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Assessing the early influence of COVID-19 in an analysis of the immediate implementation of Minimum Pricing for Alcohol on drinkers in Wales

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Abstract

Background: The Welsh Government has commissioned a number of projects to consider the influence their implementation of Minimum Pricing for Alcohol (MPA) legislation in March 2020 had on the alcohol consumption and related behaviours of drinkers. Given the MPA's overlap with the COVID-19 pandemic and its related lockdown measures and restrictions, this rapidly became a story about the early impact of COVID-19 as it did MPA. This paper captures the core thematic messages from this specific strand of work, and in doing so reflects on (1) how early experiences of COVID-19 and the first lockdown influenced consumption and purchasing

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of alcohol behaviours and, in turn, (2) how relevant the introduction of MPA was for any of these. **Methods:** Semi-structured interviews were conducted by telephone with 32 drinkers 9 months after the implementation of the legislation in March 2020. The sample was recruited from three sources: the National Survey for Wales; a third sector organisation offering housing support to the homeless; and through an online survey on MPA. **Results:** COVID-19 had more relevance than MPA to drinkers. Furthermore, when MPA did have an influence on their behaviour, it was felt most keenly by the harmful drinkers in the study. These drinkers described spending more on alcohol, switching to other potentially more harmful substances, such as crack cocaine and synthetic cannabinoids, and more involvement in acquisitive crime and begging after the price increase. While our results might be an early indication of the influence of MPA on harmful drinkers, the small sample of this group in our study limits the generalisability of the findings. **Conclusion:** To date, the implementation of MPA has had little influence on the drinking patterns or lives of the drinkers in our sample. It is important that future research examines the longer-term influences of MPA before any conclusions on its effectiveness can be drawn.

Keywords
alcohol, Minimum Pricing for Alcohol, minimum unit pricing, MUP, Wales

In early 2020, COVID-19 was spreading quickly across international borders and the UK entered a full nationwide pandemic lockdown on 20 March 2020. The measures implemented in response to COVID-19 had an immediate and significant impact on individual alcohol consumption and purchasing behaviour. During the subsequent 12-month period, Wales entered two more lockdowns. Each lockdown period brought vast changes, pressure and restrictions on lifestyles. The restrictions included the closure of hospitality venues and a ban on alcohol consumption and purchasing in on-licensed settings. Consequently, for much of the early period after the early implementation of the Public Health (Minimum Price for Alcohol) (Wales) Act 2018 on 2 March 2020, alcohol could only be purchased from off-licence settings.

Minimum pricing background and context

Alcohol is a leading global risk factor for ill health and premature mortality and is responsible for an estimated 3 million deaths worldwide (WHO, 2022). Governments have many options at hand to reduce alcohol-related harms and these might target either the general population or a specific sub-population considered to be at increased risk of experiencing these harms. According to Mäkelä (2018), whole population measures are preferrable because the harms and risks from drinking affect large groups of people, not just the heaviest of drinkers. Moreover, general population measures are also effective in promoting public health, well-being and safety (Babor et al., 2010; Giesbrecht & Bosma, 2017). Scientific evidence indicates that they reduce the number of heavy drinkers at the population level and prevent other alcohol consumers from becoming heavy drinkers (Mäkelä, 2018).

Most Nordic countries (Finland, Iceland, Norway and Sweden) have a long history of implementing restrictive whole population alcohol policies. These have traditionally rested on three main "pillars": restrictions on business interests in the alcohol domain; restrictions on the availability of alcoholic beverages; and restrictions on affordability by means of alcohol taxation (Lintonen et al., 2020). Restrictive alcohol policies, focusing on affordability, licencing and marketing, have been shown to reduce the level of alcohol

consumption in the general population (Brand et al., 2007; Livingston et al., 2023), and their effectiveness in reducing alcohol-related harms has been well established in these countries (Håggard et al., 2015; Kristjansson & Jonsson, 2015).

Affordability and price-related measures are thus one of the more specific general population measures aimed at reducing alcohol-related harms. The scientific literature evaluating these policies is generally consistent in highlighting their efficiency (Elder et al., 2010; Fogarty, 2010; Muller et al., 2023; Nelson, 2013; Public Health Scotland, 2023; Robinson et al., 2014; Sharma et al., 2017; Stockwell et al., 2012a, 2012b; Uusitalo et al., 2022; Wagenaar et al., 2009; WHO, 2022). Based on the economic principle of price elasticity, the idea behind these policies is that an increase in price would lead to a decrease in the affordability of alcohol and therefore a reduction in overall consumption and consequently alcohol-related harms. In Nordic countries, the affordability of alcohol is influenced by the prices charged by government-owned retailers (Muller et al., 2023; Uusitalo et al., 2022). The affordability and price of alcohol can also be managed through higher levels of taxation. This has been a long-term mechanism of many Nordic countries, although it has changed in recent years (Nelson & McNall, 2017; Room et al., 2013). Recent research demonstrates that alcohol affordability (especially in the Nordic countries that have a higher level of income per capita) has generally been increasing because population income has increased while the relative price of alcohol has remained generally stable or fallen (Blecher et al., 2018; Rabinovich et al., 2009). According to WHO (2022), other policies targeting the price of alcohol might be used alongside these more established ones. One such measure is imposing a minimum price, below which alcohol cannot legally be sold or supplied.

