

Judith Lumley Centre



Reflections on evidence from trials of *interventions for supporting women to stop smoking in pregnancy...*

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Presentation outline

1. Smoking in pregnancy (SiP) trials summary
2. SiP trials in Indigenous communities
3. Reflections on factors that may impact on effectiveness



Image source:

<https://www.direct2mum.co.uk/1966/breathalyser-to-reduce-smoking-during-pregnancy>

Smoking in pregnancy interventions: impact on outcomes

Among pregnant smoking women who were randomised to receive a smoking cessation intervention (2017):

- **17% reduction in infants born with low birthweight** (RR 0.83, 95% CI 0.72 to 0.94)
- **a significantly higher mean birthweight** (mean difference (MD) 55.60 g, 95% CI 29.82 to 81.38 g higher)
- **a 22% reduction in neonatal intensive care admissions** RR 0.78, 95% CI 0.61 to 0.98.



Chamberlain C, O'Mara-Eves A, Porter J, Coleman T, Perlen SM, Thomas J, McKenzie JE. Psychosocial interventions for supporting women to stop smoking in pregnancy. Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD001055. DOI: 10.1002/14651858.CD001055.pub5.

Photo by Nicole De Khors on Burst

Evidence used to inform:

- [WHO recommendations for prevention and management of tobacco use in pregnancy](#) (2016)
- [US preventive taskforce Tobacco smoking cessation in adults, including pregnant women](#) (2015)
- [Clinical Knowledge Summaries: Pre-conception - advice and management](#) (NICE, 2017)
- [VA/DoD Clinical Practice Guideline for the Management of Pregnancy](#) (March 2018)
- [National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people: Evidence base \(Third edition\)](#) (NACCHO, 2018)




Smoking in pregnancy review: summary findings

Cochrane Database of Systematic Reviews

Psychosocial interventions for supporting women to stop smoking in pregnancy

Cochrane Systematic Review - Intervention | Version published: 14 February 2017 [see what's new](#)

<https://doi.org/10.1002/14651858.CD001055.pub5>

New search [Conclusions changed](#)  Used in 3 guidelines [View article information](#)

✉ Catherine Chamberlain | Alison O'Mara-Eves | Jessie Porter | Tim Coleman | Susan M Perlen | James Thomas
| Joanne E McKenzie

102 trials (120 arms/ interventions, >28,000 women):

- **Counselling** vs UC (RR 1.44, CI 1.19-1.73, n=30)
- **Incentives** vs AI (RR 2.36, CI 1.36-4.09, n=4)
- **Feedback** vs UC (RR 4.39, CI 1.89-10.21, n=2)

NS/borderline: Health education (RR 1.59, CI 0.99-2.55)

social support, exercise

Cochrane Database of Systematic Reviews

Pharmacological interventions for promoting smoking cessation during pregnancy

Cochrane Systematic Review - Intervention | Version published: 22 December 2015 [see what's new](#)

<https://doi.org/10.1002/14651858.CD010078.pub2>

New search  Used in 5 guidelines [View article information](#)

✉ Tim Coleman | Catherine Chamberlain | Mary-Ann Davey | Sue E Cooper | Jo Leonardi-Bee

9 trials (2210 women):

NRT vs placebo (RR 1.28, CI 0.99 to 1.66, n=5) *borderline*



Photo by Nicole De Khors on Burst

SiP trials involving Indigenous pregnant women

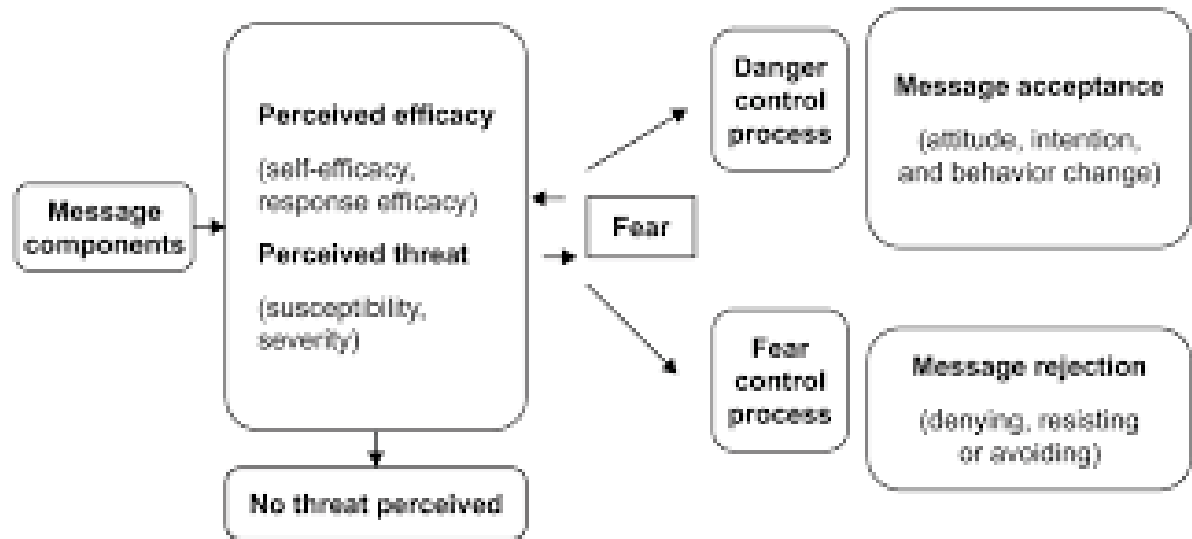
Study ID	Main intervention strategy	Relative Risk (effect size)	95% Confidence interval
Eades 2012 (Aus)	Tailored counselling	0.43	0.04-4.69
Patten 2009 (Canada)	Tailored counselling	0.35	0.02-8.08
Glover 2014a (NZ)	Incentives	0.19	0.01-3.75
Glover 2014b	Incentives	2.76	0.59-1.13

