Attitudes to maternal drinking and factors associated with increased alcohol use during pregnancy and motherhood

Funding and conflicts of interest

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- No conflicts of interest.

Alcohol exposed pregnancy - UK

UK has one of the highest global reported prevalence rates of drinking during pregnancy (41.3 - 75%) (Popova et al., 2017, O'Keeffe et al., 2015).

Alcohol exposed pregnancy, even at low levels, can increase risk of miscarriage, premature birth, low birth weight (Mumluk et al., 2017).

UK has one of the highest modelled prevalence rates of foetal alcohol spectrum disorder (FASD, 3.2%) (Popova et al., 2017) with 17% of children screening positively (McQuire C et al., 2019).

FASD: lifelong neurodevelopmental disorder, associated with poorer life outcomes with an estimated cost of £150k/child/p/a in the UK (APPG on FASD, 2015).

Alcohol use during motherhood - Potential harms

Alcohol is leading risk factor for ill health and early mortality in women aged 15-49 years, covering typical childbearing age (Griswald et al., 2016).

Alcohol use disorder in mums can be associated with greater psychological distress in adolescent children (Rognmo et al., 2012).

Around 18% of UK mum are hazardous drinkers (Syed & Wolpert, 2018).

Non-dependent maternal drinking >> increased risk of infant death, hospitalisation, social services involvement, physical/mental health issues, alcohol problems, impaired mother-child relationships (McGovern et al., 2018).

Exposure to non-dependent parental drinking can have increase psychological distress, embarrassment, and shame in children (Bryant et al., 2020).

Roles?
Mums are often the primary caregiver

Stereotypes & Stigma?
Mums shouldn't drink - they should want what's best for the child

Survey: Attitudes and Motives

Fleming, Ujhelyi Gomez, Goodwin, Rose (under review)

Survey: Attitudes and Motives

Pregnant women: 836	Mothers: 589
10% drinking since knowing Median: 2.3 units p/week	72% currently drinking Median: 6.9 units p/week 1 in 5 drinking above 14 units p/week 1 in 20 with AUDIT 16+ (probable AUD)
Celebrate (63%) Enjoy social occasion (71%)	Celebrate (94%) Enjoy social occasion (93%) To have fun (86%) To feel less stressed (64%)
Avoid harm to baby (free text)	Too tired (30.6%) Want to be healthy (28%) Breastfeeding (22.6%) Child welfare (21.4%) Weight management (21.4%)
No barriers (47.8) Health info inconsistent/incorrect (23.5 %) How to change behaviour? (19.5%) Pressure to drink (18.7%)	No barriers (35%) Motherhood is stressful (49.5%) Pressure to drink (48%) How to change behaviour? (42.5%)

Women were more likely to agree with statements "*I drink more than I should*", "*I drink more when I'm in a negative mood*", "*Alcohol makes me feel better*" if they were drinking higher levels of alcohol (**negative reinforcement**).

