Warwickshire’s Respect Yourself: Pilot evaluation of an intervention to increase uptake of sexual health services

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Main project features

• Redevelop old respect yourself website (WCC funding)
• Develop ‘app’ to support sexual health service access – funding from the Health Innovation and Education Cluster (West Mids South)
• Combined the two – website and web app to support sexual health service access amongst 13-19 years-olds in Warwickshire
• Developed using Behaviour Change Intervention development frameworks to support identification of barriers to and facilitators of service access
• Involved PH doctor, RY campaign manager, CU behaviour change specialists, sex education consultant and after tendering process the web developer

• Involve young people and draw on ‘hooks’ within similar Dutch approaches
• Include evaluation
40 000 Hits a month

160 Countries worldwide

No matter who you are, who you fancy or how much you know...

Respect Yourself
Intervention development process from the Behaviour Change Wheel guide (Michie et al., 2014)

Stage 1: Understand the target behaviour
1. Define the problem in behavioural terms
2. Select the target behaviour
3. Specify the target behaviour
4. Identify what needs to change

Stage 2: Identify Intervention functions
Identify:
5. Intervention functions
6. Policy categories

Stage 3: Identify content and implementation options
Identify:
7. Behaviour change techniques (BCTs)
8. Mode of delivery
COM-B (Michie et al., 2011)
The BCW (Michie et al., 2011)
Stage 1: Understand the target behaviour

1. Define the problem in behavioural terms
Young people experience the greatest proportion of STI and termination of pregnancy; may also experience coercion and unwanted sexual activity. They can access condoms, contraception, STI testing and support around relationships and sex from sexual health services, but they don’t always access services when they have a need.

2. Select the target behaviour
Range of potential target behaviours that may lead to improved sexual health and wellbeing outcomes – Warwickshire wanted to target sexual health service access
Stage 1: Understand the target behaviour

3. Specify the target behaviour
All young people in Warwickshire to access sexual health services at a time and place convenient to them, alone or with support from a friend, whenever they have a need

4. Identify what needs to change
Conducted a full needs analysis with a sample of the target population (focus groups) and conducted literature review

Identified a list of factors that emerged from this process
Stage 1: Understand the target behaviour

Embarrassment
Fear
Shame
Lack of confidence e.g. having to explain problem (especially in public space)
Prefer online communication rather than face-to-face
Prefer to use the internet or peers for sexual health information
Belief that there will be unpleasant procedures
Belief that parents have to be there, to consent or be told
Fear of being recognised
Belief that health workers will unfriendly or unapproachable
Belief that health workers scold, be hostile or judge
Concerned that difficult questions being asked
Belief service is not for them (e.g. an older age group)
Fear of age restrictions
Lack of knowledge concerning STIs, contraception and pregnancy
Fear of lack of privacy and/or confidentiality
Not knowing what services are available and where
Not knowing what to expect
Lack of knowledge of what services are available and when
Not knowing how to obtain an appointment
Poor access i.e. too far, poor transport link, inconvenient opening hours
Not knowing how to get there and/or difficult to find
Not knowing whether you have to pay for service/treatment
Cost of travel to service
Long waiting times

4. What needs to change?

Motivation: automatic and reflective
beliefs about capability
beliefs about
consequences
emotion
Psychological capability
knowledge
Social opportunity
social influences
Stage 2: Identify intervention functions

5. Intervention functions
We chose: **Education** (Increasing knowledge or understanding), **Persuasion** (using communication to induce positive or negative feelings or stimulate action) and **Enablement** (Increasing means/reducing barriers to increase capability or opportunity)
Because: aligned with the COM-B but also feasible in web/app mode of delivery (though this is strictly step 8)

6. Policy categories
Already decided by project parameters – Communications/marketing (Using print, electronic, telephonic or broadcast media)
Stage 3: Identify content and implementation options

