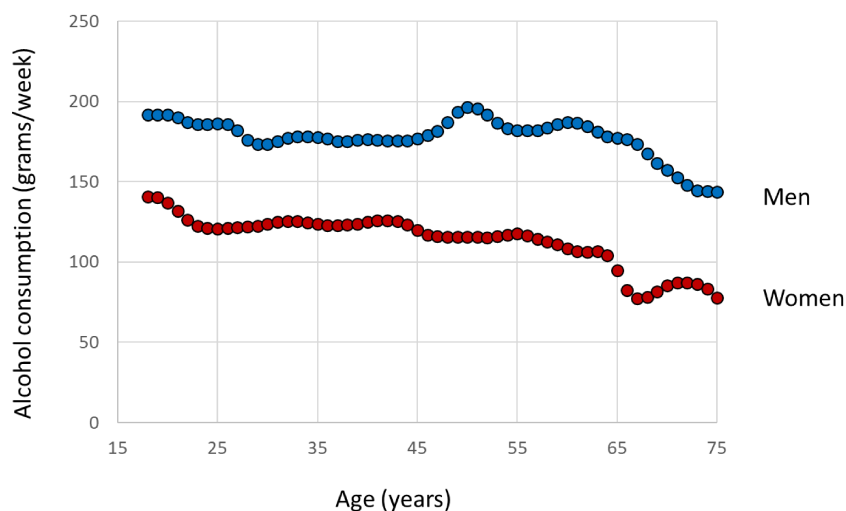


Figure 14. Mean alcohol consumption (grams per week) by age and sex, based on T4253H smoothing¹ across age. In a generalized linear regression equation, [GENLIN alcohol consumption with age, consumption decreased, similarly for both sexes, by 5.1 grams per every 10 years of increasing age (95% confidence interval, CI=4.4 to 5.7 grams).

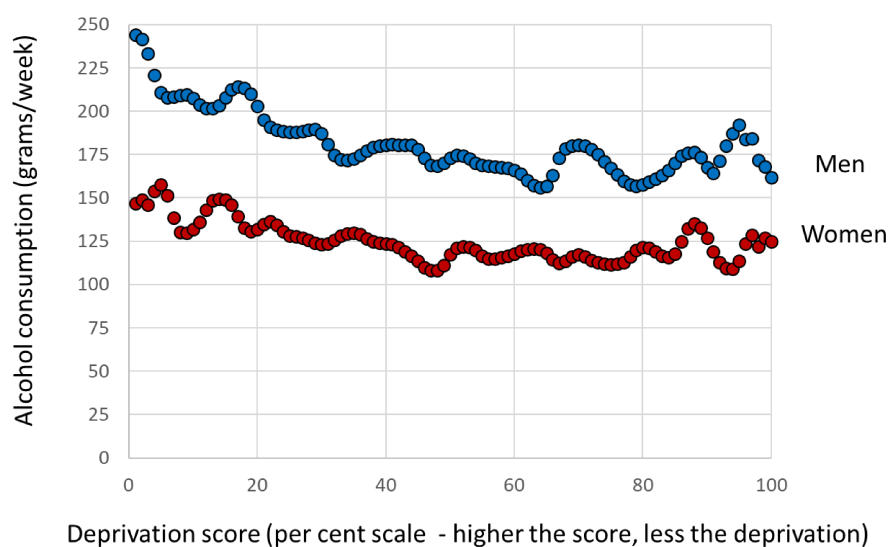


Figure 15. Mean alcohol consumption (grams per week) by deprivation score and sex, based on T4253H smoothing¹ across deprivation score. In a generalized linear regression equation, [GENLIN alcohol consumption with deprivation score, consumption decreased, similarly for both sexes by 1.1 grams per every 10 points (within a scale, 1-100) of decreasing deprivation (95% confidence interval, CI=0.8 to 1.4 grams).

¹ Velleman PF. Robust nonlinear data smoothers: Definitions and recommendations. *Proc Natl Acad Sci U S A.* 1977;74(2):434-436. doi:10.1073/pnas.74.2.434

Table 7 Interrupted time series analyses, main findings. Coefficients with 95% confidence intervals. Model with interaction terms by sex of respondent, which demonstrates that the drop in consumption associated with MUP was greater for women than men.