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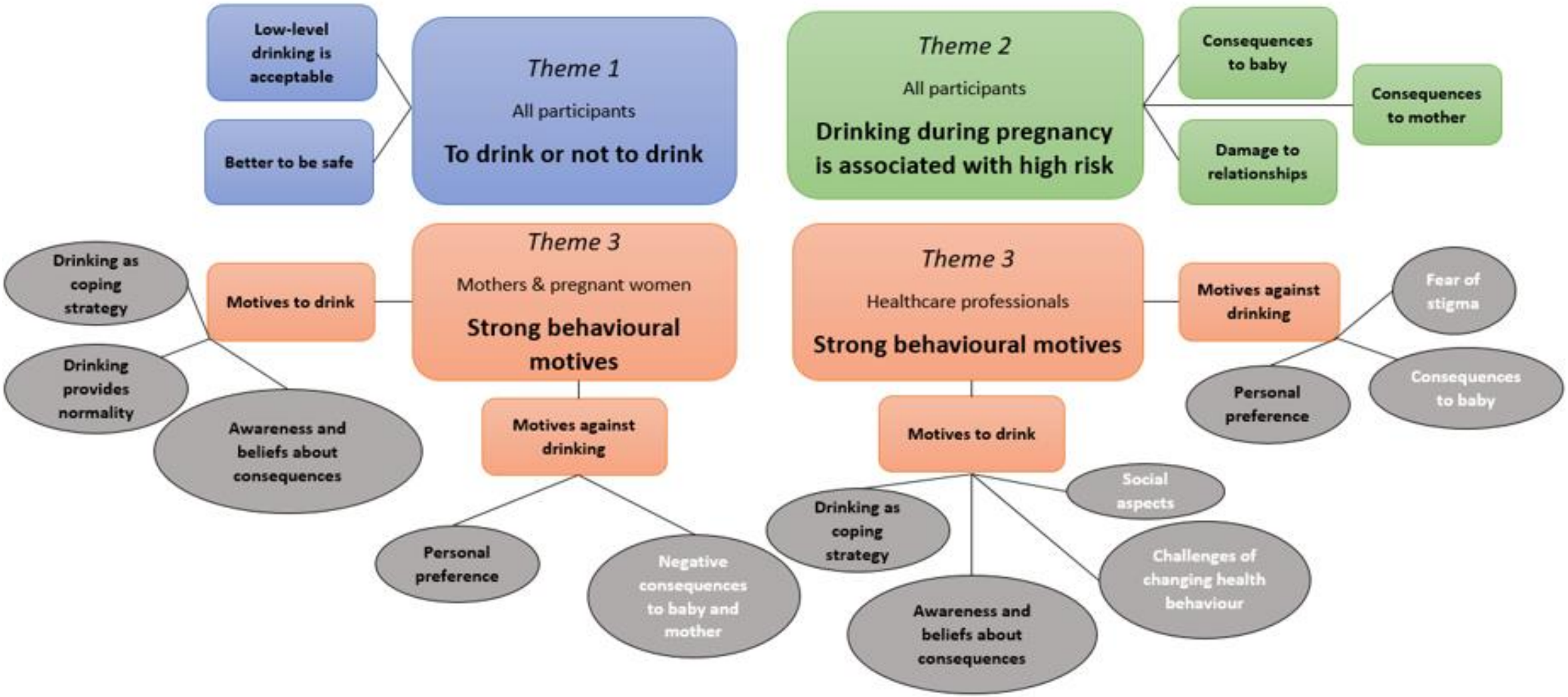
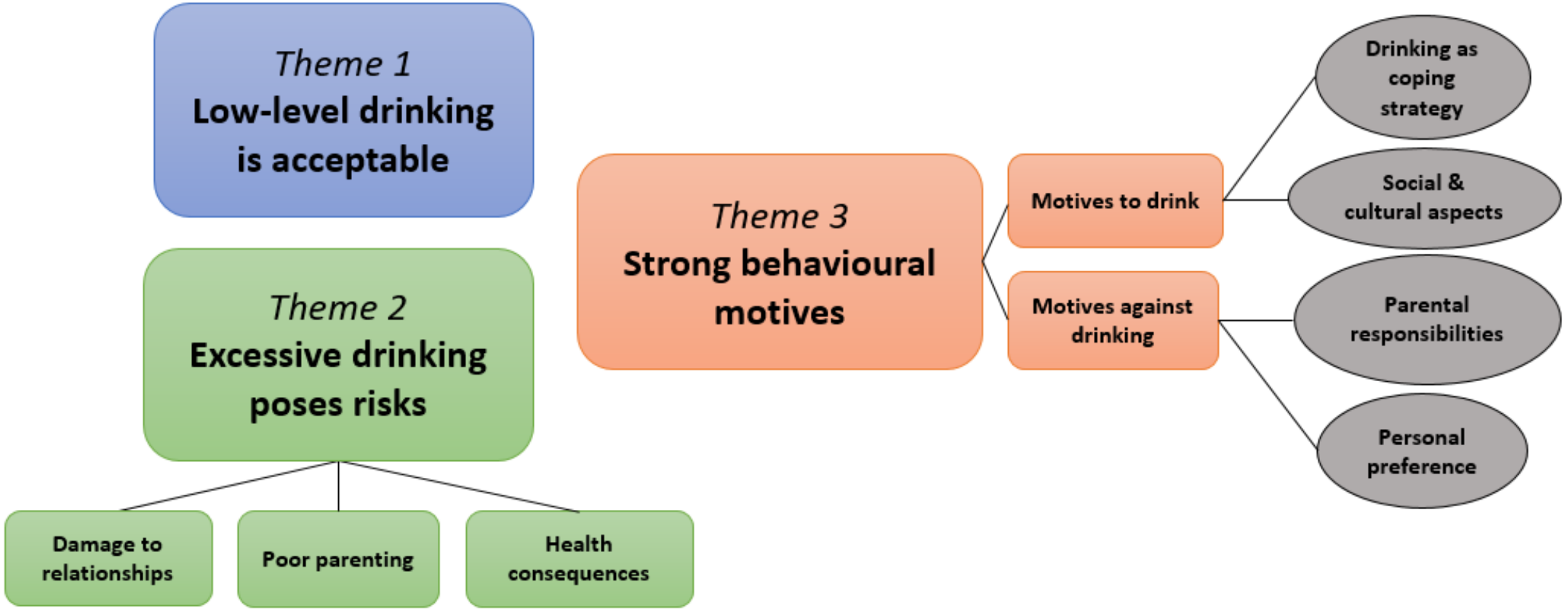
Views on alcohol use in pregnancy



