Using the Theoretical Domains Framework (TDF) to explore lifestyle choices for weight-management with overweight pregnant women

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Why focus on overweight women?

- Health risks associated with being overweight (BMI 25-29kg/m²) CEMACH (2007) and NICE (2010).

- ‘Overweight/obesity' in pregnancy highlighted in key documents but attention focussed on obesity.

- Within maternal research ‘overweight/obesity’ is reported as one group: difficult to identify behaviours specifically impacting on lifestyle choices for pregnant women who are overweight (WO).
Aims of the Study

1. Explore the barriers and facilitators impacting on healthy lifestyle choices for pregnant WO.

2. Assess whether these barriers are the same for normal weight (BMI 18.5-24.9kg/m²) NW and obese (BMI 30-39.9kg/m²) OB pregnant women.
Design & Materials

• Semi-structured interviews, informed by the Theoretical Domains Framework (TDF)

• Changing individual’s behaviour = changing one (or more) of the Capability, Opportunity and Motivation (COM) factors (Michie et al., 2011).

• The TDF describes 14 factors from theories of behaviour change that fall into the COM categories.

• Intervention functions and policy categories can be identified, in a systematic and transparent way, using the Behaviour Change Wheel (BCW) (Michie et al., 2011, 2014).
Recruitment & Analysis

- All women were recruited at Barnsley Foundation Hospital NHS Trust via Public Health Midwife (PHM).

- Inclusion criteria: 18 years old, singleton or within 6 weeks post-partum, had fluency in English, and for G1: BMI 18.5-24.9 Kg/m²; G2: BMI 25-29.9 Kg/m²; G3: BMI ≥30kg/m².

- Framework analysis was applied, using NVivo to reduce and organise the data.
Results

- 18 women participated (6 across each of the 3 weight categories: normal weight (NW); overweight (WO); obese (OB)).

- The theoretical domains data were grouped under the categories of Capability, Opportunity and Motivation factors to identify similarities and differences, across the three weight categories.
Capability

- **Skills, Knowledge, Memory, Attention & Decision Processes**, and **Behavioural Regulation** are grouped together as they represent the component of Capability, within the COM-B model (Michie et al., 2014).

- Some WO were skilled at making healthy changes during pregnancy and were knowledgeable on how to make these changes and what to do.

  "I think it [WeightWatchers] gives you healthy habits and it gives you an idea of what you should be eating and what portion sizes looks like...it makes you aware of what you put in your mouth" (Nina, WO, 2\(^{nd}\) pregnancy)

- Like NW, some WO continued to make healthy choices as they had done in pre-pregnancy.
Women who were overweight felt reassured when they weighed themselves that they had not gained excessively,

“...I'm happy with my progress so I’ve decided to just keep things as they are” (Stacey, WO, 2nd pregnancy)

As a result of this monitoring those WO women continued to make the same dietary choices.
Opportunity

- **Social Influences** and **Environmental Context & Resources** were grouped together as they represent physical and social opportunities.

- The role of **Social Influence** impacted positively on many dietary choices made by all women.

- Delivery of support influenced women differently across each group.

- Words of support acted as motivators, influencing WO and NW to make healthier choices.

“...if I have stayed at my mum's and she's done my dinner and there are, like, a lot more colourful fruit and veg in there and things like that”. (Leanne, WO, 4th pregnancy)
Opportunity continued...

- Some WO supportive midwife: provided reassurance and/or helpful weight-related information.
- Not shared with NW/OB women:

  "She [midwife] slide the leaflet [Managing your Weight in Pregnancy] across as if it's the elephant in the room, but I am the elephant" (Daphne, OB, 3rd pregnancy)

- All women had necessary facilities and resources in their area to lead a healthy lifestyle.
- Barriers: work/childcare commitments
Motivation Factors

- **Social Role & Identity; Beliefs about Capabilities; Optimism; Intentions; Goals; Beliefs about Consequences; Reinforcement; and Emotions** impacted on whether women were motivated to choose a healthy lifestyle.

- **Social Role & Identity** domain: family expectations for WO was to eat healthier (shared with NW). All women noticed most of their pregnant friends made healthier choices.

- Most WO intended to make changes to their dietary choices during pregnancy (compared with NW & OB women), but set less specific goals.
Motivation continued...

- All women were motivated to lead a healthy lifestyle to ensure their baby was healthy.

- Experience of excessive GWG in previous pregnancies (& their struggle to lose it postnatally) reinforced to some WO & OB women to eat healthier.

- Some commonality of Beliefs about Consequences between the groups, & the experiences of miscarriage, vaginal bleeding and fertility treatment, elevated anxiety levels for WO (Emotion), which motivated healthier choices.

“I’ve been very, very apprehensive about it [pregnancy] really, with me miscarriage 4 years ago. I’ve been holding off and holding off buying stuff...it’s had an effect because they’ve [feelings] make me think; eat me greens and exercise”. (Maria, WO, 3rd pregnancy)
Strengths & Limitations

1. First study to provide an indicative pattern of behaviour change constructs influencing dietary and physical activity choices, specific to overweight pregnant women, using the TDF.

2. Small scale study with potential self-selecting bias, as all women approached by PHM agreed to participate.

3. Qualitative approach captured in-depth views of WO, and the framework method made comparing these views to normal weight and obese women, to be systematically analysed.

4. There were no factors that specifically impacted on weight-related decisions for WO, which in part might have been due to small sample size.
Potential Implications for Practice

Midwives could provide brief interventions as part of routine care to all women which would involve:

- provide information on what a ‘healthy diet’ and moderate exercise means during pregnancy, as well as the benefits of this to mum and baby

- Teach all women strategies to change dietary and physical activity habits, as well as, goal setting for weight targets and monitoring of these.

- Training midwives to help them feel confident to deliver such interventions would be required.
Conclusion

- The majority of domains were relevant to most women.

- All women wanted to have a healthy baby & some wanted to manage their weight gain throughout pregnancy. This influenced their intentions and subsequent goals to eat healthily and engage in physical activity.

- Many WO were skilled to successfully achieve their goals, by monitoring their weight and/or implementing previously learned weight management strategies, but some lacked confidence to always make the changes they desired.

- No specific domain influenced weight-related lifestyle choices WO made during pregnancy.
References


Questions?