7. Behaviour change techniques (examples)

<table>
<thead>
<tr>
<th>COM-B/TDF component</th>
<th>Intervention Function</th>
<th>Behaviour Change Technique</th>
<th>Intervention content within the RY website and web app</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belief about consequences (Reflective motivation)</td>
<td>Persuasion</td>
<td>Information about emotional consequences</td>
<td>Prompt user to think how much happier, relieved they’ll feel after visiting (e.g. in text on what to expect page under getting an STI test) <a href="https://www.respectyourself.info/services/what-to-expect/">https://www.respectyourself.info/services/what-to-expect/</a></td>
</tr>
<tr>
<td>Belief about capability (Reflective motivation)</td>
<td>Enablement</td>
<td>Adding objects to the environment</td>
<td>Request slips enabling users to communicate reason for visit to services discretely on arrival at reception <a href="https://www.respectyourself.info/services/request-slips/">https://www.respectyourself.info/services/request-slips/</a></td>
</tr>
<tr>
<td>Belief about consequences</td>
<td>Persuasion</td>
<td>Framing/re-framing</td>
<td>Suggest to individual that can think of using services as a responsible and positive thing to do (e.g. in text on what to expect page; pharmacist says this in video clip about EC)</td>
</tr>
<tr>
<td>Social influences (Social opportunity)</td>
<td>Persuasion</td>
<td>Credible source</td>
<td>Individual likely to be viewed as credible (e.g. doctor or nurse) encourages the behaviour (e.g. videos on what to expect page)</td>
</tr>
</tbody>
</table>
Evaluation Methodology

- Pre-post questionnaire based study
- Objective service data (pre vs. post)
- 5 schools across Coventry & Warwickshire
- 287 13-17 year-olds
- 148 participants matched across time (out of possible 227)
Methodology

- Participants completed a baseline Q
- Engaged with RY over a minimum two month period
- Approx two-thirds used a laptop or pc
- Approx one-third used a mobile device and laptop/pc
- Just 3 only used a mobile device
- Follow-up Q data 2 – 3 months later
Measures

• Intention measured with 2 items (α = .75)
• Self report service access (number of occasions ever and in last 6-8 weeks)
• Device used to access
• Which pages accessed
• Ease of use
• Usefulness
Measures

• Psychological measures derived from barriers and enablers of service access in needs analysis
• Refined with factor analysis
• Factor 1 represented seven items measuring trust in and a belief in the integrity of services, $\alpha = .734$;
• Factor 2 consisted of four items representing beliefs that the services are important and normal, $\alpha = .647$
• Factor 3 demonstrated acceptable after excluding 2 negatively loading item - resulting in four items representing negative perceptions relating to services and access to them. $\alpha = .570$
• The three items loading onto a fourth factor did not show satisfactory internal reliability and so they and the two excluded items from factor 3 were input into further analysis individually
Table 2

Means and (standard deviations) for beliefs and intention questionnaire measures at baseline and time 2 follow-up, by gender amongst matched participants

<table>
<thead>
<tr>
<th>Questionnaire measure</th>
<th>Baseline</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Females (n=60)</td>
<td>Males (n=88)</td>
<td>Females (n=60)</td>
<td>Males (n=88)</td>
</tr>
<tr>
<td>Intention to access sexual health services</td>
<td>3.88 (1.54)</td>
<td>4.05 (1.46)</td>
<td>4.22 (1.56)</td>
<td>4.05 (1.63)</td>
</tr>
<tr>
<td>Factor 1: Trust and belief in integrity of sexual health service</td>
<td>5.15 (0.69)</td>
<td>5.22 (0.81)</td>
<td>5.21 (0.87)</td>
<td>5.23 (0.91)</td>
</tr>
<tr>
<td>Factor 2: Belief services are important and normal* +</td>
<td>4.42 (1.03)</td>
<td>4.34 (1.02)</td>
<td>4.92 (0.95)**</td>
<td>4.36 (1.11)</td>
</tr>
<tr>
<td>Factor 3: Negative perceptions re: services and access to them +</td>
<td>5.00 (1.03)</td>
<td>4.61 (0.98)</td>
<td>5.03 (0.87)</td>
<td>4.53 (1.09)</td>
</tr>
<tr>
<td>Belief that sexual health services are free of charge*</td>
<td>5.10 (1.12)</td>
<td>5.10 (1.20)</td>
<td>5.63 (1.16)**</td>
<td>5.11 (1.35)</td>
</tr>
<tr>
<td>Belief that sexual health services are accessible to anyone of any age</td>
<td>5.08 (1.37)</td>
<td>5.58 (1.42)</td>
<td>5.52 (1.28)**</td>
<td>5.27 (1.67)</td>
</tr>
<tr>
<td>Belief that sexual health services will support any sexual health concern or need</td>
<td>5.47 (1.21)</td>
<td>5.70 (0.94)</td>
<td>5.47 (1.13)</td>
<td>5.50 (1.42)</td>
</tr>
<tr>
<td>Belief that needing to wait to be seen at sexual health services is acceptable</td>
<td>4.50 (1.23)</td>
<td>4.52 (1.43)</td>
<td>4.73 (1.33)</td>
<td>4.44 (1.62)</td>
</tr>
<tr>
<td>Belief that they could access a sexual health service when needed +</td>
<td>4.15 (1.42)</td>
<td>5.16 (1.45)</td>
<td>4.72 (1.39)**</td>
<td>4.881.37</td>
</tr>
</tbody>
</table>