Ujhelyi Gomez, Goodwin, Chisolm, Rose (in press)

Views on alcohol use in motherhood



Ujhelyi Gomez, Goodwin, Chisolm, Rose (in press)

What has been done?

Cochrane review (Lui et al, 2008) found no RCTs of psychosocial interventions for pregnant women seeking AUD treatment

Alcohol interventions applied to maternal populations

24 trials included in a narrative synthesis.

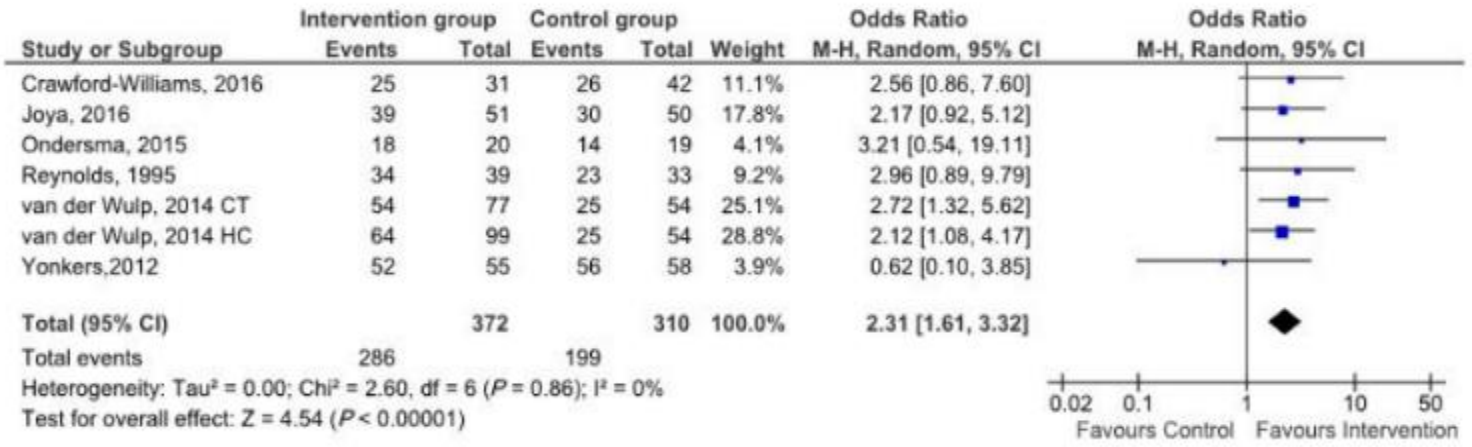
10 analysed through two meta-analyses (6 pregnancy, 4 motherhood).

