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Burton, S ORCID logoORCID: <https://orcid.org/0000-0003-3823-3275>, Irizar, P ORCID logoORCID: <https://orcid.org/0000-0003-0078-1372>, Allen, E, Beauchamp, A, Nicholls, E, Porcellato, L ORCID logoORCID: <https://orcid.org/0000-0002-8656-299X>. Prentice. M. Rose. AK ORCID

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Exploring women's views toward no-lo alcohol products during pregnancy: a photo elicitation guided qualitative study

S. Burton^{a,b}, P. Irizar^a, E. Allen^a, A. Beauchamp^a, E. Nicholls^c, L. Porcellato^d , M. Prentice^a, A. K. Rose^a, J. Smith^a, D. Zhelyazkova^a and Z. Kougiali^a

^aSchool of Psychology, Liverpool John Moores University, UK; ^bDepartment of Women's & Children Health, King's College London, UK;

^cDepartment of Sociology, University of York, UK; ^dSchool of Public and Allied Health, Liverpool John Moores University, UK

ABSTRACT

Background: Pregnancy encompasses a period of socially expected and medically advised abstinence from alcohol. The UK has one of the highest rates of alcohol exposed pregnancies globally. 'Non-alcoholic and low alcohol' (NoLo) drinks may provide a viable means to support abstinence or harm reduction. We explore women's views towards NoLo products including consumption barriers and enablers.

Methods: We conducted 18 semi-structured photo-elicitation interviews with women who were pregnant within the UK. Findings were analysed using reflexive thematic analysis.

Results: Two themes were identified: 'navigating the sociocultural environment' and 'navigating the NoLo market'. Women used NoLo products to help adhere to societal norms of abstinence in pregnancy, while navigating the social expectation to consume alcohol in social environments. The NoLo market was viewed as hindering the adoption of NoLo products, with issues around inconsistent guidance and labelling, pricing and availability.

Conclusions: NoLos can aid social inclusion and satisfy social cravings for alcohol-adjacent products. Unclear guidance around 'risk' and perceptions of the possible 'harms' of low-alcohol drinks impacts consumption. Given pregnancy's high-risk nature for alcohol-related harm, clear, evidence-informed guidance on NoLos is crucial for potential harm reduction. Specifically the need for clear marketisation and labelling between No and Low alcohol products.

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Introduction

Alcohol is widely consumed among women of child-bearing age, with prenatal use being a leading preventable cause of birth defects and intellectual disabilities (Baer et al., 2003; Dejong et al., 2019). It is estimated that one in every 13 alcohol-exposed pregnancies (AEP) results in fetal alcohol spectrum disorder (FASD), costing the United Kingdom (UK) an estimated £2 billion annually (Schölin et al., 2021). Despite revised guidelines recommending abstinence during pregnancy (Department of Health, 2016), the UK has one of the highest rates of AEP globally, with 28.5% of women reporting alcohol consumption following pregnancy recognition (Mårdby et al., 2017), leading to a high estimated prevalence rate of FASD (1.8-3.6%) (McCarthy et al., 2024). This speaks to how culturally embedded alcohol remains in the UK, with drinking to intoxication (at least outside of pregnancy)

normalized, expected, and socially entrenched (Measham & Brain, 2005).

NoLo (nonalcoholic and low alcohol) products are defined as containing between 0 to 1.2% alcohol-by-volume (ABV) within the UK (Department of Health & Social Care, 2018). These products vary in ABV, as non-alcoholic products have no more than 0.05 to 0.5% ABV (depending on regional definition), while low-alcohol products contain between 0.5-1.2% ABV (Okaru & Lachenmeier, 2022). Despite the distinctions between 'no' and 'low' products (in terms of fetal risk during pregnancy, for example) they are often considered together or conflated. Over the last 10 years, sales of NoLo products have grown substantially within the UK (Corfe et al., 2020; Holmes et al., 2024). NoLo products have been recognized as a potential alcohol harm reduction strategy, acting as a substitute for standard strength alcohol products (Jané Llopis et al., 2022) and

CONTACT S. Burton  s.p.burton@lmu.ac.uk  School of Psychology, Liverpool John Moores University, Tom Riley Building, Byrom Street, L3 3AF.
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allowing individuals to experience the social aspects of drinking (Atkinson et al., 2024) without the associated stigma nondrinkers experience (Banister et al., 2019; Piatkowski et al., 2024). While debate around the public health impacts associated with the use of NoLo drinks is ongoing (Davies et al., 2025), there remains a lack of research on their potential role in the (non) drinking routines and everyday practices of specific populations that are recommended to engage in abstinence (e.g. those who are pregnant).

There is no known safe level of alcohol consumption during pregnancy and as such abstinence is recommended in most regions, with NoLo – or at least ‘no’ – products potentially serving as an appealing and feasible substitute product for pregnant women (Adiong et al., 2014). Previous research indicates that women who regarded themselves as ‘drinkers’ pre-pregnancy and chose to reduce their drinking during pregnancy have been shown to use NoLo products as alternatives to standard strength alcohol products (Nicholls, 2023), with estimates suggesting 7% of people use them specifically for reasons associated with pregnancy (their own or partner’s) (Corfe et al., 2020) and to feel socially included (Frennesson et al., 2024). However, given inconsistencies in labeling there is a potential lack of clarity around the safety of NoLo products during pregnancy (Corfe et al., 2020). Labels have been found to be inaccurate, with 29% of products reviewed appearing to have higher levels of ethanol than reported and those claiming to be alcohol free having up to 1.8% ABV (Goh et al., 2010), this is further confounded by variations in definitions of ‘alcohol free’ across countries (Anderson et al., 2021). Some research therefore suggests that despite NoLo products having the potential to be an efficacious harm reduction strategy, women during pregnancy may still be exposed to unintended levels of alcohol due to this lack of clarity around the distinctions between ‘no’ and ‘low’ alcohol and the mislabeling of products (Goh et al., 2010; Shemilt et al., 2017).

This can also be linked into wider uncertainties around risk, alcohol consumption and pregnancy more broadly. For example, a recent systematic review on women’s views and experiences of abstinence during pregnancy identified a lack of reliable and consistent information, inadequate communication from health professionals, misunderstood public health messaging, and the influence of social norms and cultural context on their choices (Hammer & Rapp, 2022). Recent qualitative studies have explored reasons behind women’s drinking during pregnancy (Martinelli et al., 2019; Meurk et al., 2014), their perceptions of risk around moderate drinking (Meurk et al., 2014) and the

expectations of abstinence during transitions to parenthood (Skagerström et al., 2015). However, no study has specifically focused on women’s experiences of using NoLo products while pregnant, representing a key gap in the identification of decision-making processes, our understandings of women’s perceptions of ‘risk’ and ‘harm’ in relation to NoLos and pregnancy and the role NoLos may play in facilitating social inclusion in alco-centric cultures where drinking remains embedded and expected but drinking *during pregnancy* is rendered socially unacceptable. Further research is required to understand how women navigate these tensions whilst also faced with a lack of specific guidance alongside inconsistent zero-alcohol labeling and marketing strategies that frequently conflate ‘no’ and ‘low’ products.