Not all minimum pricing for alcohol polices are the same. Some countries have adopted policies that are based on a minimum price per unit of all types of alcohol (e.g., Canada, Australia, Scotland, Ireland and Wales). Other models are quite different. Uzbekistan prohibits the sale of alcohol for a price less than the production cost, while Belarus, Russia, Ukraine and Moldova have different levels of minimum pricing for different types of alcohol (i.e., beer, wine and spirits).

In Wales, a minimum pricing for alcohol policy (henceforth MPA) came into force on 2 March 2020, less than 3 weeks before the first UK-wide COVID-19-related lockdown. MPA made it a criminal offence for retailers in Wales to sell or supply alcohol at a price of less than 50 pence per unit. Minimum pricing for alcohol policies are primarily framed as whole population interventions and as such the introduction of MPA signified a commitment by Welsh Government to improve and protect the health of the population of Wales as a whole (Welsh Government, 2015). Statistical modelling predicted that a minimum price of 50p would lead to a reduction in alcohol-related harm, including an 8.5% reduction in attributable deaths, 1.9% reduction in work-based absences and up to a 3% reduction in crime (Angus et al., 2018). However, alcohol pricing policies impact on certain products and communities differently, and as such Welsh Government (2017), stated that its primary aim was to protect "the health of harmful and hazardous drinkers who consume larger amounts of low-cost and high-alcohol products".

To consider the general and specific consequences of implementing MPA in Wales, Welsh Government commissioned four longitudinal evaluation projects. In this paper, we focus on findings from one of these projects and examine changes in drinking patterns and related behaviours among the wider population of drinkers in Wales in the 9-month period after the implementation of MPA (Holloway et al., 2022). Given the context of an emerging global pandemic, this strand of the research rapidly became as

much a story about the influence of COVID-19 on drinkers as it did MPA. The paper therefore reflects on the following: (1) how early experiences of COVID-19 and the first lockdown influenced alcohol consumption and associated behaviours; and, in turn, (2) how relevant the introduction of MPA was for any of these.

The influence of COVID-19 on drinking

Research on how COVID-19 affected drinking patterns has burgeoned over the past 2 years. To assess this evidence base and inform this phase of the research, a specific systematic review of the literature was conducted. Searches of the Applied Social Sciences Index of Abstracts (ASSIA) and Google Scholar identified 59 eligible publications. Most of the eligible studies were based on a cross-sectional research design and survey methods with few studies following cohorts over time or using qualitative methods of data collection. Nevertheless, the results were fairly consistent in showing that most people maintained their existing patterns of alcohol use after the pandemic (Bakaloudi et al., 2022; Public Health England, 2021).

The literature review identified that overall population consumption declined during periods of lockdown and that any increases in off-trade purchases did not compensate for decreases in on-trade sales when pubs, bars and restaurants were closed (Anderson et al., 2021a). The observed changes in off-trade sales and consumption during this 2-year COVID-19 window have been more nuanced and variable. It has been noted that for many, habits did not change. However, for others the pandemic created opportunities for an increase in at-home drinking in response to isolation and stress. There were also some who only drank outside of the home in the off-trade arena, whose consumption decreased during the lockdown periods.

Where changes were reported, these varied across studies with some reporting larger increases than decreases while other studies reported the opposite. However, the studies were in broad agreement that heavier drinkers were most likely to increase consumption and experience more alcohol-related harms in the period after the emergence of COVID-19. While there seems to be some consensus across the evidence base in terms of the broad direction of findings, it is important to note that the studies varied enormously in terms of their design, methods and samples.

The influence of alcohol pricing policies on consumption

Findings from systematic reviews of the literature on the effectiveness of pricing policies are broadly positive in terms of their impact on drinking and related behaviours. A review by Holloway et al. (2019) found only a small amount of tentative evidence to suggest that there would be negative consequences, such as switching to more harmful substances (either licit or illicit) after an increase in the price of alcohol. A second review by Buhociu et al. (2021) found favourable evidence of pricing policies in Scotland, Australia and Canada, but highlighted the need for further research in a wider range of social and cultural locations.