Review

Are psychosocial interventions effective in reducing alcohol consumption during pregnancy and motherhood? A systematic review and meta-analysis

Katalin Ujhelyi Gomez, Laura Goodwin, Leanne Jackson, Andrew Jones, Anna Chisholm, Abigail K. Rose

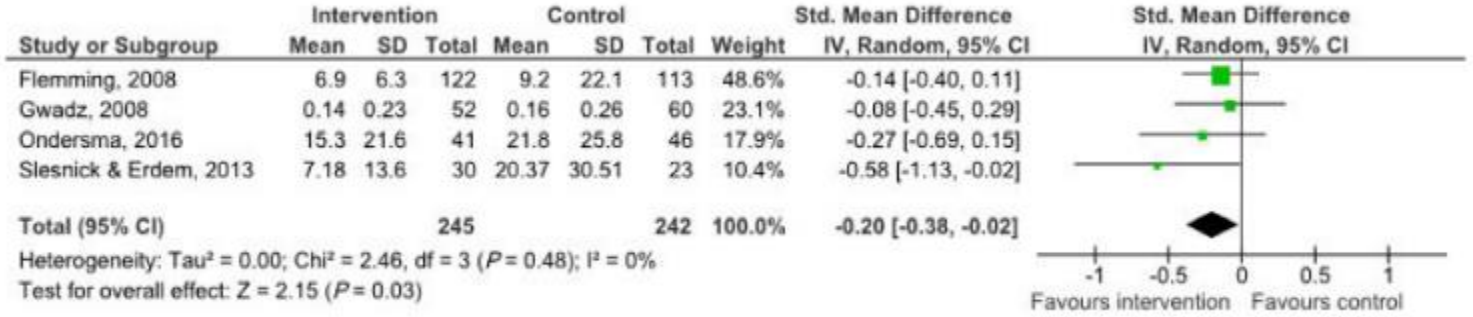
What has been done?



Study or Subgroup	Intervention group Events	Total	Control group Events	Total	Weight	Odds Ratio M-H, Random, 95% CI
Crawford-Williams, 2016	25	31	26	42	11.1%	2.56 [0.86, 7.60]
Joya, 2016	39	51	30	50	17.8%	2.17 [0.92, 5.12]
Ondersma, 2015	18	20	14	19	4.1%	3.21 [0.54, 19.11]
Reynolds, 1995	34	39	23	33	9.2%	2.96 [0.89, 9.79]
van der Wulp, 2014 CT	54	77	25	54	25.1%	2.72 [1.32, 5.62]
van der Wulp, 2014 HC	64	99	25	54	28.8%	2.12 [1.08, 4.17]
Yonkers,2012	52	55	56	58	3.9%	0.62 [0.10, 3.85]
Total (95% CI)		**372**		**310**	**100.0%**	**2.31 [1.61, 3.32]**
Total events	286		199			

Heterogeneity: Tau² = 0.00; Chi² = 2.60, df = 6 (P = 0.86); I² = 0%
Test for overall effect: Z = 4.54 (P < 0.00001)

FIGURE 2 Forest plot showing an advantage for intervention group over control group in terms of abstinence in pregnancy. CT, computer-tailored feedback; HC, health counselling. [Colour figure can be viewed at wileyonlinelibrary.com]



Study or Subgroup	Intervention Mean	SD	Total	Control Mean	SD	Total	Weight	Std. Mean Difference IV, Random, 95% CI
Flemming, 2008	6.9	6.3	122	9.2	22.1	113	48.6%	-0.14 [-0.40, 0.11]
Gwadz, 2008	0.14	0.23	52	0.16	0.26	60	23.1%	-0.08 [-0.45, 0.29]
Ondersma, 2016	15.3	21.6	41	21.8	25.8	46	17.9%	-0.27 [-0.69, 0.15]
Slesnick & Erdem, 2013	7.18	13.6	30	20.37	30.51	23	10.4%	-0.58 [-1.13, -0.02]
Total (95% CI)			**245**			**242**	**100.0%**	**-0.20 [-0.38, -0.02]**

Heterogeneity: Tau² = 0.00; Chi² = 2.46, df = 3 (P = 0.48); I² = 0%
Test for overall effect: Z = 2.15 (P = 0.03)

FIGURE 3 Forest plot showing an advantage for intervention group over control group in terms of alcohol reduction in motherhood when all studies included. [Colour figure can be viewed at wileyonlinelibrary.com]

Interventions can be effective, but small-moderate effect.

Studies are of poor quality.

Couldn't identify which Behaviour Change Techniques may have been associated with therapeutic effect.

Potential benefit

In England and Wales, there were 817,515 conceptions in 2020, with 625,008 live births in 2021.

There are 11,165,000 families with children in the UK (8,154,000 with dependent children living at home).

Any strategies/interventions, even if only effective in a relatively small proportion of pregnant people and mums, can have a big impact.