Social Norms Theory suggests that individuals’ drinking behaviors are shaped by what they perceive as typical within their social group (Perkins & Berkowitz, 1986). In alcohol-centric cultures, NoLo products may allow pregnant women to conform to social expectations around drinking without consuming alcohol. By mimicking alcoholic drinks in appearance and context—such as using the same vessels or joining in toasts—NoLo products support inclusion in social rituals and reduce stigma around abstention (Cherrier & Gurrieri, 2013; Davey, 2024). This social utility may be especially relevant during pregnancy, when abstinence is expected, but alcohol remains central to social interaction. Broader gendered and neoliberal ideals also shape women’s alcohol-related choices. In consumer-driven societies, drinking is often framed as a way for women to express autonomy, confidence, and modern femininity (Gill, 2008; Nicholls, 2019). However, alcohol use remains culturally coded as masculine, and women continue to face conflicting expectations—to participate socially while upholding norms of self-control and respectability (Atkinson et al., 2022; De Visser & McDonnell, 2012; Griffin et al., 2013). These tensions are heightened during pregnancy, when social and moral expectations of responsibility become more intense (Emslie et al., 2015; Schmidt, 2014). Within this context, NoLo products may offer a socially acceptable way for women to engage in drinking rituals while aligning with ideals of feminine control, care, and maternal respectability.

Understanding factors that increase or decrease the likelihood of AEP is essential to tailor public health messaging effectively (Addila et al., 2021; Chambers et al., 2019) and inform future health/alcohol policy (Nicholls, 2023) by guiding clearer labeling policies, tailored health messaging, and clinical communication around NoLo consumption during pregnancy. Clear communication and education about alcohol strength categories can

empower individuals to make more informed decisions, reducing the risk of harm associated with AEP. The current study aimed to address the existing research gaps by drawing on women's everyday accounts to examine their views toward No-Lo consumption during pregnancy with a focus on the factors that may drive or deter consumption. This study is informed by a conceptual framework of NoLo consumption during pregnancy that incorporates harm-reduction, social norms, and communication of guidance.

Methodology

Design

Photo elicitation is a visual methodology stemming from hermeneutic theories (Margolis & Zunjarwad, 2018), utilizing participant generated photographs and elicitation interviews. Photos serve as a means to engage in aspects of lived reality and acknowledge social and economic contexts (Copes et al., 2018), while "staying close to participants' view of their life" (Padgett et al., 2013). Photo-elicitation allows participants to select images to present experiential accounts, supporting participants to center what is important and significant to them and aiding in equalizing power imbalances created by the researcher using devised or even prescriptive interview schedules (Burton et al., 2017). This interviewing technique also provides a visual dimension to unobservable emotions, thoughts and experiences (Patton, 1990) and was selected purposefully to add depth and insight into women's views of NoLo alcohol products in a highly visual and visible alco-centric culture where women are regularly exposed to alcohol-related marketing, imagery and cues. In other words, photographs can serve as visual tools and prompts to 'get at' potentially abstract views, beliefs and perspectives.

The study employed a critical realist epistemological position (Bhaskar, 1978; Sayer, 2000). Critical realist definitions suggest that there is a reality independently existing but is not 'fixed nor stable' and direct access is impossible (O'Mahoney & Vincent, 2014). Such a position emphasizes the role of language and how it constructs social realities while recognizing the material world, and how said possibilities and constraints inherent within it (e.g. biology) shape constructs (Sims-Schouten et al., 2007). This approach reflects the central aim of this study: to understand and explore women's views toward NoLo products during pregnancy, and what may shape their perception of said products, while accounting for socially constructed elements of their experiences and the ways these are recounted.

Participants

Eighteen women were recruited, through crowd-sourcing on Prolific (an online pool of participants) (Palan & Schitter, 2018). Participants were reimbursed with £25 upon completion of the study. Sample size was reflected upon and decided based on information power, a concept aligning with the principles of the adopted qualitative research design, aims and analytical approach, which suggests that the more relevant information the sample holds, the fewer participants are needed (Braun & Clarke, 2021b; Malterud et al., 2016).

The inclusion criteria were aged 18 years or over, live in the UK, fluent in English, consumed alcohol prior to pregnancy, and currently pregnant, which were subsequently used to screen for participants for on the Prolific system. We recruited 18 participants (Table 1) with a mean age of 32.44 (± 3.62), ranging from 25 to 39, all identified as female. 115 participants were sent the invite on Prolific to take part, of which 25 wished to take part. The 25 individuals were approached by the research team (SB, EA, MP), 4 declined to take part due to time, 3 did not respond following the workshop. Participants came from diverse ethnic and socio-economic backgrounds, and all were from England.

Procedure

Ethical approval was obtained from Liverpool John Moores University Research Ethics Committee (24/PSY/032). All participants were sent an information sheet and written consent form before one-to-one training sessions and interviews took place. Verbal consent was also ascertained at the start of the interview. Participants were invited to attend a one-to-one training session, prior to said session they completed via Prolific demographics questions and the AUDIT (Barbor et al., 1992) in relation to drinking behaviors prior to pregnancy. This data was used to describe the participant population, researchers were unaware of participant AUDIT scores at time of the interview to avoid bias. During the training session, the principles of photo elicitation and ethics of photography were discussed. Participants were asked to take as many pictures as they liked, of NoLo products or items they believed related to NoLo products, over a one-week period using their own smart phone. Interview participants were then asked to choose around five images to share during the interview. This activity not only provided prompts for the interview setting, but encouraged participants to start reflecting on their views toward NoLo and pregnancy and to notice the ways in which these products were made visible in their everyday lives. Given the sensitive and stigmatizing nature of alcohol use during

Table 1. Participant characteristics.

ID	Age	Ethnicity	Relationship status	Education	Employment	Household Income (£ thousand)	Region	Sexuality	Number of Children	Weeks pregnant at taking part	AUDIT score
1	32	White British	Married or Co-habiting	PhD	Employed, full time	75	England, North West	Heterosexual	1	36	4
2	37	White British	Married or Co-habiting	Master's degree	Employed, full time	80	England, East Midlands	Heterosexual	1	33	5
3	25	Black Other	Married or Co-habiting	Master's degree	Employed, full time	49	England, East Midlands	Heterosexual	1	33	23
4	29	White British	Married or Co-habiting	Bachelor's degree	Employed, full time	94	England, Yorkshire and the Humber	Heterosexual	0	18	7
5	32	White British	Married or Co-habiting	Secondary School/College (e.g. A-Level)	Employed, full time	24	England, South West	Heterosexual	0	28	13
6	35	White British	Married or Co-habiting	Bachelor's degree	Employed, full time	95	England, South East	Heterosexual	1	32	3
7	35	Black Other	Married or Co-habiting	Master's degree	Stay at home mum	60	Scotland	Heterosexual	1	16	1
8	33	Black Other	Married or Co-habiting	Master's degree	Employed, full time	33	England, London	Heterosexual	1	18	11
9	39	Asian British	Married or Co-habiting	Bachelor's degree	Employed, full time	79	England, South East	Heterosexual	2	20	1
10	35	White British	Married or Co-habiting	Bachelor's degree	Employed, full time	80	England, North West	Heterosexual	1	16	7
11	29	Black Other	Married or Co-habiting	Master's degree	Employed, full time	76	England, East Midlands	Heterosexual	1	18	1
12	36	Black British	Single	Bachelor's degree	Maternity Leave	19	England, West Midlands	Heterosexual	2	26	25
13	34	White British	Married or Co-habiting	Bachelor's degree	Employed, full time	100	England, South East	Heterosexual	1	18	5
14	34	Black Other	Married or Co-habiting	Master's degree	Employed, full time	41	England, London	Heterosexual	1	31	10
15	33	White British	Married or Co-habiting	Trade/Technical/vocational training	Maternity Leave	79	England, South East	Heterosexual	0	38	4
16	31	Asian British	Married or Co-habiting	Secondary School/College (e.g. A-Level)	Employed, full time	55	England, South East	Heterosexual	1	Yes	16
17	25	Asian British	I prefer not to answer this question	Secondary School/College (e.g. A-Level)	Employed, full time	44	England, Yorkshire and the Humber	Heterosexual	1	Yes	0
18	34	White British	Married or Co-habiting	Doctorate degree	Employed, full time	66	England, South East	Heterosexual	0	Yes	6

pregnancy, researchers emphasized that confidentiality would be maintained to encourage honest discussions, and we did not ask about alcohol consumption during pregnancy, only NoLo consumption.

