Understanding barriers and facilitators to healthy pregnancies among women living in poverty using visual methods and the Behaviour Change Wheel

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Acknowledgements

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Overview

• Background and methods
• Context to my analysis of barrier and facilitators
• The Behaviour Change Wheel
  – The COM-B model
• Data analysis
• Emerging findings
• Conclusions
Context to my analysis

- Existing interventions often have high drop out (e.g., NHS stop smoking services for pregnant women)
- Existing interventions may not affect behavior (Building Blocks - Robling et al., 2016. *Lancet*)
- MRC Framework for developing and evaluating complex public health interventions (Craig, 2008, *BMJ*)
  - By understanding the theoretical basis of behaviours, we can design interventions which may change them
- The Behaviour Change Wheel (Michie et al., 2011; 2014) provides one way of understanding the socio-ecological context of health behaviour
The Behaviour Change Wheel

Sources of behaviour

Intervention functions

Policy categories

Michie et al. (2011). Imp Sci
# The COM-B model

<table>
<thead>
<tr>
<th>COM-B domain</th>
<th>COM-B sub-domain</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capability – an individual’s ability to engage in a specified activity</td>
<td>Physical</td>
<td>Skills; Ability to do a task</td>
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<tr>
<td></td>
<td>Psychological</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Opportunity - environmental factors which allow or facilitate a behaviour</td>
<td>Social</td>
<td>How ‘normal’ that behaviour is in that environment</td>
</tr>
<tr>
<td></td>
<td>Physical</td>
<td>Access to necessary goods to facilitate behaviour</td>
</tr>
<tr>
<td>Motivation - beyond conscious decision making to include any way in which</td>
<td>Reflective</td>
<td>Consider it is morally appropriate to do</td>
</tr>
<tr>
<td>behaviour is directed psychologically</td>
<td>Automatic</td>
<td>Driven by impulse or addiction</td>
</tr>
</tbody>
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The COM-B model

- Capability
- Motivation
- Opportunity

Behaviours

Michie et al. (2011). Imp Sci
Data analysis

• Rich seam of data
• Coded in Nvivo 11 (by Melanie)
• Identifying target behaviours (Michie et al., 2014)
  – Smokefree pregnancies
  – Abstinence from alcohol during pregnancy
  – Healthy diet in pregnancy
• I considered all content relating to each of the behaviours against domains of the COM-B model
  – Barriers and facilitators
  – Healthy diet was not suitably well defined
Smoking: Behaviour

- 4 abstinent (Donna, Fiona, Gaby, Imogen)
- 2 participants smoked (Cat and Jess)
- 1 used an e-cigarette (Becky)
- 1 had previously smoked in two previous pregnancies (Anna)
- 1 lived in a smokey home, but did not disclose smoking status (Ellie)
- 1 had quit prior to pregnancy (Hayley)
The smell of smoking “makes me gag” (Donna)

- Stress (Cat and Anna) - Belief alcohol worse than smoking (Jess)

Partners judgemental: “Well that’s my baby in there.” (Anna, Cat, Jess)

Belief PH advice was accurate (Becky)

Addiction: “I’ve got to have one” (Cat)

Judgement from friends, family and strangers “it was in my own house, I never walked around out and about with one, it’s not the best look.” (Anna)

Smoking as a home-based activity (Cat, Anna)

Strong views from childhood – smoking is bad (Donna, Gaby)
Alcohol: Behaviour

• Research context:
  – 9 of the women already had children
  – guidance to completely abstain from alcohol introduced Jan 2016
• 5 women were abstinent (Donna, Fiona, Gaby, Imogen, Jess)
• 2 regularly drank a few drinks (Anna, Cat)
• 1 drank on her previous pregnancy but was abstinent now (Hayley)
• 1 would consider having a drink on special occasions (Becky)
• 1 not discussed (Ellie)
Alcohol COM-B

Tiredness and sickness reduced appeal (Cat, Hayley)

Belief that 1 or 2 drinks would be safe (Cat)  
“Alcoholics manage to have babies” (Anna)  
“rules change all of the time” (Hayley)

Partner encourages alcohol consumption  
(Anna, Cat, Donna, Hayley)

Feel excluded from social life because can’t drink (Anna, Becky, Donna, Hayley, Jess)

Rarely drank or engaged in NTE anyway (Donna, Gaby, Imogen)

Concern about baby: “you feel like whoa and I don’t want to put a poor innocent baby through that really.” (Fiona)

“Tiredness and sickness reduced appeal” (Cat)

“Belief that 1 or 2 drinks would be safe” (Cat)

“Partner encourages alcohol consumption” (Anna, Cat, Donna, Hayley)

“Feel excluded from social life because can’t drink” (Anna, Becky, Donna, Hayley, Jess)

“Rarely drank or engaged in NTE anyway” (Donna, Gaby, Imogen)

“Concern about baby: “you feel like whoa and I don’t want to put a poor innocent baby through that really.”” (Fiona)
Conclusions

• More women abstained from alcohol than remained smokefree in their pregnancies
• The drivers of smoking and alcohol were different, notably highlighting addiction (automatic motivation)
• The social environment influenced both smoking and alcohol consumption
  – Women’s behavior in relation to alcohol and smoking was judged – both at home and in public
• It was not always easy to understand what was a barrier and what was a facilitator: this appeared related to how it was perceived by the individual – shame and guilt may affect behavior

• We have applied for funding to follow up the ladies following birth – outcome March 2017
Thank you

• Any Questions?

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