Potential treatments

CMO guidelines are to avoid alcohol when trying to conceive and abstinence during pregnancy.

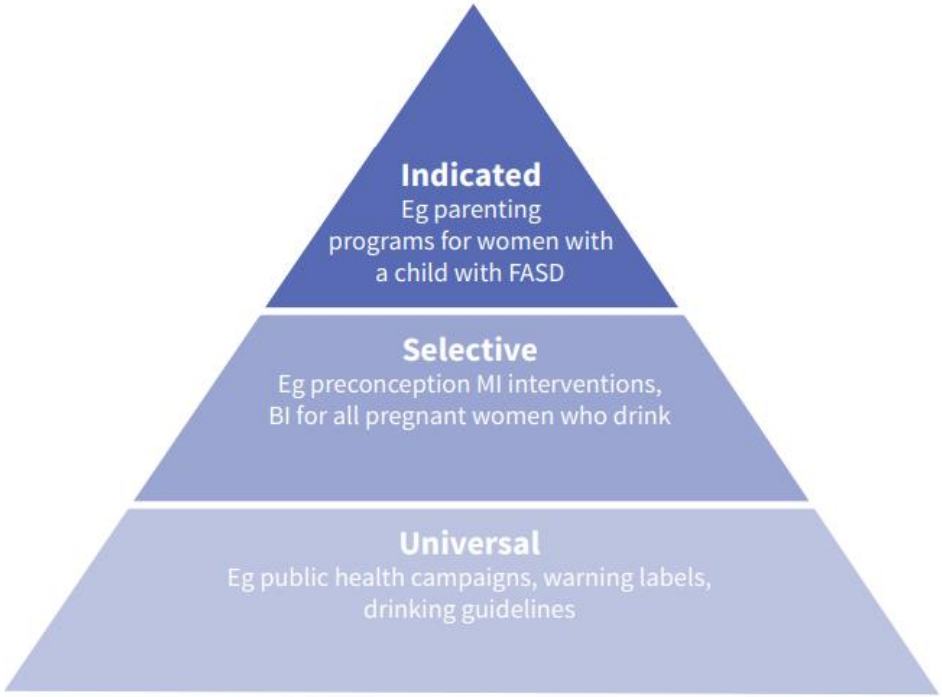
Different interventions are needed for different types of drinkers, ranging from low level alcohol use to alcohol use disorder.

But many people will not recognise their alcohol use as problematic (focus on extremes).

Many maternal drinkers feel they do not need individual/face to face interventions.

There's an issue with some women finding current provision of information patronising and/or insufficient.

Figure 2. Levels of prevention of prenatal alcohol use (adapted from Clarren et al., 2011).



Scholin et al (2019) Alcohol guidelines for pregnant women. Barriers and enablers for midwives to deliver advice.

Life course approach

In utero	Childhood	Adolescence	Mid-adulthood	Later adulthood
Alcohol can increase risk of miscarriage. UK prevalence rate of fetal alcohol spectrum disorder is 3.6%	Approx. 1.3m UK children are affected by parental alcohol use p/a. Parental drinking increases risk of child injury, neglect, mortality, physical and mental health problems, alcohol problems later in life and impaired interrelationships	Alcohol is associated with regret, violence, poor education attainment, poisoning and suicide. Gender inequality is also evident with females under 18 more likely to be admitted to hospital than males.	Alcohol-related risk of developing disease (e.g. cancers, heart and liver disease) increases. Fertility and post-partum implications for men and women who want, or have had, children become more prominent. Women may find the impact of alcohol on their well-being changes as they experience perimenopause and menopause.	Alcohol increases risk of confusion, infections, falls, heart failure, and geriatric suicide. It contributes to self-neglect and poor diet, and often interacts negatively with prescription medications.

Figure 1: Examples of alcohol harms across the life course

- Don’t wait for a person to be pregnant.
  - Opportunities in schools/HEI to provide information on harms (to everyone!)
- Individual-based strategies tailored to the drivers and impact of maternal drinking.
- System-based strategies: health inequalities, cultural norms, industry messaging.
- Challenge stigma, don’t blame/judge women for their alcohol choices.
- Stop telling women how to behave - explain <u>why</u> recommendations are what they are and help them develop adaptive strategies/alternative behaviours.

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Please contact me for more information about this research or have any suggestions

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