A third review updating the two previous reviews was conducted as part of this phase of the study. This review focused on literature published between March 2020 and May 2021 and involved searches of ASSIA and Google Scholar as well as searches of the grey literature. The searches identified 21 eligible studies including 10 from within the UK and 11 from other countries. The review found that Minimum Unit Pricing in Scotland was having a successful early impact in terms of increasing prices and reducing sales, consumption and alcohol-related harms with little evidence of any negative consequences (Alcohol Focus Scotland, 2021; Ferguson et al., 2021; Holmes et al., 2020; Robinson et al., 2020). Early findings in relation to the impact of

MPA in Wales were also found to be positive and mirrored those from Scotland (Anderson et al., 2021b). The review concluded that while the findings are largely positive, there is some evidence to suggest that other policies will be needed to sustain its positive impact in the longer term and again highlighted the need for further research.

The most recent research (published in the period after May 2021) includes a combination of quantitative and qualitative studies and has produced more mixed results than previously. In Australia, wastewater analyses identified an immediate decrease in alcohol consumption after the introduction of MUP. However, 1 year later this was followed by a bounce back to near pre-MUP levels, suggesting that the impact of minimum pricing may be short-lived (O'Brien et al., 2022).

In Scotland, MUP was found to have little impact on harmful drinkers in terms of their levels of alcohol consumption and some were found to have experienced financial hardship as a direct result of the policy (Holmes et al., 2022). However, many of the anticipated negative consequences did not materialise to any great extent with limited evidence of substance switching, acute alcohol withdrawal or violence.

While MUP led some drinkers in Scotland (particularly those living close to England) to participate in cross-border shopping, analyses suggested that this was unlikely to be on a scale that would affect population-level consumption (Patterson et al., 2022). However, a similar study that assessed changes in the level of cross-border purchases as a consequence of reduced alcohol taxes in Denmark compared to Sweden found that cross-border shopping for alcoholic beverages was associated, on average, with a 3.1% increase in alcohol use. Moreover, cross-border shopping was significantly associated with heavy alcohol use (Stafstrom, 2018). Increases in cross-border alcohol shopping were also reported across Baltic countries after tax increases in Estonia and Lithuania had considerably increased their alcohol prices and more alcohol purchases from Latvia were recorded (Neufeld et al., 2021; Pärna, 2020; Täht & Laarmann, 2019). This mixed pattern of results suggests that further evidence and evaluation research is needed to fully understand the long-term consequences of minimum pricing measures (WHO, 2022).

Methods

The aim of this study was to undertake a detailed qualitative study that would assess the perceived influences of COVID-19 and MPA on the wider population of drinkers in Wales. Interviews were conducted by telephone with 32 members of a cohort of 41 drinkers who had taken part in a baseline interview in the period immediately before the implementation of MPA in March 2020. The cohort had all agreed to be recontacted for the purposes of the evaluation and were therefore sent an invitation email asking them to participate in an additional wave of interviews. To help minimise attrition, participation in the longitudinal study was rewarded with a £10 Argos voucher per interview (Boys et al., 2003).

The original cohort of interviewees was recruited from three sources: the National Survey for Wales (NSW); a third sector organisation offering housing support to the homeless; and through an online survey on MPA. Recruitment through third sector organisations was based on convenience sampling with assistance from staff working within those organisations. In practice, this largely involved one member of the evaluation team spending time in the organisation's premises waiting for potential, eligible interviewees to turn up, although some interviews were pre-arranged by staff within the organisations. Recruitment through the online survey was also based on convenience sampling. At the end of the survey, all respondents were asked if they would be willing to take part in our longitudinal interview study. Those who were willing were asked to click on a link that would direct them

to a separate survey where they could provide their contact details.

Recruiting interviewees through the NSW was a staged process that involved the following: (1) obtaining a list of names and phone numbers for all those who had taken part in the NSW, identified themselves as alcohol drinkers and had agreed to be recontacted for research purposes; (2) stratifying the sample by type of drinker to include similar numbers of moderate, hazardous and harmful drinkers; and (3) randomly selecting 10 people from within each of these categories and inviting them (by telephone) to take part in our longitudinal study. Those who we were unable to contact or who changed their mind after initially agreeing were replaced by scrolling through NSW lists to identify people with similar characteristics to the person they were replacing (i.e., same type of drinker, living in the same Local Authority Area, the same sex and similar age).

Each of the 32 interviewees completed the Alcohol Use Disorders Identification Test (AUDIT) to ensure sample diversity consistent with the aims of this study (i.e., to assess the influences of MPA on different types of drinker within the wider population of drinkers). The AUDIT uses the terms lower risk (0–7), increasing risk (8–15) and higher risk (16+) to categorise drinkers on the basis of their scores. A score of 20+ on the AUDIT is sometimes categorised separately as "possible dependence" (Alcohol Screening Tool). These identifiers are included against each data example for added context. Usefully for this study, the sample included a mixture of drinkers, including six drinking at harmful levels (i.e., scoring 16+ on the AUDIT), 13 at hazardous levels (scoring 8–15) and 13 moderate drinkers (scoring 0–7).