Semi-structured, online, photo-elicitation interviews followed a participant-led approach whereby participants were free to describe their views and experiences and the interviewer acted as a facilitator prompting further reflections and seeking clarification rather than following a prescriptive interview schedule. The interviews focused on participants' reflections around the photography task, their NoLo drink consumption and potential changes in their attitudes toward NoLo drinks. The photos chosen by participants were used as a starting point for a reflective discussion on these topic areas. Interviews were conducted by SB, MP and EA, lasting between 20 and 56 minutes, and were audio recorded. All participants produced 5- to 6

photos, these included NoLo products, drinks menus, NoLo products in shops as part of a marketing piece and National Health Service (NHS) guidance on alcohol use in pregnancy. All participants were provided with the same debrief material, with signposting to NHS services around maternal alcohol use and third-party services through charities (both for alcohol use in general and during pregnancy).

Reflexivity

The research team is comprised of individuals both with and without children, and members with lived experience of pregnancy and/or NoLo consumption. Reflexive notes were taken regularly to explore how the researchers' background and lived experiences may have shaped, influenced or informed this research and its outputs (Nightingale & Cromby, 1999).

Analytic strategy

Reflexive thematic analysis (RTA) was conducted in an interactive and inductive cycle (Braun & Clarke, 2006, 2021a). Reflexive thematic analysis was chosen as the preferred analytical method due to its interpretive approach. This approach facilitates the identification of patterns across a relatively large dataset that requires examination within the current sociocultural context and highlights the need for the research to have actionable outcomes that can inform policy and practice.

NVivo qualitative software was utilized to code interviews and to support data handling and organization (Nowell et al., 2017). Photos were not included in the analysis, functioning as prompts during the interviews themselves. Codes from the transcribed interview data were grouped into initial themes and, subsequently, discussed and negotiated within the research group. The role of multiple researchers involved in analysis and interpretation was sought as a means of enhancing interpretive depth and enhancing rigor (Braun & Clarke, 2013; Koch, 1994), rather than for 'accuracy' or 'reliability', which differentiates RTA from other approaches to TA (Braun & Clarke, 2013). Themes were revised, refined

and reconceptualised following discussion within the research team, until a final thematic framework was developed (Koch, 1994; Tracy, 2010)

Results

The data highlighted pregnancy as a transitory period marked by alterations in women's everyday practices and choices as they navigate the wider cultural imperatives to consume alcohol alongside the condemnation of doing so during pregnancy. During the analysis of the dataset, it became clear that women's choices of NoLo could not be understood in isolation but as part of a broader socio cultural and risk-related context. Participants talked about their choices in terms of alcohol and NoLo products as situated within a broader set of sociocultural norms, gender norms and expectations that guided agentic action. NoLo consumption appeared to facilitate certain aspects of social life during pregnancy and the post-natal period, however navigating the NoLo market safely presented certain challenges. This section will focus initially on presenting the sociocultural framework that appeared to affect

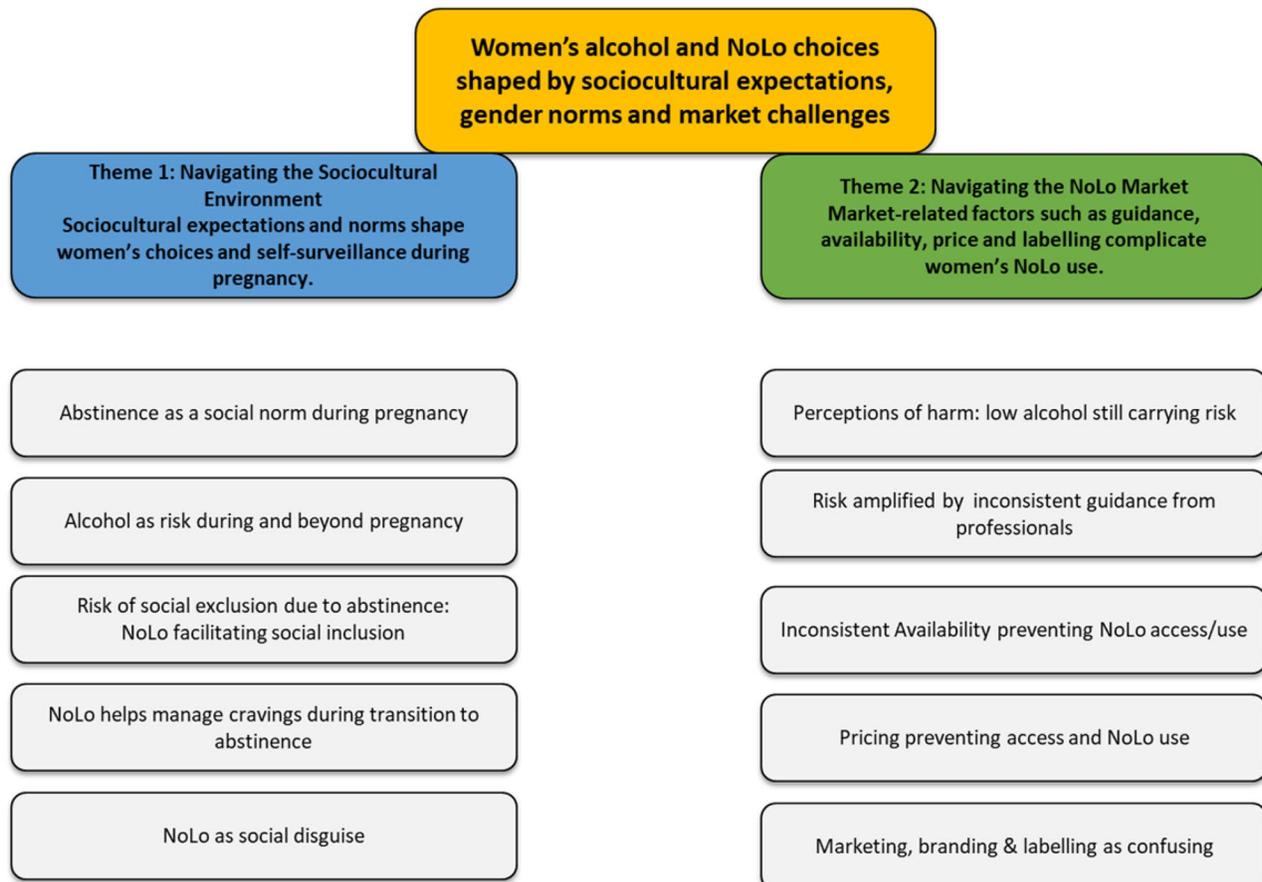


Figure 1. Thematic map.

women's choices and actions (Navigating the sociocultural environment theme) and proceed to the discussion of challenges women were presented with when navigating the NoLo market (Navigating the NoLo market theme), see [Figure 1](#) for thematic map.

