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CARE. CONNECT. CAMPAIGN.

Introduction

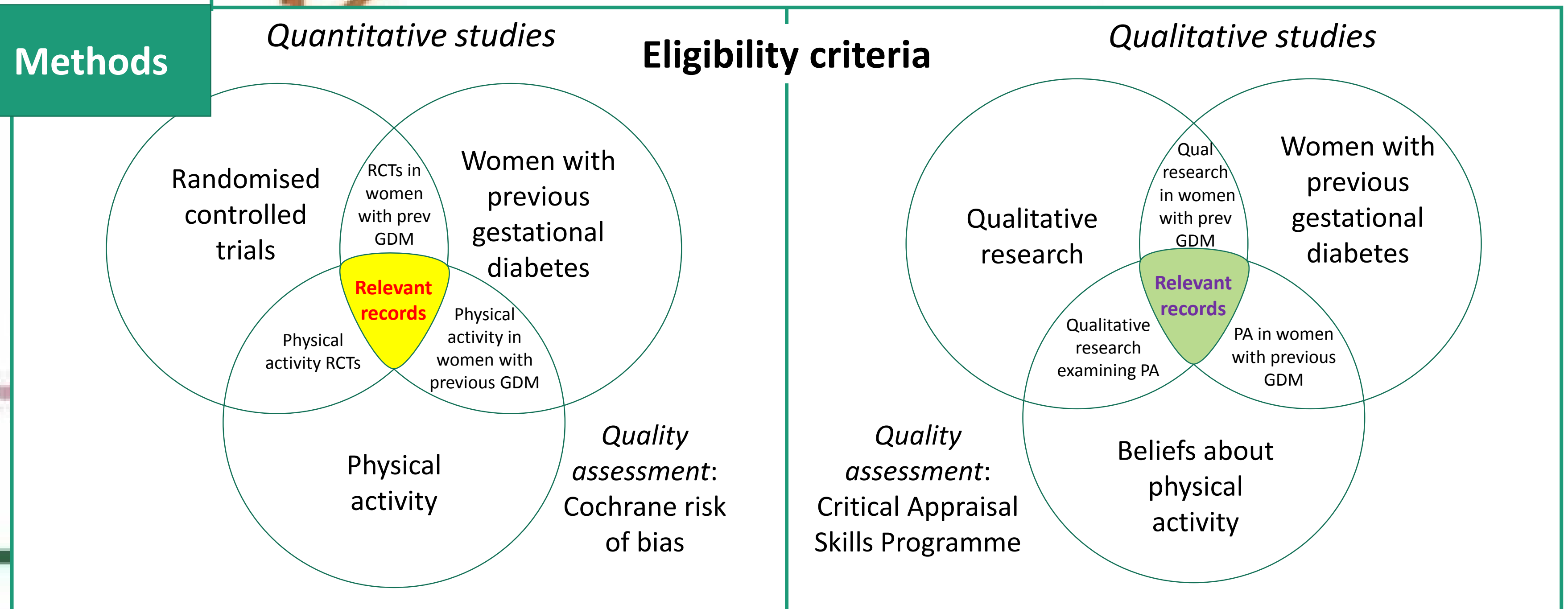
- Women with previous gestational diabetes are at seven times increased risk of Type 2 diabetes later in life (Bellamy et al, 2009).
- Physical activity (PA) can reduce this risk, but most women with recent gestational diabetes are not active (Anjana et al, 2016).
- **Interventions to increase physical activity in this group have had mixed success** (Gilinsky et al, 2015) – further exploration of these interventions and why they are (or are not) effective is needed.



Aims

1. **Quantitative review:** To explore the effectiveness of interventions to increase physical activity in women who have had gestational diabetes.
2. **Qualitative review:** To explore the barriers, facilitators and perceptions that influence women with previous gestational diabetes' likelihood to be regularly physically active.
3. **Mixed methods synthesis:** To examine what factors (Aim 2) influence intervention effectiveness (Aim 1).

Figure 2 Methods



Results

Quantitative review: Summary of intervention characteristics and effectiveness

6 pre-post study designs, 12 RCTs

Intervention design

- 5 web-based
- 7 individual in-person or telephone
- 4 group-based
- 2 individual and group-based

Intervention focus

- 3 only physical activity
- 9 PA + diet
- 6 PA + diet + other

Median sample size

- N=54 (range 17 – 2280)

Risk of bias

- 7 high, 6 moderate, 3 low-moderate, 2 low

Intervention results

- 4 studies significantly increased PA
- 4 studies with mixed (both significant and nonsignificant) results about PA
- 10 studies that did not increase PA