The interview schedule was devised by the evaluation team (drawing on findings from previous research) with guidance from our Project Advisory Group, which included representatives from Welsh Government as well as people with lived experience of substance misuse problems and treatment. In line with the COVID-19-related restrictions on social distancing in place at that time, the interviews were all conducted by telephone and digitally recorded with permission from each interviewee. The recordings were subsequently transcribed securely and professionally by Transcriptum Ltd.

The interview adopted a semi-structured approach based on key themes that included the following: current drinking patterns; and awareness of MPA and the perceived influence of both COVID-19 and MPA on their drinking and purchasing patterns, their use of other substances and on their lives more generally. In practice, the interviews were "flexible but controlled" (Burgess, 1984) and based on an open rather than a rigid structure to allow interviewees the freedom to discuss a range of related issues (Bryman, 2016).

Analysis of the interview scripts was conducted using NVivo Version 20. An initial coding framework was developed based on the core themes of the interview schedule. Free or emergent codes were then added to the framework through the process of script analysis. This coding was quality assured by different team members checking each other's coding and/or leading on separate coding. This process ensured that the final extracted themes were borne out of the data rather than the personal interpretation of just one team member. In line with the recommendation of Neale and West (2015), we have avoided quantifying the qualitative findings. Instead, a form of semi-quantification has been adopted, using terms such as "a few", "several", "some", "many" and "most" in order to achieve maximum transparency with regard to the numbers of people giving particular responses or types of response (Neale et al., 2014).

Ethical approval for the research was granted from two universities (University of South Wales and Wrexham Glyndwr University). All interviewees provided consent verbally before the interview after reading an information sheet, which documented the aims and

purpose of the research, what their participation in the study would involve and how their data would be stored.

Findings

The results of this study are presented around the key themes confirmed through the analysis and extracts from the interviews are used to illustrate the findings.

In terms of demographics, the sample of 32 drinkers was fairly evenly split in terms of their sex, age and marital status. However, it was not at all mixed in terms of ethnic group with all of the interviewees defining themselves as White British or White Other. The sample included people living in a wide range of locations across Wales, although some areas were more heavily represented than others (e.g., Cardiff and Wrexham).

Changes in drinking patterns

Given the potential confounding influence of COVID-19 and lockdown on drinking patterns, interviewees were asked to reflect on their experiences with MPA as well as the perceived influence of COVID-19 and the associated lockdown on their drinking patterns. Most interviewees reported changes in their drinking in the period since March 2020; this included drinkers who increased their consumption and those who decreased the amount of alcohol consumed.

Most changes in drinking patterns were associated with COVID-19. Decreases were linked to the lack of socialising during lockdown while increases were attributed to feelings of loneliness, boredom and anxiety brought about by lockdown.

> … not that I drank a lot anyway, but because there's been… because we haven't been able to see people, because of lockdown and stuff, and nothing has been going on, I haven't had that need to drink. So, I think that's definitely reduced it, but still not by a lot, because I didn't drink loads in the first place. (Interviewee 1, male, lower risk)

> I: Okay, has COVID 19 had an impact on your drinking? Has lockdown had an impact?
> R: To be honest, when it first started and I moved into my property, I was drinking more and more and more.
> I: Why were you doing that?
> R: To be honest, I was lonely. When I was down the XXXX [homeless hostel], I had people who lived with me that I used to have a drink with, I used to talk to, I used to feed them. (Interviewee 2, male, possible dependence)

> Yes, just everything really. It got really depressing and stuff for a while there. My kids, not being able to get out for an hour's exercise and everything. So, yes. It was just… just to smile a bit to be fair. Everyone was just worried… stressed and worried. So, when I say to take the edge off, it was just to relax a bit more. (Interviewee 3, female, increasing risk)

Some interviewees described participating in a greater number of drinking sessions during lockdown, which resulted in an overall increase in the amount of alcohol consumed:

> I'd say we used to… before [lockdown] we didn't drink on Wednesdays or Fridays, and I think… sometimes we do now drink on Wednesdays and Fridays. So, it's gone from four, five days a week to six or seven. … I suppose it's a combination of factors that… because we don't have to get up early in the morning. My husband doesn't have to commute at the moment and things like that, so we go to bed a bit later. … Also, because you can't go out, I suppose. (Interviewee 4, female, lower risk)

Another commented that the restrictions on shop opening times had resulted in her

consuming larger quantities of alcohol more rapidly than previously:

> The lockdown's making me drink more … Since we've been in lockdown, I've no time.… Not being allowed out, that's not enough time. All the shops shut at 10, so you've got to get all your alcohol by 10 o'clock at night, half past nine at the latest. (Interviewee 5, female, possible dependence)

