

Multiple Risky Behaviours: Obesity, Alcohol & Smoking

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Produced by

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1. Introduction & Objectives

Understanding the degree of overlap in risky behaviour is important from a public health perspective because of the additive impact on health and wellbeing. For example research has shown that premature mortality rates from cardio-vascular disease are significantly elevated among smokers who drank more than 15 units of alcohol per week when compared with similar groups who were smokers but not drinkers or smokers who drank moderately. In addition people who smoke and drink have elevated risk of certain types of cancer, particularly those of the mouth and throat.

It has been reported that 26% of adults in England are obese, 19% drink at a risky level and 19% currently smoke¹. This analysis seeks to explore the overlap between these risky behaviours.

2. Methodology

This analysis has been conducted using data from the Health Survey for England, 2014. An anonymised dataset was sourced from the UK Data Service.

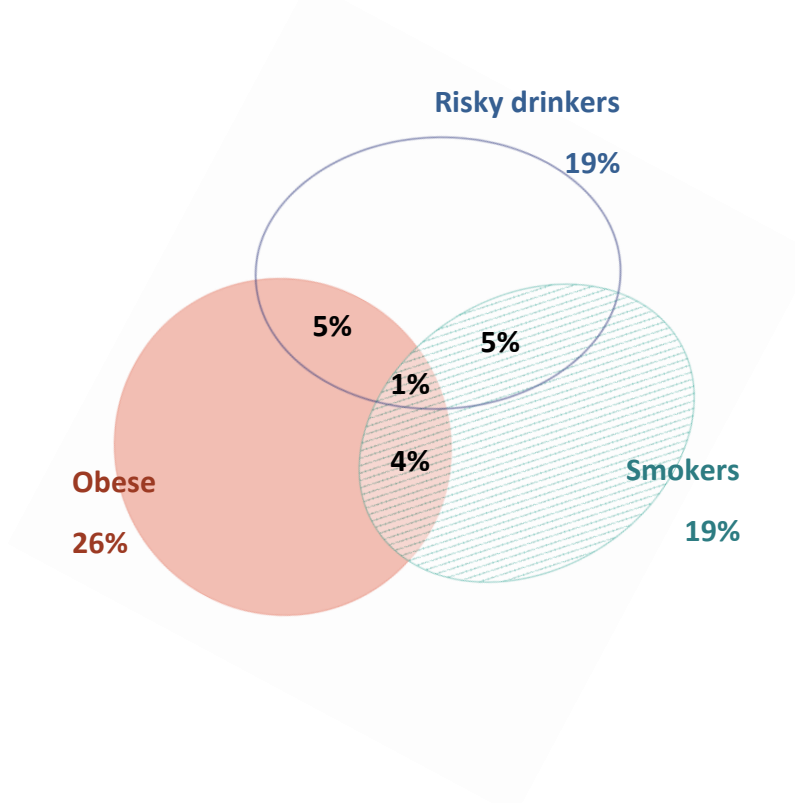
The analysis is based on results from 6797 adults (aged 16+) taking part in the 2014 survey. Only those individuals for whom BMI information, smoking status, and data on alcohol consumption was available could be included in the analysis. This represented 84% of all of the adults (aged 16+) taking part in the survey.

¹ See [NHS Digital \(formerly HSCIC\) analysis of the Health Survey for England 2014](#)

| 3. Results

3.1 Overall

The Venn diagram below provides a visual representation of the estimated overlap between obesity, risky drinking and smoking in England.