	Total consumption	Off-trade consumption	On-trade consumption
(Intercept)	-8.916 (-12.071 to -5.762)	-10.052 (-12.113 to -7.992)	1.136 (-1.747 to 4.019)
Level change associated with MUP	-1.544 (-7.214 to 4.126)	-.754 (-4.458 to 2.950)	-.790 (-5.972 to 4.393)
Time (weeks)	.003 (-.025 to .031)	.004 (-.014 to .022)	-.001 (-.027 to .025)
Women	7.565 (4.746 to 10.384)	9.285 (7.444 to 11.126)	-1.720 (-4.296 to .856)
Men (reference group)	.000 (. to .)	.000 (. to .)	.000 (. to .)
Women*event (introduction of MUP)	-8.801 (-15.672 to -1.930)	-5.039 (-9.527 to -.551)	-3.762 (-10.042 to 2.518)
Men*event (introduction of MUP) (reference group)	.000 (. to .)	.000 (. to .)	.000 (. to .)

Table 8 Interrupted time series analyses, sensitivity analysis, with Northern England as control. Coefficients with 95% confidence intervals. Model with interaction terms by sex of respondent, which demonstrates that the drop in consumption associated with MUP was greater for women than men.

	Total consumption
(Intercept)	-9.757 (-12.047 to -7.468)
Level change associated with MUP	-2.875 (-6.990 to 1.240)
Time (weeks)	.009 (-.012 to .029)
Women	3.695 (1.649 to 5.741)
Men (reference group)	.000 (. to .)
Women*event (introduction of MUP)	-6.022 (-11.009 to -1.035)
Men*event (introduction of MUP) (reference group)	.000 (. to .)

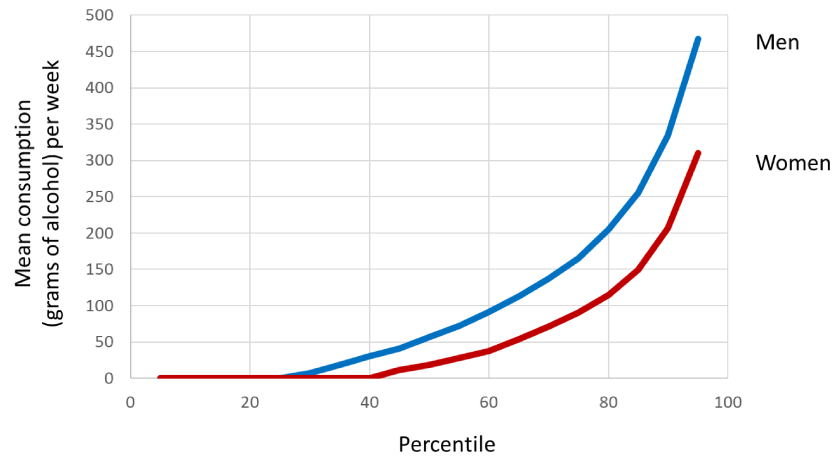


Figure 16. Mean consumption, grams of alcohol per week, by percentile distribution of consumption for men and women.

Supplement Table 9 Associated changes (and 95% confidence intervals) in the net difference in alcohol consumption (Scotland minus England) following the introduction of MUP by drinking percentile distribution of total alcohol consumption

Consumption percentile	Men			Women		
	Coefficient	Lower 95% confidence interval	Upper 95% confidence interval	Coefficient	Lower 95% confidence interval	Upper 95% confidence interval
5	0.042	-0.082	0.167	0	0	0
10	0.048	-0.079	0.176	0	0	0
15	-0.362	-0.821	0.097	-0.001	-0.021	0.019
20	0.062	-0.829	0.953	-0.006	-0.168	0.156
25	-0.456	-1.581	0.669	0.01	-0.327	0.346
30	0.157	-1.812	2.125	0	0	0
35	-2.448	-6.852	1.955	0	0	0
40	-0.464	-5.058	4.13	-0.133	-1.671	1.405
45	0.307	-5.088	5.703	1.495	-0.451	3.441
50	0.067	-6.297	6.431	-3.767	-6.947	-0.588
55	-2.559	-8.078	2.96	-9.296	-12.183	-6.409
60	-5.055	-11.564	1.454	-11.2	-11.2	-11.2
65	-2.508	-11.198	6.182	-12.795	-16.807	-8.782
70	-5.167	-15.185	4.852	-15.775	-21.859	-9.691
75	-5.131	-17.915	7.653	-15.365	-21.286	-9.445
80	0.96	-4.646	6.566	-18.71	-27.335	-10.086
85	0	-4	4	-26.605	-32.6	-20.6
90	2.08	-3.5	7.93	-7.57	-21.374	6.234
95	13.75	5.75	21.5	4.75	-4	13.74

There were 633 Scottish residents and 4046 English residents in each percentile prior to MUP, and 121 Scottish residents and 805 English residents in each percentile after the introduction of MUP split roughly equally between men and women.