Navigating the sociocultural environment

Abstinence as a social norm during pregnancy

Participants discussed their perception of abstinence during pregnancy as a societal norm, noting how advice was consistent around alcohol as a source of harm to the unborn baby. This norm was seen as a moral imperative, reflecting a broader cultural emphasis on motherhood ideals and maternal responsibility for the protection of the unborn child, alongside the social construction of the pregnant body as subject to monitoring and (self-)governance. P16 highlighted the consistency of this messaging through the use of the word "always" suggesting advice is unambiguous, leaving little room for interpretation and deviation from the norm for the generalized 'you', referring to all mothers. The phrase "It's not good for the baby" reinforces the notion that alcohol consumption during pregnancy is inherently harmful, aligning with broader public health discourses that prioritize fetal well-being. At the same time, the use of 'shouldn't' here reinforces abstinence as a type of moral obligation or imperative:

It is always advised that if you're pregnant you shouldn't be drinking... It's not good for the baby. (P16)

Abstinence guidance, while consistent from healthcare professionals in discussions, did not always appear to be consistent within family networks, with generational differences in abstinence becoming apparent. P18's experience highlights the tension between current health advice and historical practices. The mention of a sister who drank occasionally during pregnancy and an aunt who smoked reflects a past where such behaviors were more socially acceptable and highlights the socially constructed and historically contingent nature of 'risk'. Such a generational gap underscores the dynamic nature of societal norms, which evolve in response to new scientific evidence and changing cultural values:

It's all on the NHS page, the midwives tell you from the beginning, it's pretty obvious you're not supposed to drink. Everybody knows, although I will say, my sister's got three teenagers and she was like 'well, you can have a glass of champagne. I drank a few times when I was pregnant'. And then I've got my auntie who's even older and she was like, 'I smoked when I was pregnant'. So, things have obviously changed quite recently. (P18)

Here, the phrase "things have obviously changed quite recently" implies the participant's understanding of a rapid shift in attitudes, suggesting societal expectations may fluctuate because of new information or socially-shaped thresholds of 'acceptable' risk during pregnancy. This also highlights how women are required to adapt to shifting guidance and expectations as previously embedded 'truths' about alcohol, pregnancy and risk become reconfigured and new 'truths' and moral obligations circulate. Given the societal norm of abstinence, participants unsurprisingly felt like they were under surveillance and reported feeling guilt and shame even when not drinking, for example when looking at alcohol products within a shop. Participants noted how if they saw someone in their situation they would attribute "quick judgements" (P16) toward said individual.

Even when I went to the Co-op to buy my friend a bottle of wine to say thank you for something, I was conscious that other people might be looking at me and thinking, 'she's pregnant. She's buying a bottle of wine'. (P4)

P4 attributes a certain set of thoughts and judgements, from the generalized others ('people') linked to the act of a pregnant woman buying a bottle of wine; in this scenario the participant is positioning herself in a role where she is judged for buying a bottle of wine, even though her intention was not to consume it herself. This internally constructed and performed interaction, highlights the ways in which the pregnant body continues to be perceived as policed by others but also the self, where women position themselves in the role of the wrongdoer. Women appear to be internalizing a disciplinary gaze that subsequently affects their own behaviors and extends to practices *beyond* alcohol consumption (such as the mere presence of the pregnant body in the alcohol aisle of a supermarket).

Alcohol as a source of harm and risk during and beyond pregnancy

Against this backdrop, participants constructed alcohol consumption as inherently harmful and risky during both pregnancy and the postnatal period (specifically in relation to breastfeeding):

Why risk myself and my baby? (P3)

Here and elsewhere in the data, alcohol is construed as an *unnecessary* risk. P3 presents alcohol as a risk to 'myself' as well as 'my baby', and others also echoed wider framings whereby alcohol is increasingly constructed as a product of harm even outside of pregnancy:

I know a lot about the effects that alcohol can have and that's even when you're not pregnant (P1)

Post-partum, participants also believed they should consume only lower strength alcohol while breastfeeding, yet ambiguity remained as to whether it was safe for the baby to have *any* alcohol at all. One participant noted how, during pregnancy, harms are actively discussed, but this lapses in the postnatal period. This reflects a broader societal concern for the well-being of infants and a recognition that risks associated with alcohol consumption do not end with childbirth yet also captures an enduring and ongoing preoccupation with the *pregnant* body, whilst the postnatal body is framed in a more ambiguous way in relation to 'risk'. Mindful of this concern, participants in the study expressed a desire to make informed choices that balance their own needs with the health and safety of their babies:

Maybe if people weren't aware and want to make those choices in their life, those lifestyle choices, but they are perhaps worried about their health, because midwives are very quick to tell you about all the bad things in pregnancy, but they wouldn't necessarily say, 'oh, but it's OK in breastfeeding'. (P4)

P4 highlights a significant gap in information and guidance provided to new mothers. While healthcare professionals are diligent in discussing the risks associated with alcohol consumption during pregnancy, the same level of attention is not given to the postpartum period. This discrepancy leaves mothers feeling uncertain and anxious about making the right choices for their babies. The phrase "midwives are very quick to tell you about all the bad things in pregnancy" underscores the emphasis placed on pregnancy risks, while the lack of similar guidance during breastfeeding is perceived as a neglect of an equally important period where women still hold their child's health and safety as paramount. Such a protective instinct is highlighted by P2 who states "I was very conscious of" reflecting heightened awareness and a sense of duty to protect their baby irrespective of clear guidelines:

I think I still would be inclined to have a low alcohol choice. Just because obviously, you might be driving. Or to be honest, with my first baby I was breastfeeding a lot, so I was very conscious of - I didn't really go back to having alcohol that much. (P2)

Despite the lack of consistent guidance women still believe alcohol presents a level of risk of harm to the baby post-partum, highlighting the ways in which the self-surveillance of the pregnant body continues *beyond* childbirth. Disparity in knowledge was evident



Figure 2. P14 describing feeling left out when others have a glass of alcohol and they do not, when with family at a pub.

yet overriding this was a sense of protectionism and attempting to mitigate risk for the baby both during and after pregnancy. The construction of alcohol as inherently 'risky' appeared to act as a key motivator for women to consume NoLo products and adopt harm reduction strategies in relation to their alcohol consumption.