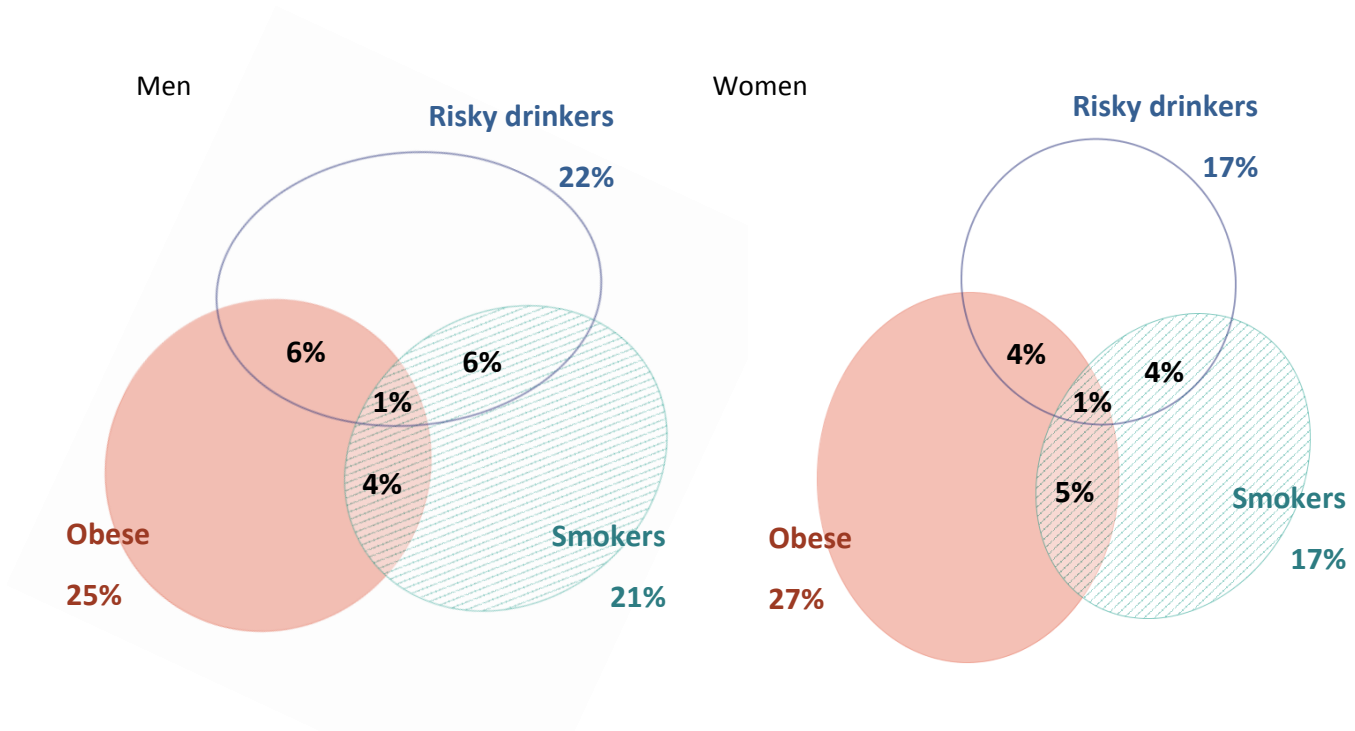
This suggests that around 1% of adults in England are obese, and indicated that they drink at risky levels and smoke. A further 11% display two of these risky behaviours.

- 8% of obese adults also smoke and/or drink at risky levels
- 8% of smokers are also obese and/or drink at risky levels
- 9% of adults who drink at risky levels also smoke and/or are obese

This analysis suggests that around half (49%) of adults in England are neither obese, nor smoke, nor drink at risky levels (i.e. display none of these risky behaviours).

3.2 Sex

The diagrams below provide the same analysis, but separately for men and women.



For both men and women, around 1% of are obese, and indicated that they drink at risky levels and smoke.

- 9% of obese men and 7% of obese women also smoke and/or drink at risky levels
- 9% of male smokers and 8% of female smokers are also obese and/or drink at risky levels
- 11% of men and 7% of women who drink at risky levels also smoke and/or are obese

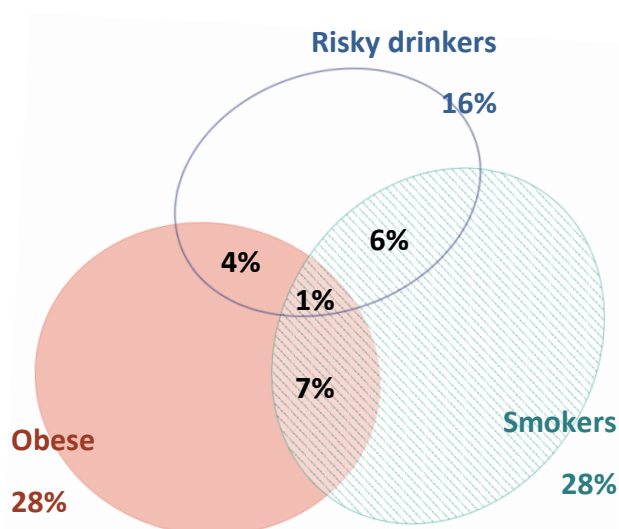
The table below provides a more detailed analysis.