Several drinkers reported that their drinking patterns had fluctuated in the period since March 2020. For most, this involved an initial increase in quantity followed by a decrease in response to the easing of restrictions and, for some, an awareness that they had started to drink more than they had previously:

> That is probably back to what I used to drink. I definitely got a point during April… no, maybe not at soon as April but definitely May and June, I was drinking a lot more than maybe I normally would. More than that anyway. Again, not drinking until I was drunk a lot, I was drinking… noticing the fact that I was starting drinking at, maybe, 5 o'clock, having a couple of cans then with making tea, which persisted for a while, to be honest, until I checked it. (Interviewee 6, male, increasing risk)

The only MPA-related change was in relation to a harmful drinker who switched away from cider to vodka as the prices of the two became closer after the implementation of MPA.

> R: Yeah, I just think cider's about … 7.5%, I could get a bottle of this for £4. Now it's not that good a deal. I can get a bottle of vodka for like £8, so half a bottle.
> I: Okay. Would you say that it's minimum pricing that has caused you to change the drinking?
> R: Yeah, before then it was… because it was decent strength and lasts quite a while and it's four quid. (Interviewee 7, female, possible dependence)

Overall, the mixed findings reported support those of other researchers exploring drinking behaviour changes during the COVID-19 pandemic in the UK (Bakaloudi et al., 2022). While many reported changes, most appeared to have returned to pre-pandemic patterns by the time of interview. Indeed, drinking status (as measured by the AUDIT) remained broadly stable for most and the few who did report changes shifted to less harmful patterns of drinking.

Implementation of MPA

Most drinkers were unaware that MPA had come into force on 2 March 2020. Several explanations for this lack of awareness were given, including their drink/brand of choice not being affected by MPA:

> I really didn't notice because I wouldn't necessarily shop for a cheap wine or a cheap vodka. I would normally go for a branded product anyway, which wouldn't affect the price so much, because it's already at the minimum pricing anyway. (Interviewee 8, female, lower risk)

Other explanations offered by interviewees included the fact that they were not generally interested in the price of alcohol or that they had not had the chance to look more closely at prices of drinks, since they did not go physically to supermarkets due to the pandemic:

> Not really. When I buy drinks, I'm not too bothered about the pricing of it. So, if I see a brand or something I like to drink, I will buy it regardless of price and obviously since… and if implementation [of MPA] has been made, I haven't really noticed the difference, because I've not been one to just go with what's cheapest or better value. I've just gone with the ones I like. (Interviewee 9, male, increasing risk)

> I think it was probably because we weren't in supermarkets. When I do go to supermarkets, I do look at what is on offer and so that's probably… the reason is that we weren't going to supermarkets, and as we don't drink vast amounts, I'm not browsing online of what's going. (Interviewee 10, male, lower risk)

Those who were aware varied in terms of the point at which they noticed the change in price. For some, this was on the day of implementation but for others it took longer to reach their radar:

I: So, you've seen it straightaway?
R: Yes, everything went up overnight, didn't it? (Interviewee 11, male, increasing risk)
I: Can I ask you how soon after implementation did you notice this?
R: A couple of weeks. (Interviewee 12, male, lower risk)

When price changes were noticed, these were in respect of a range of alcoholic products, including strong ciders and beers, wine, spirits and even some lower alcohol products.

> I noticed they put that [cider brand] up to £10 for 3 litres, or £11 for 3 litres. That's all … Even the white… What's that cider called? [Brand]. [Brand of cider]. That's it. That made me laugh the other day. Someone put on Facebook that it was £10 or £11-odd to a bottle of it, like. (Interviewee 13, male, possible dependence)

> I noticed a bottle of vodka, not that I drink vodka, but as you go past you notice it's gone up from… one they used to sell at £9.99 to £13 something now with the minimum price I see on vodka. (Interviewee 11, male, increasing risk)

Changes were also noted in the price of bulk products (i.e., crates of lagers).

> Funnily enough, I was on my way to shopping when you rang the first time and I knew you were going to ring me back and I glanced at the price of crates of lager now, and they're almost £16, when before they were more like £10. (Interviewee 12, male, lower risk)

Most interviews perceived no change in the availability of alcoholic drinks. However, a few noticed that some products, including strong ciders, were no longer available:

I: Have you noticed any products being no longer available?
R: Yes, you don't see these strong ciders so much and I notice they're not advertised online now.
I: Did you notice that everywhere or just in one specific location?
R: Maybe everywhere, not so advertised, no. Certainly I would say the nasty white ciders; they don't seem to be quite as high profile in shops, so that must be good. (Interviewee 10, male, lower risk)