Table 10 Figure 3 of main paper: Data by age group: B, Coefficient; upper 95% confidence interval; lower 95% confidence interval.

Consumption	Sex of respondent	Age	B	Upper	Lower
Total consumption	Men	18-24	0.154	0.361	-0.054
		25-44	-0.094	0.113	-0.300
		45-64	-0.151	0.015	-0.317
		65+	-0.216	-0.032	-0.399
	Women	18-24	-0.063	0.087	-0.213
		25-44	0.064	0.259	-0.131
		45-64	0.000	0.150	-0.150
		65+	-0.267	-0.018	-0.517
Off-trade consumption	Men	18-24	0.186	0.405	-0.033
		25-44	0.261	0.428	0.094
		45-64	-0.019	0.153	-0.192
		65+	-0.311	-0.125	-0.497
	Women	18-24	-0.125	0.073	-0.322
		25-44	-0.078	0.122	-0.279
		45-64	0.036	0.163	-0.091
		65+	-0.251	-0.015	-0.486
On-trade consumption	Men	18-24	-0.033	0.097	-0.162
		25-44	-0.354	-0.170	-0.538
		45-64	-0.132	0.141	-0.404
		65+	0.096	0.183	0.008
	Women	18-24	0.062	0.189	-0.065
		25-44	0.142	0.232	0.052
		45-64	-0.036	0.091	-0.163
		65+	-0.017	0.142	-0.176

Table 11 Figure 3 of main paper: Data by social grade group: B, Coefficient; upper 95% confidence interval; lower 95% confidence interval.

Consumption	Sex of respondent	Social grade group	B	Upper	Lower
Total consumption	Men	DE	0.053	0.245	-0.138
		C2	-0.165	-0.009	-0.321
		C1	-0.177	-0.017	-0.338
		AB	0.230	0.472	-0.011
	Women	DE	0.111	0.302	-0.080
		C2	-0.030	0.083	-0.142
		C1	-0.220	-0.105	-0.336
		AB	-0.090	0.115	-0.295
Off-trade consumption	Men	DE	0.023	0.198	-0.151
		C2	-0.147	0.088	-0.381
		C1	-0.261	-0.072	-0.450
		AB	0.515	0.694	0.336
	Women	DE	-0.018	0.106	-0.143
		C2	-0.009	0.085	-0.103
		C1	-0.207	-0.083	-0.330
		AB	-0.046	0.131	-0.223
On-trade consumption	Men	DE	0.030	0.111	-0.052
		C2	-0.018	0.172	-0.208
		C1	0.084	0.172	-0.004
		AB	-0.285	0.012	-0.582
	Women	DE	0.129	0.374	-0.116
		C2	-0.021	0.038	-0.080
		C1	-0.014	0.029	-0.056
		AB	-0.044	0.057	-0.145

Table 12 Figure 3 of main paper: Data by deprivation grade group: B, Coefficient; upper 95% confidence interval; lower 95% confidence interval.

Consumption	Sex of respondent	Deprivation group (1-most deprived)	B	Upper	Lower
Total consumption	Men	1	-0.027	0.091	-0.146
		2	0.045	0.234	-0.143
		3	-0.075	0.101	-0.252
		4	0.000	0.100	-0.100
		5	0.016	0.200	-0.168
	Women	1	0.103	0.291	-0.086
		2	-0.026	0.102	-0.154
		3	-0.032	0.130	-0.195
		4	-0.050	0.034	-0.135
		5	0.031	0.222	-0.160
Off-trade consumption	Men	1	0.009	0.145	-0.128
		2	-0.024	0.099	-0.147
		3	0.262	0.417	0.106
		4	0.023	0.146	-0.101
		5	0.044	0.246	-0.157
	Women	1	0.084	0.278	-0.110
		2	-0.034	0.097	-0.164
		3	0.093	0.276	-0.090
		4	-0.165	0.005	-0.334
		5	0.012	0.178	-0.154
On-trade consumption	Men	1	-0.036	0.057	-0.128
		2	0.069	0.318	-0.179
		3	-0.337	-0.221	-0.453
		4	-0.023	0.101	-0.146
		5	-0.028	0.026	-0.082
	Women	1	0.019	0.301	-0.263
		2	0.008	0.049	-0.033
		3	-0.125	0.154	-0.404
		4	0.114	0.294	-0.065
		5	0.019	0.125	-0.086