NoLo consumption to facilitate social inclusion: the 'odd one out'

Multiple participants discussed how consuming NoLo products allowed them to feel socially included and connected in alco-centric settings and contexts. In these environments, an alcoholic drink (including NoLos) is needed for the individual to feel normal and comfortable, and to participate in socializing events (see Figure 2). Participants allude to wanting to fit in with their peers, engaging in practices such as consciously purchasing the same drink as others (but the alcohol-free version), displaying fear of being left out or even ostracized due to abstinence:

We hosted a party last week. We had a couple of no alcohol [drinks] because I don't want to feel left out. I bought a version of no alcohol of the same drink. (P3)

You are the odd one out then, aren't you? Because you've got a can and everyone else has got a glass. So, you are the odd one out. (P14)

Then you don't feel left out, like everybody has a glass of Prosecco and then you're like, being pregnant. In general, you just get kind of segregated in some way because of the stuff that you can't have, and having that just gives you that inclusive kind of feeling. So it's quite nice to be involved in be inclusive sometimes. (P16)

Such findings are particularly interesting as despite the widely recognized social condemnation of drinking during pregnancy, women also associate the avoidance of alcohol during this period with 'segregation' and feeling 'left out'. These feelings are highlighted by frequent references to 'everyone'/'everybody', a generalized group, women feel they do not belong to. Women appear to position themselves as occupying peripheral social positions; as recipients of judgment or advice, as holders of responsibility and obligation to perform certain roles or, here, as outsiders. This partly speaks to the depth and strength of drinking norms in cultures such as the UK, where drinking becomes inseparable from fun, connection and social inclusion and alcohol plays a key role in the maintenance of friendships. NoLos could help facilitate this sense of social inclusion. Similarly, the visual presentation of NoLos is important in such contexts. For example, P14 notes that drinking from a different vessel to others can lead to feelings of exclusion, whilst others also referenced the ritual-like process of preparing and serving NoLos in a way to resemble alcohol as an important aspect:

They taste different. Of course they do. But I guess a non-alcoholic beer - you get the same taste of it. But like a cocktail, obviously it's not strong, so it doesn't really taste of alcohol, but it does taste a bit like - I can't explain, just a bit different. It's nice and I feel like you can garnish it a bit nicely and you can feel a bit more fancy. (P14)

Here, taste is referenced, but the main focus is on the appearance of a NoLo cocktail and the ways in which it is presented to foster a sense that this is a 'nice' or 'fancy' drink, mimicking the kinds of emotions that might be associated with alcohol. This 'fancy' presentation tied into wider ideas of NoLo products as a 'treat' or something reserved for a special occasion such as the weekend:

NoLo drinks aid management of cravings

Multiple participants discussed aspects of alcohol craving, and one participant discussed NoLo drinks as a tool to transition to abstinence. Here, 'cravings' can be interpreted not necessarily as physical cravings for the

ethanol in alcohol (and certainly not in connection to physical dependence on alcohol), but rather in relation to the ways in which particularly social cues or conditions trigger 'social' cravings for alcohol. These kinds of cravings are amplified in social environments, linking back to a feeling of social inclusion, with NoLo drinks mitigating cravings that likely stem from contextual cues. NoLo products allow individuals to feel a sense of calmness and alleviation from cravings:

Sometimes you might have cravings as you're pregnant and you really need to take something to just cool your mind and not feel left out. (P3)

Sometimes when you get cravings whilst pregnant, that's always an alternative option I suppose, just to get the taste. (P16)

Another cue to trigger NoLo consumption and produce 'cravings' to drink was the weather:

Because of the weather and things, I think it's been a bit more to be honest, like craving a drink of something. (P17)

Again, the emphasis here is not on physical dependency on alcohol but rather the role of wider 'cues' - such as sunny weather or being on holiday from work - in triggering a desire for a product resembling alcohol.

NoLo as a form of social disguise

A proportion of participants concealed their pregnancy in the first trimester, using NoLo products to avoid further questioning and judgment from others and avoid drawing attention to abstinence. For some, this even extended to holding alcoholic drinks - or pouring NoLos into alcohol bottles - to 'fit in'.

When I went out when I was early pregnant and I wasn't telling everyone, I had to decant non-alcoholic red wine into a red wine bottle because I know that if I didn't, all my friends would be like, 'You're pregnant'. I think that you get so many questions like, 'why aren't you drinking, there must be something wrong. Are you pregnant? Are you sick?'... There's definitely a bit of stigma to not drinking (P14)

They gave the alcoholic Prosecco out for the toast. I took one and just held it so that it looked like I was drinking, then my husband just drank it for me. I think it was definitely more of an appearance thing there. (P5)

The extracts are indicative of participant's attempts to navigate social spaces where women appear to experience gendered pressure to perform drinking in order to avoid scrutiny and avoid social judgment attached to deviance from social expectations. This is indicative of how culturally and socially entrenched alcohol

consumption is; it functions as the 'default' position and it is decisions to *refuse* alcohol that require explanation and a socially sanctioned reason. Whilst pregnancy functions as one of these socially sanctioned reasons, participants discussed attempts in early pregnancy to provide other socially approved reasons for having to consume NoLo products that do not relate to pregnancy, to rationalize their abstinence at a time when social expectations dictate that pregnancies should not yet be more widely announced:

I was grateful for them more because, especially when I was hiding things, like I'd meet my dad down in a pub or something for a drink or food and I was quite lucky because I could just order that and just say it's because I've got the car or something. And it still felt like I was having a pint or a cider or something. (P6)

Participants' quotes demonstrate clearly how women strive to maintain a symbolic continuity of their pre-drinking identity and preserve inclusion and normality. They do this by strategically navigating conflicting social expectations: cultural expectations to consume alcohol to be socially included and expectations to abstain to uphold the image of the 'good mother'. Participants' experiences of NoLo drinks during

pregnancy, a time that is both culturally and morally charged, reflect the complex social negotiations women undertake to balance opposing demands.

Navigating the NoLo market

Perceptions of harm: low alcohol carries risk that is amplified by inconsistent guidelines

Whilst women make active and agentic choices around NoLo use, these are of course also shaped by wider – and at times competing – influences, including dominant drinking cultures and norms and social constructions of 'risk' reinforced by 'experts'. Whilst the guidelines on drinking in pregnancy initially seemed clear, participants reported a lack of clarity and inconsistent guidance from professionals around whether it was 'safe' to consume products with no or low alcohol. In this sense, whilst most drinks seem to fall firmly into the 'safe' (e.g. soft drinks) or 'not permitted' (e.g. full-strength alcohol) category, NoLos appear to occupy something of a liminal space.

Amongst participants, there was a perception of harm associated with NoLo products, specifically in relation to low alcohol products, but also even non-alcoholic products with 0.5% ABV.



Figure 3. P1 and P9 presenting examples of drinks that they would choose 0.0% in comparison to those that contain alcohol potentially <0.05%.

I think if it's still classed as alcohol free, I'd go for it. I think I've not gone for low alcohol during either pregnancy, just for personal preference. (P9)

If we're not going to drink alcohol, then why would I bother even having the tiniest bit? Because I suppose obviously there's a big difference between having a 0.0% and 0.5%. (P1)

There was also discussion around inconsistency in how products which are labeled as alcohol free may in fact still contain small percentages of alcohol, further adding to the ambiguity and 'blurring' presented by NoLos (see Figure 3). The nuances of wording on labeling played a role in facilitating (or undermining) trust in the product as truly facilitating abstinence, demanding that pregnant women become lay-experts in the varying terminology associated with NoLo products and its implications:

It was alcohol free and it said it was, I think it was like 0.5%. It actually nowhere told me not to drink that while pregnant... I couldn't really see anything on the packaging about what was safe and what wasn't. (P15)

You know, there are two different things, some alcohol free, but when it says no alcohol, no alcohol means there's no alcohol. So I think I trust the no alcohol better than the alcohol free. (P7)

Upon realization that products contain alcohol, one participant noted feeling 'panicked', followed by aspects of shame due to prior beliefs around alcohol use in pregnancy.

