

Research Justification

Evaluating the impact of minimum unit pricing on alcohol consumption across gender, age and socioeconomic status in Scotland:

A pre- and post-implementation analysis using the Scottish Health Survey data of 2017 and 2019

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Why Alcohol Consumption in Scotland

- Drinking plays a causal role in 200+ health conditions (e.g., alcoholic cirrhosis, stroke)^(1, 2)
- Across timeseries, Scotland has high levels of consumption (e.g., volume drunk, drinker numbers) & alcohol-related health conditions⁽⁴⁻⁸⁾
- **81%** were self-reported drinkers (2022); **20+%** were **hazardous/harmful drinkers** (2022/23); **32,301** alcohol-attributable hospitalisations (2023/24); **1,277** alcohol-specific deaths (2022), highest since 2008⁽⁹⁻¹⁵⁾
- 40% of Scottish prisoners (2019) committed influenced by alcohol^(16, 17)
- Alcohol harm costs £5-10 billion **annually** in Scotland^(18, 19)

Why Drinking by Gender, Age & SES in Scotland

- Males have **higher** consumption level: 2× female average drinking volume (2023); 2/3 of hazardous drinkers (2023)^(8, 11, 13, 15, 20-22)
- Aged **16+/18+**: consumption is **higher** among 16-24 and 55-74 and **lower** among 25-34 and 75+ (2023), which is similar across timeseries^(11, 23)
- Higher socioeconomic status (less deprived): **higher** consumption^(9, 10)
- **Among harmful drinkers:** higher consumption in those at lower SES^(9, 11)
- **Intersection** between 2 or 3 characteristics entails a joint effect: e.g., among harmful drinkers, **younger men** in **more deprived** areas have higher consumption⁽²⁴⁾
- These sociodemographic variations navigate minimum unit pricing policy

Why Minimum Unit Pricing (Scotland)

- Implementation in May 2018⁽⁵⁾
- Minimum price of £0.50 (2018) to £0.65 (2024) for a unit (10 ml or 8 g) of pure alcohol in alcoholic beverages^(25, 26)
- ↓Drinking ↔ ↑Prices
- Target: **unequal** hazardous/harmful drinking & alcohol-related health conditions by SES⁽²⁶⁾
- Worth evaluating for national-scale impact and radicality

Knowledge Gap to Address

- **13** studies were included: generally supporting MUP through significantly **reduced** alcohol **sales** / self-reported **consumption** / alcohol-related **health conditions**^(27, 28)
- **Gap 1:** only **4** studies on self-reported consumption analysed **any** of sex, age and SES^(20, 21, 31, 32)
- **Gap 2:** **0** intersectionality study, despite 1 interaction study analysing self-reported consumption⁽³¹⁾
 - Found significant two-way interaction**
 - No three-way interaction analysis**
- Traditional interaction regression **≠** intersectionality analysis 👍⁽²⁹⁾
 - More sensitive to sociodemographic explanatory variables**

Research Aim & Objectives

- **Aim:** To evaluate the impact of minimum unit pricing on alcohol consumption of Scottish population across gender, age and socioeconomic status, using secondary repeated cross-sectional data.

SHeS 2017 (pre-) & 2019 (post-implementation)

Questions:

1. To what extent did MUP implementation impact the total weekly alcohol consumption among Scottish population in general?
2. How did the impact of MUP implementation vary across sociodemographic subgroups, with respect to gender, age and SES?
3. How was the impact of MUP implementation influenced by the intersection between gender, age and SES?

Research Methodology Outline

- Study design: quantitative; secondary; observational; analytical; repeated cross-sectional
- No ethical approval: SHeS data (2017 & 2019) is publicly accessible
- Variables: **1** outcome (total units of alcohol per week) & **3** explanatory (sex, age, and SIMD quintiles regarding SES)
- Statistical analyses: one model each research question
- Model 3: the popular I-MAIHDA framework for intersectionality analysis⁽³⁰⁾

Thank You

Q & A



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