**Pooled/average
RR 0.54,
95% CI 0.13 to
2.20,
I² = 0%.**



Source:
<https://www.sbs.com.au/nitv/article/2016/07/22/three-solutions-close-gap-indigenous-women-smoking-during-pregnancy>

Some ponderings

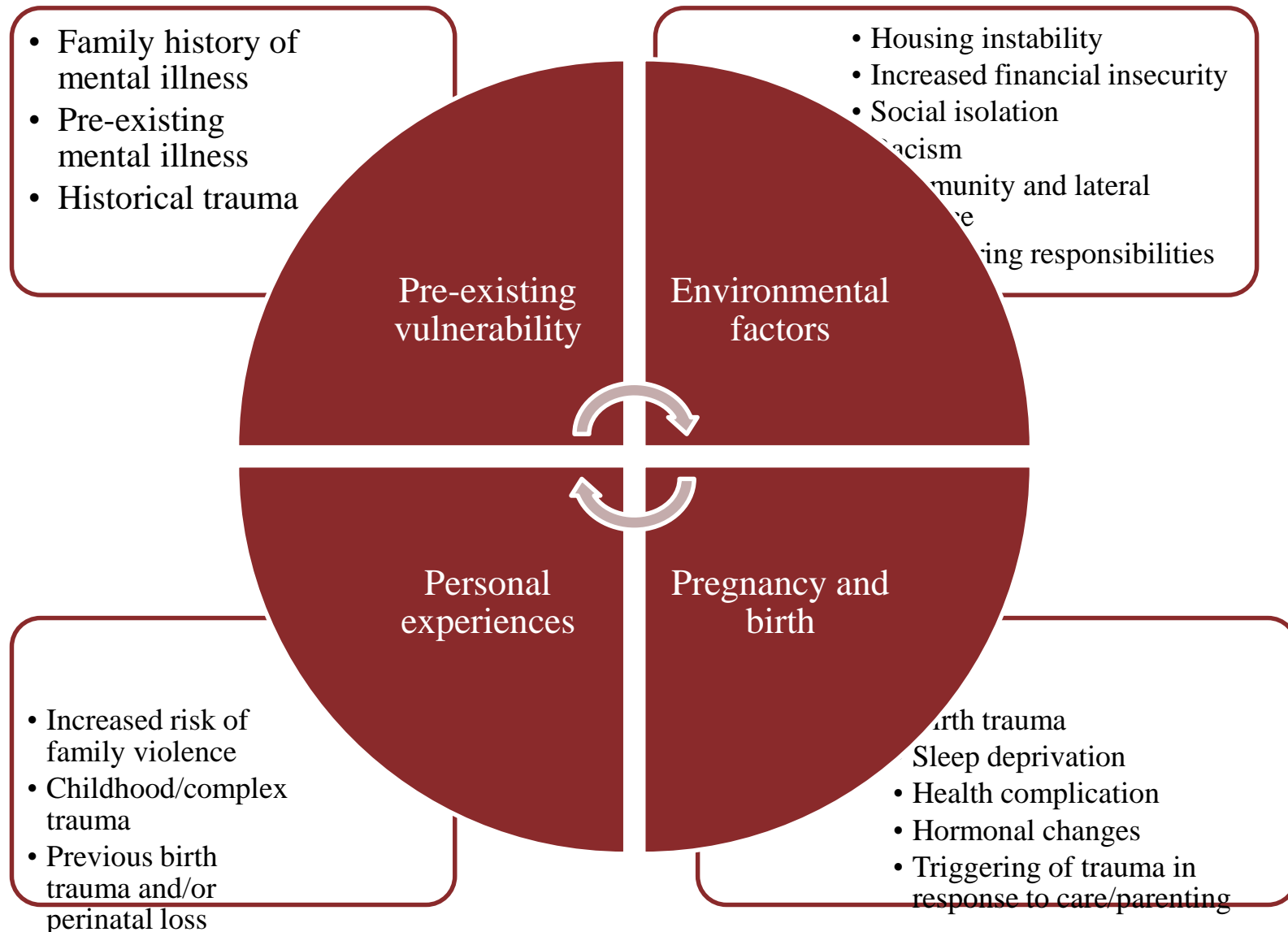


1. Characteristics of women for whom smoking and diabetes interventions less likely to work (higher perception of risk, low self-efficacy, childhood maltreatment)
2. Obesity strategies that require a lot of individual agency less likely to be effective for parent who are categorised as 'low SES' (ie hence increase inequality)