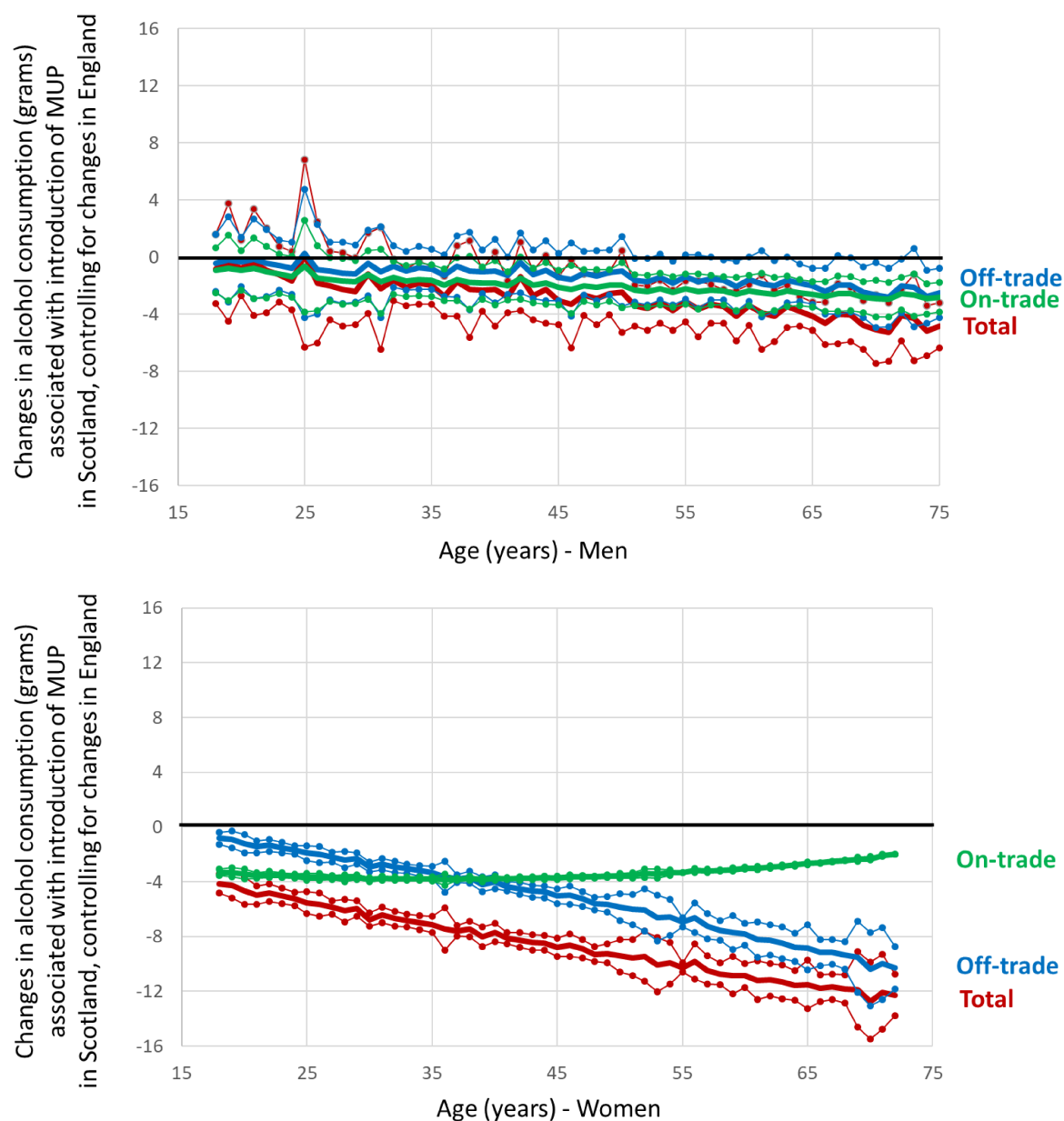


Figure 17 Plots of the means (95% CI) of the predicted values of the dependent variables (changes in alcohol consumption per week in grams associated with the introduction of MUP in Scotland, controlling for changes in England) derived from the regression models of the before and after analyses for each age group in years. Plots of men and women for total consumption, off-trade consumption, and on-trade consumption. Thicker lines: means; thinner lines: 95% confidence intervals. Horizontal black line set at zero (i.e., no change). Analyses based on sample of respondents who consumed alcohol during previous week; square roots of consumption taken prior to regression models, with squares of resultant coefficients taken prior to plots.