Changes in purchasing patterns

Most interviewees felt that they continued to spend similar amounts of money post-implementation of MPA. Some, however, reported increases while others described decreases. The reasons corresponded broadly with those given for the changes in quantities consumed and were predominantly related to COVID-19. Explanations for decreases were linked to restrictions on socialising and less opportunities for going out while explanations for increases were due to anxiety, boredom and feelings of isolation. One interviewee linked a change in their diet to the pandemic and the availability of different kinds of food:

I: So you changed to more wine than beer, and that sounds like it's a COVID issue rather than…?
R: It is a COVID issue, yes, because it's a slight change of diet, to do with the availability of food. (Interviewee 14, male, increasing risk)

Just one interviewee reported that MPA had affected their expenditure on alcohol:

> Well yes obviously because it went up as I already said from £2 to £5… two and a half times the price. So, whereas I was spending perhaps, £150 before over the time of a month, then I was spending £450. (Interviewee 11, male, increasing risk)

Along with the pandemic and MPA, some additional explanations were also given, including an increase in expenditure on alcohol to help them cope with a recent bereavement:

R: From last time I spoke to you yes, my drinking's gone heavier, yes.
I: And the reason for that is…?
R: I had a death… my auntie died about 2 days ago, you know what I mean? (Interviewee 5, female, possible dependence)

Those who increased their spending on alcohol had little difficulty funding the additional costs. Most were able to absorb the increase into their existing household budgets while others were able to use the money saved by not going out during the lockdown period:

I: Have you absorbed the price increase into your existing budget? Have you shifted around your finances or to free up some money?
R: No. Well, just within the financial budget I suppose is the answer. (Interviewee 10, male, lower risk)

Some drinkers, however, had to make changes to their spending habits to fund their continued use of alcohol. As predicted in previous studies, there was evidence to suggest that some harmful drinkers were funding their continued use of alcohol by spending less on food and necessities and by participating in more begging:

> Well, I've cut my food bill down for instance. I don't buy all the nice things I was buying. I still get my essential food and what I need to survive on, but I don't get as many biscuits, or the higher priced biscuits that I like more. (Interviewee 2, male, possible dependence)

I: Okay, so if you're spending more now than you used to on alcohol, how are you paying for that?
R: Cash.
I: And where are you getting that?
R: I go begging in the town centre. (Interviewee 5, female, possible dependence)

Most interviewees continued to purchase alcohol in the same way that they had done before MPA. However, the few who made changes described shifts to online shopping, home deliveries and greater use of local convenience stores, attributing these changes to the pandemic and the lockdown restrictions:

I: Have you changed how and where you purchase alcohol?
R: Yes, it's now 100% from the stores rather than drinking out with a meal or anything, but again, that's purely because of the pandemic. (Interviewee 4, female, lower risk)
R: The only reason really, I'm buying it more from a local supermarket now, the smaller supermarket, rather than going to the big stores like [supermarket name] and [supermarket name], because of the travel restrictions. I live in a village that is outside of the town and would be going 4 or 5 miles in the car to buy one bottle of wine - would it be essential? I think the answer is no, but…
I: And that's again because of COVID?
R: Because we can't travel, yes. (Interviewee 15, male, lower risk)
R: Yes, well over the last 6 weeks, we've been having deliveries, even better than click and collect…
I: Why did you switch from going into the shop?

R: Well, the pandemic… (Interviewee 16, male, increasing risk)

Use of other substances

During the scrutiny stages of the MPA Bill, concerns were raised about the possibility that some drinkers might switch from alcohol to cheaper illegal drugs as a result of an increase in the price of alcohol. However, as predicted in previous studies, most interviewees did not switch from alcohol to other substances during the follow-up period (Livingston et al., 2021; Buhociu et al., 2021; Holloway et al., 2019). For these drinkers, alcohol remained their substance of choice and switching to illegal drugs was not an option:

> No change. I didn't take them before and I don't take them now. (Interviewee 17, female, increasing risk)

> Nothing has changed. I don't take illegal drugs. I don't smoke weed or anything like that. Nothing has changed at all. (Interviewee 9, male, increasing risk)

Also, as predicted, switching to illegal drugs was only noted among dependent drinkers with histories of using these substances. One harmful drinker explained that the price increase resulted in her having less money to spend on alcohol and that she had turned to painkillers and tranquillisers to help her cope with alcohol withdrawal symptoms:

I: Have you been using other drugs?
R: Last week, yeah.
I: And is that unusual for you to do that? Is it a money thing?
R: A bit, because I couldn't get a drink and somebody offered me some Diazepam on tick until I got some money. I bought just a takeaway and cigs and that and then I bought some painkillers and somebody gave me some painkillers.
I: Oh dear. Is that unusual then? Would you normally do that or is this to do with minimum pricing in any way? The price of your drinks being more or is this some other reason?
R: A bit because I had no money to get a drink and I was just shaking and felt unwell. (Interviewee 7, female, possible dependence)