	All adults	Men	Women
Obese	26%	25%	27%
Smoker	19%	21%	17%
Risky drinker	19%	22%	17%
Obese & a smoker	4%	4%	5%
Obese & a risky drinker	5%	6%	4%
Smoker & a risky drinker	5%	6%	4%
Obese, a smoker & a risky drinker	1%	1%	1%

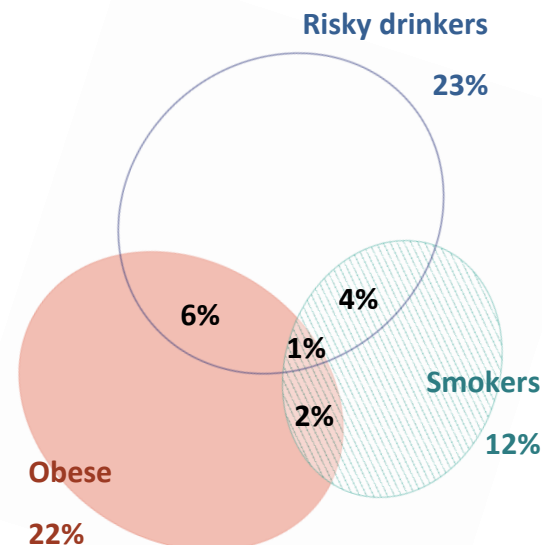
3.3 Deprivation

The Venn diagrams below provide a visual comparison of the estimated overlap between obesity, risky drinking and smoking in England between the most and least deprived IMD quintiles.

Quintile 1: Most deprived



Quintile 5: Least deprived



Despite higher levels of both smoking and obesity in the most deprived areas, still only 1% of adults are obese, and indicated that they drink at risky levels and smoke.

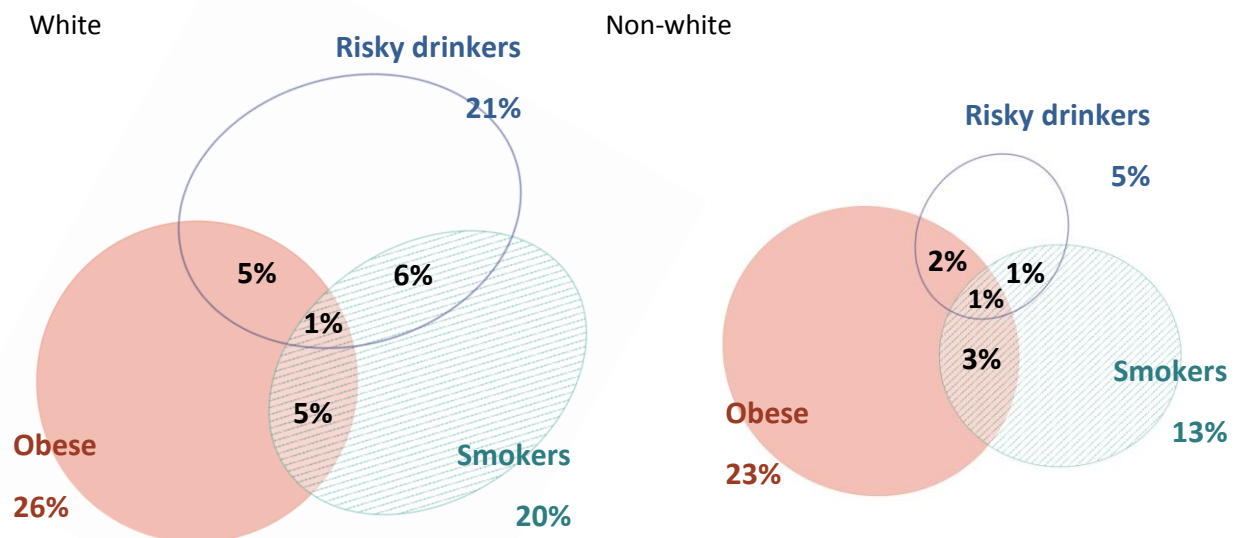
The overlap between smoking and obesity is higher in the most deprived areas, where 7% smoke and are obese (compared with 2% in the least deprived areas). Risky drinking is more common in the most deprived areas.

The table below provides a more detailed analysis for all five deprivation quintiles.

	1 - Most deprived	2	3	4	5 - Least deprived
Obese	28%	28%	28%	24%	22%
Smoker	28%	25%	17%	14%	12%
Risky drinker	16%	17%	19%	21%	23%
Obese & a smoker	7%	6%	5%	3%	2%
Obese & a risky drinker	4%	5%	5%	5%	6%
Smoker & a risky drinker	6%	7%	5%	3%	4%
Obese, a smoker & a risky drinker	1%	2%	1%	0%	1%

3.4 Ethnicity

The Venn diagrams below provide a visual comparison of the estimated overlap between obesity, risky drinking and smoking in England between white and non-white adults.