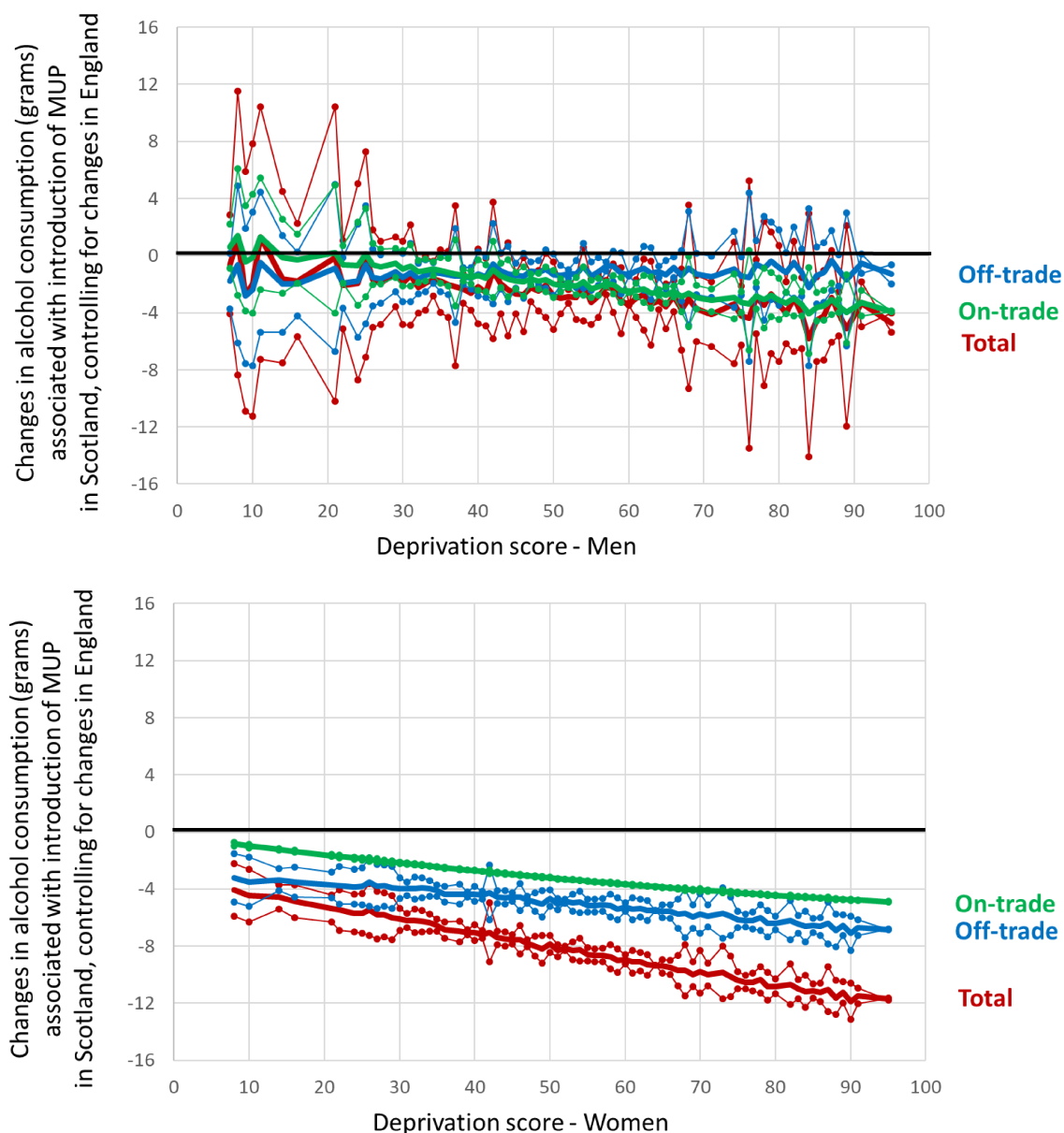


Figure 18 Plots of the means (95% CI) of the predicted values of the dependent variables (changes in alcohol consumption per week in grams associated with the introduction of MUP in Scotland, controlling for changes in England) derived from the regression models of the before and after analyses for each deprivation score on a scale from 1 (most deprived) to 100 (least deprived). Plots of men and women for total consumption, off-trade consumption, and on-trade consumption. Thicker lines: means; thinner lines: 95% confidence intervals. Horizontal black line set at zero (i.e., no change). Analyses based on sample of respondents who consumed alcohol during previous week; square roots of consumption taken prior to regression models, with squares of resultant coefficients taken prior to plots.