Another interviewee described an increase in the use of crack as a cheaper alternative to alcohol (a decision influenced by both MPA and the pandemic):

I: Okay and you're using more crack now… is that because you can't afford the alcohol?
R: Yes…
I: Okay and you're also using crack now… you were using crack before, but are you using more crack now?
R: Only on my pay day I do crack. I buy like a 50 stone every fortnight, when I get my money.
I: Okay, and have you always done that, or is it now more than it was before we spoke?
R: … Since I've been on lockdown and all the death, it drew me back to crack and drinking more. (Interviewee 5, female, possible dependence)

Finally, one other interviewee explained that he had stopped using illegal drugs and started using more alcohol. It is not wholly clear why, but it seems that COVID-19 restrictions impacted on his ability to purchase illegal drugs and led him to drink more alcohol:

> And that's how it started. Because I couldn't get crack then at 9 o' clock at night, or heroin, or what have you or any other drug, then that's when I started on the bottles of vodka then, and then now it's my habit then, and it's just got worse and worse and worse from there. (Interviewee 13, male, possible dependence)

Preparing for MPA

Almost all interviewees reported that they had done nothing to prepare for the implementation of the MPA legislation. The only exception was an interviewee who vaguely speculated that he "might have" purchased a "nice" bottle of whisky before its price went up:

> I might have bought a bottle of whisky from [supermarket], a nice Scotch, but like one bottle, nothing excessive. And I don't think… it went up by like £2, so it's not very noticeable and it's a decent whisky in its price range anyway. (Interviewee 18, male, increasing risk)

The main reasons provided by interviewees for not making any preparations for the introduction of MPA were because they were not drinking enough alcohol to be affected by any price increase or because their drink of choice was not affected significantly by MPA:

> There was no need for me. Like I say, if I was buying a lot then I would have stocked up, but I didn't need to. (Interviewee 12, male, lower risk)

> To be honest, for myself with lager in the cans, it hasn't really changed the price… But to be honest, because I don't drink spirits, or I don't drink flagons of cider, the prices for me haven't changed much. (Interviewee 2, male, possible dependence)

Publicity about MPA before its implementation was noted by the majority of interviewees. A variety of sources were mentioned including the following: online (news sources and social media); television and/or radio; and posters in supermarkets or third sector organisations. However, an important minority of interviewees had not noticed any publicity, and several were surprised that they had not noticed more:

> No, I didn't see anything to be honest. In fact, if you hadn't have mentioned to me, I wouldn't have really noticed. (Interviewee 18, male, increasing risk)

> It amazes me really, because critically, it seems a good idea and I would have thought it would have been promoted by the Welsh Assembly, at least as something we've done as a policy matter. But I didn't see anything at all before the introduction and I haven't seen anything since. It's very strange really. (Interviewee 15, male, lower risk)

Discussion

This study is the first to gather feedback on the perceived influence of MPA on drinking patterns and related behaviours in Wales. It is also one of the first in the UK (and one of very few studies across the world) to have examined COVID-19's influence on drinking patterns using a longitudinal design and qualitative research methods. The research differs from previous research on MPA in Wales in that it is based on real-life scenarios rather than predictions of events. It has therefore enabled us to monitor whether the anticipated changes, including possible unintended consequences, have in fact materialised and been borne out by events.

The feedback gathered from this qualitative sample suggests that, to date, the implementation of MPA has had little influence on the drinking patterns or lives of the drinkers in our sample. While some drinkers reported increases and others decreases in consumption after implementation, interviewees felt that these changes were attributed, in all but one case, to COVID-19 rather than to MPA.

In line with COVID-19-related research from around the world (e.g., Australia, the US, France, Denmark and Norway), increases in alcohol consumption were linked to loneliness, boredom and stress while decreases were linked mainly to a lack of socialising during periods of lockdown (Biddle, 2020; Birkeland Nielsen et al., 2021; Flaudias et al., 2020;

Hagen et al., 2022; Hviid et al., 2023; Rodriguez et al., 2020; Searby et al., 2022).

There was some evidence to suggest an increase in the frequency of drinking sessions, which resulted in an overall increase in the amount of alcohol consumed. This appears to contradict the findings of a study in Norway, which reported that young people had fewer drinking sessions during lockdown due to a close relationship between in-person social interactions and frequency of drinking (Hviid et al., 2023). The COVID-19-related restrictions on shop opening times led some drinkers to consume larger quantities of alcohol more rapidly than previously. Overall, the mixed findings identified in this study support those of other researchers exploring the impact of COVID-19 on drinking patterns in the UK and other countries (Prestigiacomo et al., 2021; Public Health England, 2021; Wisk & Buhr, 2021).