Because I've seen it before where it said 0.0%, and I've looked closer and then it's like no, it's 0.05% and I'm like, I know that still counts as alcohol free because it's less than a certain point-zero, but part of me panicked, and I was like, 'oh no, it's still got that 0.05% in it, so I got rid of it... I was like 'that's so silly because people back in the old days, they would have a glass of wine. (P5)

Although alluding again here to differing standards of acceptability 'back in the old days' and even positioning her own panic as 'silly' due to the social acceptability of full-strength alcohol in the past, P5's concerns reflect the strength of complete abstinence messages today. A perceived failure (even if accidental) to meet these standards and construct the responsible, abstinent pregnant body might be associated with shame, panic and a need to immediately 'get rid' of the offending substance, even as participants recognize the socially and historically variability of drinking guidelines.

The perceived risk of NoLo products is increased given the lack of guidance that is readily available to women during pregnancy. Multiple participants discussed having to go to great lengths to find out if such products were safe, discussing the topic with healthcare professionals in their social network. One

participant discussed feeling judged by their midwife when asking for guidance on NoLo drinks.

Her husband's a chemist and she was saying they did loads of research and actually drinking a bottle of 0.5% beer is probably equivalent to eating a ripe banana. (P10)

I checked with my midwife about the 0.5% stuff and she looked at me like I was insane and said it was absolutely fine. (P18)

Here again, tensions are revealed in that women are instructed to engage in total abstinence, yet receive a lack of information or conflicting messages about products containing a very small percentage of alcohol (such products are 'absolutely fine' or 'equivalent to eating a ripe banana'). Even questioning the safety of such products may result in being regarded quizzically ('she looked at me like I was insane'), suggesting women are expected to self-navigate this terrain and just *know* what is acceptable during pregnancy.

When referring to antenatal appointments with their midwife, one participant discussed how transitioning to abstinence was hard. Midwives were viewed as a means to guide women toward abstinence using NoLo drinks as a tool and potentially a means to reduce potential harm to baby.

Just because you're pregnant, switching to completely no alcohol at all is a very hard thing. And this is probably when alternatives can be discussed, with those ladies who perhaps might be struggling – to give them advice or 'maybe try this' instead of just 'see how you get on' and instead of just drinking actual alcohol. (P16)

Note that here, whilst P16 suggests NoLos could be a beneficial tool for women who are 'struggling' with abstinence during pregnancy, she is careful to exclude herself from this group i.e. 'those [other] ladies' who 'might be struggling'. In doing this, she cites the value of NoLos as a transitional or harm reduction tool during pregnancy, whilst establishing a distance from the 'other' whose drinking might be stigmatized or 'problematic'.

Inconsistent availability

Whilst NoLos could be regarded as a positive tool during and post pregnancy, availability was a source of contention with conflicting accounts coming from participants. On the one hand, participants noted there has been a noticeable increase in the availability of NoLo products in general, reflecting their rise in market share within the UK, and also what was viewed as a wider societal shift toward non-drinking and NoLo use (not just one targeted at specific populations). Individuals were pleasantly surprised to find in restaurants for example NoLo drinks were readily available.

I think they've become more prominent. You are seeing more and more of them, but I think there's a whole move in society. I think people are consciously trying not to drink, whether that's for driving or pregnancy or health benefits or just kind of generally, 'I don't want to get drunk'. (P10)

I could also see in some of the some of the places that I went, like the restaurants actually had some of the drinks openly out there in the bottles, like ready to be served and it clearly stated non-alcoholic on there, which I thought was really quite nice. (P17)

On the other hand, availability is not consistent across participants' experiences, with a sense that NoLos were not deemed popular enough to restock once sold out and participants reporting a lack of choice and variety. Concerns around the lack of availability also highlighted the difference in perception between low and no alcohol drinks, with some suggesting low alcohol products were more readily available than alcohol-free options.

So your options are quite limited in what you can have, but there's a range there that you can have. That is the non-alcohol and low alcohol. But I did notice, and you can see from that picture, there's quite a lot that are out stock. (P15)

There's not enough selection really. And I could appreciate that there was low alcoholic options for people who don't want to drink much, but there wasn't really much for people who don't want to drink at all. (P5)

Pricing

Pricing of NoLo drinks was a significant issue, with NoLos viewed as expensive in comparison to standard strength alcohol products. As a result, multiple participants felt NoLos were overpriced with minimal effort going into their production.

Normally when you get a mocktail, they're the same price as a cocktail and you think 'hang on a minute, you've just munched up some cucumber and stuck some lemonade in here. (P10)

This links to earlier discussions around the rituals of preparing and serving drinks, particularly in order to make them feel like a 'treat' and to mimic and care and attention typically reserved for alcoholic drinks. Price was also noted as an issue given how participants thought they could have a soft drink for a lower price. NoLos were often viewed as not worth the increased cost.

I've had a few non-alcoholic [drinks] in the airport lounge because I've seen them in shops before I was pregnant. I've seen a non-alcoholic one and just thought 'what's the point?' It's still quite expensive and is essentially just like having a squash because you're

just diluting it with lemonade and I thought, 'oh, it's a bit of a waste of money'. (P5)

These concerns also highlight again the cultural and social 'value' of alcohol i.e. consumers *expect* to pay a premium to consume alcohol, but express a strong sense of reluctance to pay the equivalent price for products that resemble alcohol in many ways but do not contain it.

Offers do incentivize the purchasing of NoLo drinks, making products more affordable and encouraging individuals to try new products:

Like I'll notice an offer and I'll go, 'oh, I'll try it'. And then I like it. I'll end up buying it full price and it goes back up. (P6)

But the fact that the Thatcher's was on 2 for £3 or was it 2 for £5. That was one of the few offers that I'd actually seen on the non-alcoholic products. Very few of them are in an offer which again is frustrating if it's a financial consideration when buying one. (P4)

Marketing, branding and labeling

Marketing, branding and labeling was seen as an issue for various reasons. The foremost issue was in respect to labeling and relates back to the perception of harm and

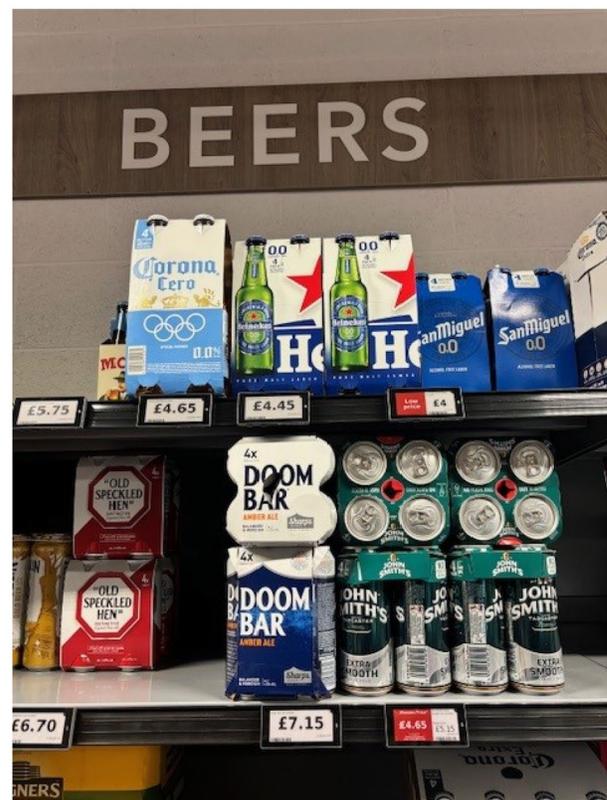


Figure 4. P15 when discussing not being able to clearly differentiate between standard and no alcohol products.

inconsistency in how products are marketed and promoted. Mis-marketing applied to labeling and retail merchandizing, for example where NoLo drinks were placed with standard strength alcohol in supermarket aisles. This along with the close branding resemblance between alcohol and NoLos - could lead to confusion about which products were NoLos and an increased risk of accidentally purchasing standard strength alcohol (see Figure 4).