The most striking feature of this analysis is the far lower levels of self-reported risky drinking amongst non-white adults in comparison with white adults. Smoking rates are also lower amongst the non-white adult population. Whilst just under half (47%) of white adults in England are neither obese, nor smoke, nor drink at risky levels (i.e. display none of these risky behaviours), this increases to 65% amongst non-white adults.

Around 1% of both white and non-white adults in England are obese, and indicated that they drink at risky levels and smoke.

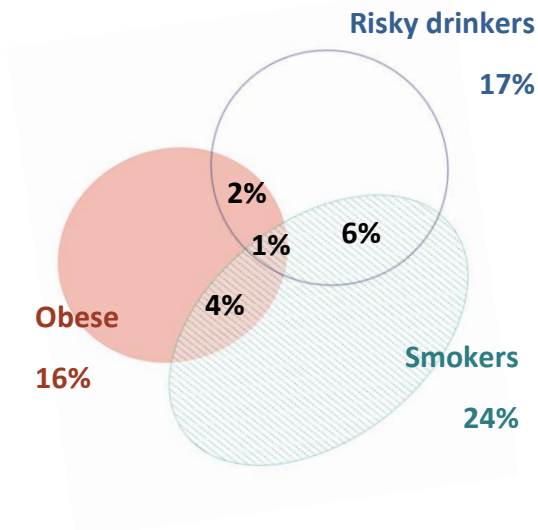
The table below provides a more detailed analysis of the overlap between these risky behaviours.

	White	Non-white
Obese	26%	23%
Smoker	20%	13%
Risky drinker	21%	5%
Obese & a smoker	5%	3%
Obese & a risky drinker	5%	2%
Smoker & a risky drinker	6%	1%
Obese, a smoker & a risky drinker	1%	1%

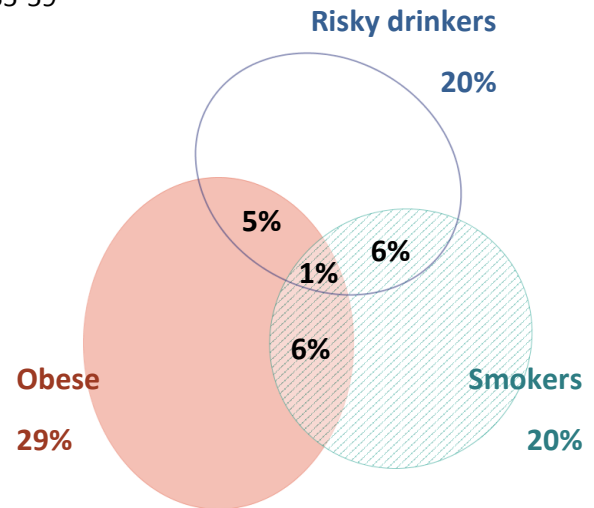
3.5 Age

The Venn diagrams below provide a visual comparison of the estimated overlap between obesity, risky drinking and smoking in England by age band.

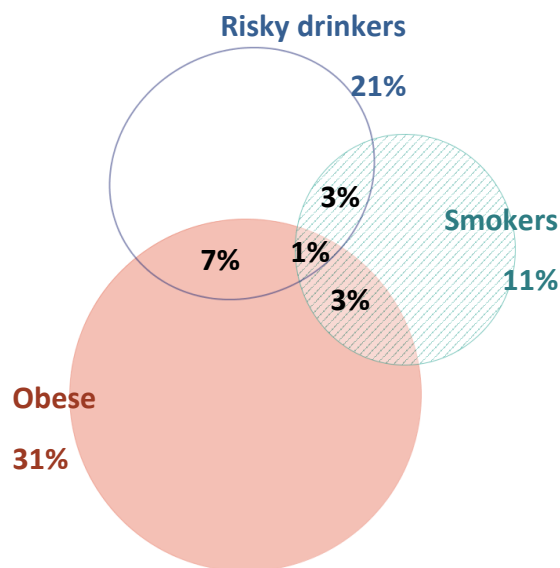
Age 16-34



Age 35-59



Age 60+



Whilst obesity increases with age, smoking decreases. Across all three age bands, 1% are obese, and indicated that they drink at risky levels and smoke.

The overlap between obesity and risky drinking increases with age, from 2% of adults aged 16-34 to 7% of adults aged 60+.

The table below provides a more detailed analysis.

	16-34	35-59	60+
Obese	16%	29%	31%
Smoker	24%	20%	11%
Risky drinker	17%	20%	21%
Obese & a smoker	4%	6%	3%
Obese & a risky drinker	2%	5%	7%
Smoker & a risky drinker	6%	6%	3%
Obese, a smoker & a risky drinker	1%	1%	1%