A Framework for Evaluating the Impact of Obesity Prevention Strategies on Socioeconomic Inequalities in Weight

| Kathryn Backholer, PhD, Alison Beauchamp, PhD, Kylie Ball, PhD, Gavin Turrell, PhD, Jane Martin, MPH, Julie Woods, PhD, and Anna Peeters, PhD

Perinatal period: convergence of risk

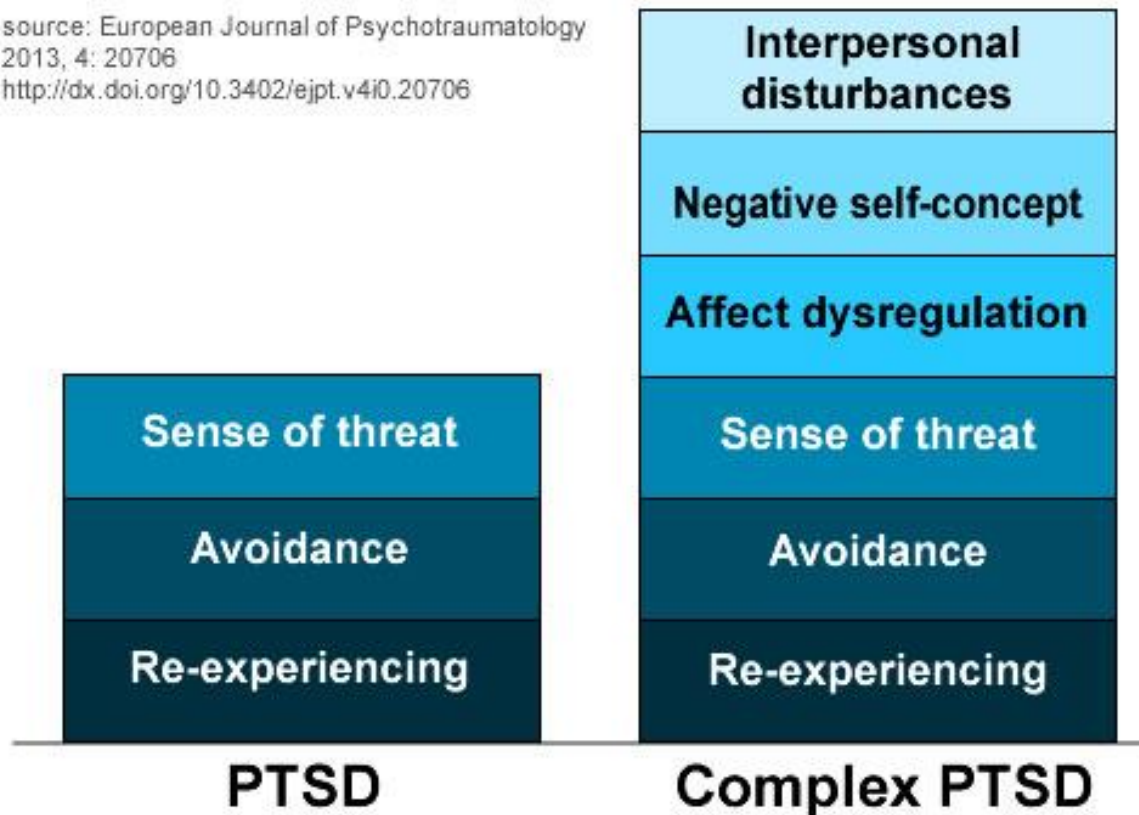


Emerging evidence of complex trauma



PTSD and complex PTSD symptoms

source: European Journal of Psychotraumatology
2013, 4: 20706
<http://dx.doi.org/10.3402/ejpt.v4i0.20706>