But you know, a lot of the time it's not very clear which is alcohol free, so, you have to look for it. (P1)

Manufacturers, it basically comes from the manufacturers. If you are going to be advertising and selling a product, they chose to do this to up their revenue. You can take the Gordon's gin for example. The bottles are pretty similar apart from the fact that one says alcohol, one says alcohol free. If you are wanting to advertise them products and sell them products to a new field, there needs to be the restrictions in place to make sure that you're doing it in a sensible manner. (P15)

Such issues lead to hyper-vigilance, both in supermarkets (for example carefully checking products), but also in licensed venues, where participants sought confirmation products would enable them to remain abstinent due to inconsistent language around alcohol strength and unclear labeling or naming of products:

That's what I've seen before is that there's been some controversy in some places naming the non-alcoholic cocktail or the mocktail the same. But it's the non-alcoholic version. And obviously there's then the question of making sure that it is the right one. (P9)

Another tension is revealed here, in that the proximity of NoLos to alcohol is both a strength (satisfying cravings, helping women to fit in or even 'hide' pregnancy) and a challenge (triggering concerns over the risks of drinking the 'wrong' product or accidentally purchasing or consuming alcohol).

Discussion

This is the first study to use photo elicitation methods to qualitatively explore women's views toward NoLo products and the ways in which they are used (or not used) by women to navigate the dual, conflicting imperatives around drinking (drinking in general is normalized, expected and embedded versus drinking during pregnancy is socially prohibited) (Jones & Telenta, 2012). The findings highlight the contributing role of various social-contextual factors that shape women's decision-making around the consumption of NoLo products, such as using NoLo products in social settings where others are consuming alcohol to avoid feeling "left out", to conceal early pregnancy or to

respond to social and environmental cues that encourage drinking practices and behaviors (such as sunny weather, the weekend). In contexts where they replace alcohol, NoLos function as a 'treat' and allow women to directly substitute their preferred alcoholic beverage with the NoLo version (e.g. mocktail, nonalcoholic beer). In this way, NoLos can not only operate as a more desirable alternative to soft drinks, but also allow women to 'walk the line' between navigating social expectations that one *should* consume alcohol generally (because drinking is associated with sociability and friendship) (MacLean, 2016; Nicholls, 2020) with alcohol use during pregnancy not being socially approved and associated with 'risk'. The liminal positioning of NoLos somewhere between full-strength alcohol and a soft drink thus supports women during pregnancy to navigate conflicting moral and social obligations around drinking/not drinking.

At the same time, the liminal status of NoLo drinks presents challenges during pregnancy. We identified important findings relating to the perception of harm for NoLo products, primarily confusion and uncertainty around the distinction between 0.5% and 0.0% ABV nonalcoholic products, and the use of NoLo products whilst breastfeeding. Many participants reported avoiding even 0.5% ABV products due to the perception that they could potentially be harmful. This highlights the entrenched nature of existing guidance that promotes 'complete abstinence' as the only acceptable approach to alcohol during pregnancy. Alcohol-free products thus play an important role in supporting pregnant women to position themselves as responsible future-focused and risk-averse consumers (Nicholls, 2024), aligning with dominant constructions of the 'good' consumer who continues to engage with drinking cultures and consumer cultures but in the 'right' ways (Featherstone, 2007). Women also raised concerns about the way NoLo products are marketed and labeled, as it can be difficult to identify NoLo products when they are displayed near alcoholic products and resemble them closely (Critchlow et al., 2023). The close resemblance between alcohol and NoLo products in terms of branding may assist women in 'passing' as drinkers (Nicholls, 2024) during early pregnancy yet may also cause anxiety over the 'wrong' product being purchased and consumed. This can be further complicated when 'no' and 'low' are conflated as there is a considerable difference in relation to fetal risk between consuming 0.0 or 0.5% ABV products and those with a strength of up to 1.2% ABV. Price was also a key factor in decision-making, as consumers feel NoLo products should be priced more closely to soft drinks, reflecting the cultural and social 'added value' consumers feel

they get from alcohol which means they are prepared to pay a premium (Bucher et al., 2020).

A variety of social factors influencing the consumption of NoLo products were discussed by participants. NoLo drinks allowed them to be involved in situations where alcohol was viewed as a social facilitator. This aligns with prior work showing that social context is a driver of alcohol use during pregnancy (Schölin et al., 2018; Tsang et al., 2022) and speaks to the wider positioning of alcohol as associated with fun, sociability, relaxation and leisure (MacLean, 2016). Alcohol consumption as a norm also led to consumption of NoLo products to conceal being pregnant while remaining socially involved. The concealment of pregnancy until after 12 weeks due to fear of miscarriage (Lou et al., 2017; Murphy Tighe & Lalor, 2016; Nalubwama et al., 2025) is a socially normalized and expected practice, with NoLo use helping women to navigate the liminal space of early pregnancy where a refusal to drink would be met with questions and requires a socially sanctioned motivation (Pehlke-Milde et al., 2022). Social Norms Theory can be applied to interpret these findings, as this theory posits that individuals' drinking behavior is influenced by perceptions of what is typical within their social group, and therefore NoLo products can be used as a replacement in social situations where it is perceived that alcohol should be consumed (Nicholls, 2023). This is reinforced by the fact that NoLos were often specifically chosen to mimic their alcoholic counterparts (for example consciously choosing the alcohol-free equivalent of what drinkers were consuming), with participants stressing the importance of the 'look' of products (for example in a similar drinking vessel to their drinking friends' alcoholic option). Consuming direct NoLo equivalents may also better facilitate inclusion in social and drinking rituals such as 'toasts' (Cherrier & Gurrieri, 2013).

NoLo products can provide an alternative to soft drinks and alcohol in alco-centric cultures where drinking is simultaneously normalized but also judged and stigmatized (for example during pregnancy and motherhood). NoLo use can support women to "fit in" while attempting to mitigate the associated stigma of alcohol use during pregnancy (Binder et al., 2024), with nonalcoholic drinks being significantly less stigmatized than standard strength alcohol (Burton et al., 2025a). Harm perception appears to influence women's decision to consume NoLo products as an alcohol-alternative during pregnancy (Adiong et al., 2014; Corfe et al., 2020), which aligns with prior work around regular strength alcohol (Marlow et al., 2021) with low levels of alcohol being more acceptable (Hammer & Inglin, 2018; Raymond et al., 2009). (Adiong et al., 2014; Corfe