Other results

- Poor reporting of intervention characteristics limited analysis

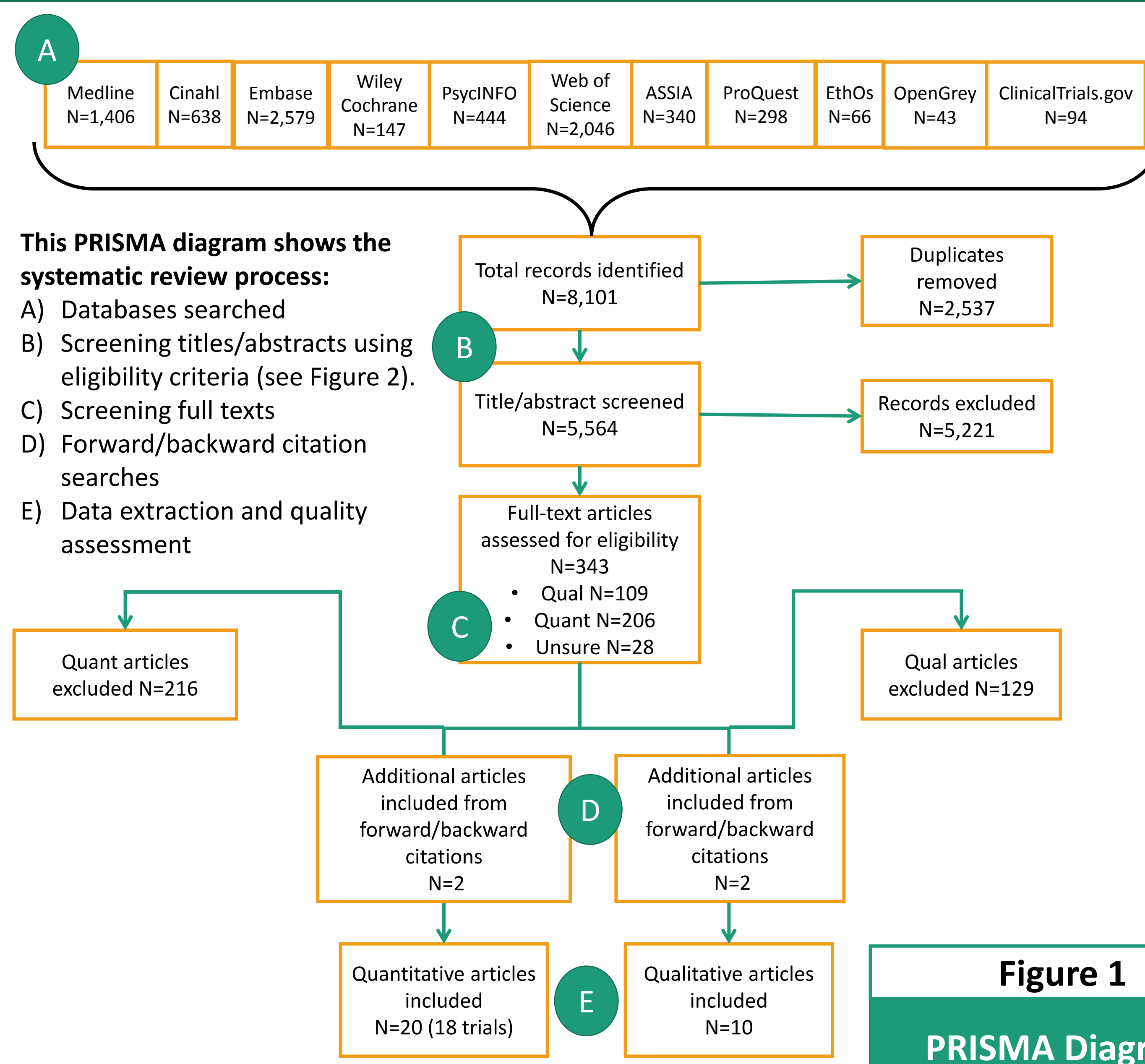


Figure 3 Qualitative review: Summary of barriers to PA found and associated Health Determinant levels

Health Determinant Level	Barriers to PA
Environment/Culture/Economical	Lack of affordable childcare, Weather as a barrier, Cultural expectations as a barrier
Healthcare	Lack of support from healthcare, Diet emphasised over PA
Family/Social	Feeling unsupported emotionally, Feeling unsupported physically, Domestic responsibilities time-consuming, Putting family before self
Individual	Breastfeeding is a barrier, Too busy for PA, Too tired for PA
Psychological	Mental health difficulties, Lack of motivation, Feeling lazy, Emotional barriers to accepting childcare, Too young to worry about lifestyle change, Feeling helpless about progression to T2D
Education	Unsure/unconcerned about future T2D risk, Lack of education about future T2D risk

Mixed methods synthesis

- Successful interventions were significantly more likely to address **lack of affordable childcare as a barrier** than unsuccessful interventions $\chi^2(1) = 13.04, p < 0.001$.
- Successful interventions were significantly more likely to include **multiple levels of health determinants of barriers to PA** (e.g. Educational, Individual and Healthcare) than unsuccessful interventions $F(1,12) = 7.50, p = 0.018$.
- There was **no significant difference** in number of barriers to PA addressed between successful and unsuccessful interventions $F(1,12) = 3.47, p = 0.087$.



**Figure 1
PRISMA Diagram**

Conclusions: Mind the gap between reported barriers and intervention components

- There are significant gaps in reporting quality for the majority of intervention studies.
- Successful interventions were significantly more likely to address multiple levels of health determinants and lack of access to affordable childcare than unsuccessful interventions.
- **Future interventions should work to incorporate the results of this review into future intervention development.**