<http://traumadissociation.com/complexptsd>

Impacts on population health and health inequities

70/30 CAMPAIGN: EMPOWERING COMMUNITIES TO PROTECT OUR CHILDREN

Adverse Childhood Experiences

Traumatic events that can have negative, lasting effects on health and wellbeing

Abuse

- Emotional abuse
- Physical abuse
- Sexual abuse

Household Challenges

- Domestic violence
- Substance abuse
- Mental illness
- Parental separation / divorce
- Incarcerated parent

Neglect

- Emotional neglect
- Physical neglect

People with 6+ ACEs can die

20 yrs

earlier than those who have none



1/8 of the population have more than 4 ACEs





www.70-30.org.uk
@7030Campaign

4 or more ACEs

3x the levels of lung disease and adult smoking 

11x the level of intravenous drug abuse 

 **14x** the number of suicide attempts

 **4x** as likely to have begun intercourse by age 15

4.5x more likely to develop depression 

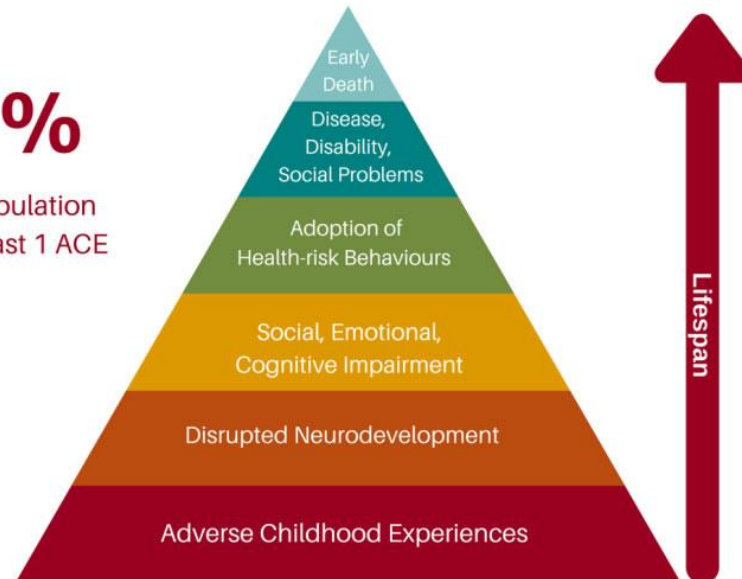
2x the level of liver disease 

“ Adverse childhood experiences are the single greatest unaddressed public health threat facing our nation today ”

Dr. Robert Block, the former President of the American Academy of Pediatrics

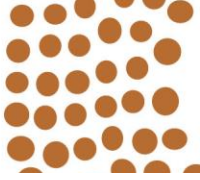
67%

of the population have at least 1 ACE



See: https://www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_health_across_a_lifetime_15_mi
Source: <http://www.leedstrinity.ac.uk/blogs/Adverse-Childhood-Experiences-too-High>

Healing the past by nurturing the future key support themes



1. Foster **empowerment**
2. **Self-care**
3. **Compassionate care and support**
4. **Build connections**
5. Provide **parent education and opportunities to develop skills**
6. Provide **practical assistance and support to develop life skills**
7. **Reduce isolation**
8. Offer a range of **healing and therapeutic approaches.**



Songs of Strength, Ink on paper, 2018 © Shawana Andrews

A father, mother and child wearing possum skin cloaks and looking to the ancestors and past generations. The parents are connected with a songline which gives them strength. The stones below represent a strong foundation and the stitching on the cloaks represent the relational connectedness of Aboriginal people and worldview.

Healing the Past by Nurturing the Future website (and video for parents)

<https://www.latrobe.edu.au/jlc/research/healing-the-past/research>

Implications

1. No evidence that individual support/interventions are NOT effective so important to offer/continue
2. But need to continue a strong focus on structural strategies



Image source: <http://www.eclecticstock.com/Lightbox.asp?ID=219>

Syst Rev. 2017 Jul 10;6(1):135. doi: 10.1186/s13643-017-0520-9.

Evidence for a comprehensive approach to Aboriginal tobacco control to maintain the decline in smoking: an overview of reviews among Indigenous peoples.

Chamberlain C^{1,2,3,4,5}, Perlen S^{6,7}, Brennan S⁸, Rychetnik L^{9,10}, Thomas D¹¹, Maddox R^{12,13,14}, Alam N¹⁵, Banks E¹⁶, Wilson A^{10,17}, Eades S^{6,8,10}.

 **Author information**

Thank you

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Image source: <http://www.sbs.com.au/nitv/article/2015/10/27/child-removals-continue-rise-trauma-perpetuates-says-social-worker>