et al., 2020). Prior experimental work has found that both members of the public and those who are currently pregnant view standard and lower strength alcohol products as significantly more harmful than alcohol free products (Burton et al., 2025b) which aligns with findings from the current study and reflects wider social norms around the policing and surveillance of the pregnant and maternal body and pregnancy as a period of 'risk' (Burton-Jeangros, 2011). This may also increasingly reflect wider recognition and reframing of alcohol itself as a product of 'risk' (even outside of pregnancy), as evidenced in previous research into phenomenon such as declining drinking rates in the Global North (Burgess et al., 2022). Tensions and differences around the acceptability of 'low' versus 'no' alcohol drinks are also reflected in our prior work (Burton et al., 2025a; 2025b), which has found consumption of low-alcohol products to be more stigmatized and these products perceived as more harmful than their non-alcoholic counterparts. At the same time, some pregnant women and mothers are not convinced that low strength alcohol use during pregnancy is harmful, finding the evidence and information given confusing, inconsistent and/or incorrect, and – whilst this was not a view expressed in the current study – previous research indicates that some women believe that abstinence messaging is patriarchal (Fleming et al., 2025; Hammer & Rapp, 2022; Katalin Ujhelyi et al., 2022). The absence of these more critical discussions in the present study is of interest; it appears participants had internalized alcohol risk messaging during pregnancy. Whilst several recognized that guidelines are socially, culturally and historically variable, this did not lead them to directly question whether such guidelines might be socially constructed and reflective of wider, shifting risk discourses rather than objective 'truths' or 'facts' about alcohol and pregnancy. Rather, several participants stressed that they drank no alcohol during pregnancy at all, avoiding even low alcohol products, although they might still consume completely alcohol-free drinks. Alcohol-free products thus play an important role in supporting pregnant women to position themselves as responsible future-focused and risk-averse consumers (Nicholls, 2024), aligning with dominant constructions of the 'good' consumer who continues to engage with drinking cultures and consumer cultures but in the 'right' ways (Featherstone, 2007)

Implications

These findings highlight the need for clearer guidance on the use of NoLo products during pregnancy and the way that NoLo products are labeled and marketed.

Certain groups of women, e.g. heavy or hazardous drinkers, can find abstinence very difficult to achieve (Popova et al., 2022). As pharmacotherapies for maintaining abstinence after detoxification have unclear safety profiles during pregnancy (Quintrell et al., 2025), alcohol withdrawal requires medical supervision due to the risks it poses to both mother and fetus (Day & Daly, 2022). NoLo products (specifically alcohol free/0% abv) may provide a viable harm reduction strategy, as part of a stepped-support approach toward abstinence (NHS, 2023; Tommy's, 2024). However, some research suggests that NoLos may trigger urges to drink and drinking behavior including people in recovery and drink to excess in addition to regular alcohol and therefore limit potential health benefits (Corfe et al., 2020). However, there are inconsistencies in the definition of nonalcoholic drinks, as the UK threshold is currently 0.05% ABV, whereas it is 0.5% ABV in most other European countries, the USA, and Australia, and there are calls to increase the threshold to 0.5% ABV in the UK (Disparities & O. f. H. I, 2023). There are also international inconsistencies in guidance, with only Poland and Sweden specifically providing guidance on 0.5% ABV products, with Polish guidance advising against consumption and Swedish guidance stating that "it is possible to drink moderate amounts" (IARD, 2021). The potential harms of consuming 0.5% ABV products during pregnancy are unknown due to a lack of evidence, yet research recognizes that other products that are safe to consume during pregnancy can have a similar alcohol content, such as fermented foods (Kim et al., 2022). Research has also shown that 0.5% ABV has no physiological effects on the body and cannot cause intoxication (Okaru & Lachenmeier, 2022). Clearer guidance is needed, globally, as the lack of consistent advice can contribute to feelings of guilt and shame for pregnant women who are trying to reduce their alcohol use (Katalin Ujhelyi et al., 2022) and more generally, attempting to manage a series of moral pressures around how one should 'optimise' pregnancy or at the very least take every measure to minimize harm. It is evident that - alongside clearer and consistent guidance about their role during pregnancy - more transparent labeling of NoLo products is required, whereby the ABV is clearly visible and NoLo products are displayed clearly in supermarkets, so that consumers can make confident, informed choices (Shemilt et al., 2017).

Strengths & limitations

The strengths of this research include the use of Prolific to recruit pregnant women from diverse regions in the UK,

from a wide age range (25 to 39 years old), reaching data saturation through in-depth online interviews with 18 participants. The photo-elicitation approach contributed to rich discussions relating to the images taken and shared by participants, to understand the context in which NoLo products were consumed and probe deeper into participants' views on NoLos. Restricting the eligibility criteria to only those who were currently pregnant, rather than retrospective accounts from those who have been pregnant, provided more accurate perceptions of current drivers and deterrents of NoLo consumption. Nevertheless, the study has limitations. By restricting the sample to only those fluent in English and requiring the use of a smart phone, this study may not have captured the experiences of recent migrants or socioeconomically disadvantaged groups without a smart phone. Similarly, a large proportion of the sample were university-educated, thus potentially less likely to find the costs of NoLos a barrier (although several did still comment on cost). Research also indicates that NoLo products are more likely to be consumed by those of a higher socioeconomic status and in more affluent households (Anderson et al., 2021). Additionally, there was variation in engagement with the photo-elicitation method, while all participants provided at least 5 images as requested, some participants found the task easier to engage with (e.g. had greater exposure to NoLo products and encountered more opportunities to photograph them). This study did not measure or explore women's drinking patterns prior to becoming pregnant and it may be that all participants previously drank to low levels or regularly consumed NoLo products. Further research is needed to understand experiences of NoLo consumption among pregnant women who previously drank to at-risk levels, to understand whether NoLo products can be used as an effective harm reduction strategy for those most at risk of AEPs and alcohol-related harms.

Conclusion

Our findings suggest that NoLo products may support social inclusion during pregnancy and help fulfill a non-pathological desire for alcohol-like beverages, reflecting habitual rather than dependence-related drinking patterns. At the same time, findings indicate that harm perception and lack of clear guidance around NoLo products influences women's decisions to consume them during pregnancy, with women wanting clearer labeling in relation to alcohol content of products. Low-strength alcohol presents a key concern for women, as its reduced alcohol content creates uncertainty around potential harm, and there is a clear gap in guidance regarding its use during pregnancy. Pregnancy is a high-risk period for potential harm from

alcohol use, there is a need for evidence-informed guidance regarding NoLo products in pregnancy, given their potential to be a harm reduction strategy.

Author contributions

Conceptualization: Burton, S, Porcellato, L, Rose, A.K., Smith, J. Data curation: Burton, S., Prentice, M., Allen, E., KougiAli, Z. Formal analysis: Burton, S., Irizar, P., Nicholls, E., Beauchamp, A., Prentice, M., Allen, E., Zhelyazkova, D., KougiAli, Z. Funding acquisition: Burton, S., Porcellato, L., Rose, A.K., Smith, J. Investigation: Burton, S., Irizar, P., Nicholls, E., KougiAli, Z., Methodology: Burton, S., Irizar, P., Nicholls, E., KougiAli, Z., Porcellato, L., Smith, J. Project administration, Burton, S. Resources: Burton, S. Software: Burton, S. Supervision: Burton S. Validation: Burton, S., KougiAli, Z. Writing- original draft: Burton, S., Irizar, P., Allen, E., Beauchamp, A., Nicholls, E., Porcellato, L., Prentice, M., Rose, A.K., Smith, J., Zhelyazkova, D., KougiAli, Z. Writing- review and editing: Burton, S., Irizar, P., Allen, E., Beauchamp, A., Nicholls, E., Porcellato, L., Prentice, M., Rose, A.K., Smith, J., Zhelyazkova, D., KougiAli, Z.

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Ethical approval

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ORCID

L. Porcellato  <http://orcid.org/0000-0002-8656-299X>

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