This mixed set of findings is also visible in the Scandinavian countries, which traditionally have strict policies in terms of alcohol sales. The global COVID-19 pandemic in 2020 had affected these countries' alcohol sales and consumption as well. In 2020, there were increases in state-run "monopoly" alcohol sales in Finland (12%), Sweden (12%), Norway (40%) and Iceland (20%). On the contrary, on-premise alcohol sales were significantly limited across all Nordic countries, with restaurants and bars having restrictions in both opening hours and customer capacities, or perhaps even having to close temporarily (Häkkinen, 2021, p.12; Leifman et al., 2022).

The virtual absence of a shift from one form of alcohol to another stronger form is interesting given that it was a widely anticipated outcome predicted in earlier studies. This finding may be explained in part by the small number of harmful drinkers in this study. However, it is consistent with research from Scotland, which has found fairly limited evidence of shifts from one type of alcohol to another even among harmful drinkers (Holmes et al., 2022).

In line with patterns of consumption, in the period after implementation, some drinkers felt they were spending more on alcohol while others felt they were spending less. Most drinkers were able to absorb any increase in expenditure into their existing household budgets while others were able to use the money saved by not going out during the lockdown period. However, as reported in other studies, a small number of harmful drinkers funded their continued use of alcohol by changing their household purchasing patterns and by participating in more begging. This shifting of household budgets was also reported among harmful drinkers in Scotland after the implementation of MUP (Holmes et al., 2020, 2022).

Importantly, the widely anticipated negative consequences of increasing the price of alcohol were not widely reported within our sample. Indeed, as predicted, most drinkers did not switch from alcohol to other substances during the follow-up period. The few cases where potentially harmful behaviours (e.g., a shift to crack and tranquilliser use) were reported were among dependent drinkers and those with histories of illegal drug use. These findings are consistent with those emerging from Scotland, which have found that predictions about substance switching had not materialised to any great extent (Holmes et al., 2020, 2022).

Whether the positive influence of minimum pricing on consumption and alcohol-related harms noted in Scotland before the pandemic will materialise in Wales, now that COVID-19-related restrictions have been lifted, remains to be seen. The next wave of data collection, which will include a repeat of the online survey as well as another wave of interviews, will be 2 years after implementation and hence some considerable time after any significant national lockdown in Wales. It therefore offers the first real opportunity to assess the impact of MPA without the confounding impact of the restrictions associated with a global pandemic.

The clear take-home message from this study is that COVID-19 had more relevance to

drinkers than MPA. Furthermore, when MPA did have an influence, it was felt most keenly by the harmful drinkers in the study, which is consistent with findings of similar studies that looked at the influence of minimum pricing policies on this population (Angus et al., 2016; Black et al., 2011; Mäkelä et al., 2007). These drinkers described spending more on alcohol, switching to other potentially more harmful substances, such as crack cocaine and synthetic cannabinoids, and more involvement in acquisitive crime and begging after the price increase. While this might be an early indication of how MPA can affect this group, the small sample of harmful drinkers in our study limits the generalisability of the findings. It is therefore important that future research examines the longer-term influences of MPA on a larger sample of harmful drinkers before any conclusions on its effectiveness can be drawn.

Limitations

There are several other limitations to this study. First, it is important to note that the sample of 32 interviewees was a sub-sample of the longitudinal study sample ($n = 41$). Attrition is not uncommon in longitudinal research and this project is no exception. Indeed, it was not possible to include 10 members of the original baseline sample in the study. Fortuitously, with the kind assistance of one of our "hostel" contacts, one member of the hostel sample was replaced with another harmful drinker. However, it was not possible to replace the others for several reasons, including ethical obligations to protect people from harm (e.g., stress, anxiety and pressure), particularly during a global pandemic, and the resource implications of recruiting new sample members from the NSW.

Second, while the follow-up sample of interviewees is usefully diverse in many respects, including drinking patterns, sex, age and marital status, it must be noted that minority ethnic groups are not well represented. Furthermore, some areas of Wales (e.g., Cardiff and Wrexham) are more heavily represented than others. Caution must therefore be taken when generalising the results beyond those represented in the research.

Third, it could be argued that a sample of 32 individuals limits the generalisability of findings. However, given the predominantly qualitative nature of this study, it is important to note that generalisability was not one of its core objectives. Rather, the results presented here have provided a "new and richly textured understanding" (Vasileiou et al., 2018, p.2) on the perceived influences of COVID-19 and MPA on drinking-related behaviours of a sample of people living in Wales. These findings therefore add important qualitative detail to the evidence base, which, until recently, has been predominantly quantitative in focus.

Finally, it is important to note that the research was based on retrospective accounts of behaviours that occurred during the midst of a global pandemic. Accuracy of recall is an issue in any research project involving self-report methods, particularly one involving alcohol consumption, where recollection of events may be clouded by intoxication. The added stress of coping with the COVID-19 pandemic may well have compounded this methodological problem. Any conclusions drawn from the research must therefore be considered with these limitations in mind.

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