*significant effect of time p<.05
** significant interaction of time*gender p<.05
+ significant effect of gender p<.05
Analysis

Ratings for ease of use
And usefulness of the RY website
Self-report access

<table>
<thead>
<tr>
<th>Number of visits</th>
<th>Baseline T1</th>
<th>Follow-up T2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>Never</td>
<td>49</td>
<td>74</td>
</tr>
<tr>
<td>Ever</td>
<td>6</td>
<td>11</td>
</tr>
</tbody>
</table>

McNemar Test ($\chi^2$ for repeated measures) shows significant increase in service visits for males ($p=.017$) but not females ($p=.453$)
Psychological predictors

- 2 (time) * 2 (gender) mixed MANOVA
- DVs = factors and beliefs from table above + intention
  - significant main effect of time
    \( (F[9, 138]=2.302; p=.019; \eta_p^2=.131) \)
  - significant main effect of gender
    \( (F[9, 138]=4.371; p<.001; \eta_p^2=.222) \)
  - significant interaction effect of time by gender
    \( (F[9, 138]=2.239; p=.023; \eta_p^2=.127) \)
• Main effect of time
  – significant differences between baseline and time 2 follow-up on factor 2: beliefs that sexual health services are important and normal (F[1, 146]=10.163; p=.002; $\eta_p^2=.065$),
  – and the individual belief that services can be accessed free of charge (F[1, 146]=4.416; p=.037; $\eta_p^2=.029$).

• Interaction effect
  – due to factor 2: beliefs that sexual health services are important and normal (F[1, 146]=8.667; p=.004; $\eta_p^2=.056$),
  – the individual beliefs that the participant could access a sexual health service when they needed to (F[1, 146]=6.373; p=.013; $\eta_p^2=.042$),
  – that services can be accessed free of charge (F[1, 146]=4.056; p=.046; $\eta_p^2=.027$),
  – anyone of any age can access services (F[1, 146]=6.935; p=.009; $\eta_p^2=.045$).
  – females demonstrated improvements but males did not
• Because intervention effect differed for females compared with males, consideration of the **main effect of gender** examined potential reasons for this.

• Follow-up analysis of variance (ANOVAs) showed that the main effect of gender was due to significant differences between males and females in responses to:
  – factor 2: beliefs that sexual health services are important and normal (F\[1, 146\]=4.713; p=.032; $\eta_p^2=.031$);
  – Factor 3: negative perceptions relating to services and accessing them (F\[1, 146\]=8.993; p=.003; $\eta_p^2=.058$);
  – Individual belief that participants could access sexual health services when they needed them (F\[1, 146\]=12.005; p=.001; $\eta_p^2=.076$).

• Females held stronger beliefs overall about the importance and normality of services (F1) and were less likely to hold negative perceptions (F3) than males. Males felt more confident than females that they could access services when they needed to.
### Table 5

Mean scores for numbers of service visits by 13-19 year-olds at five Warwickshire services comparing April-November 2011 with the same period in 2012

<table>
<thead>
<tr>
<th>Service</th>
<th>Pre-intervention Mean</th>
<th>Post-intervention Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number of service visits per month</td>
<td>number of service visits per month</td>
</tr>
<tr>
<td>GUM Nuneaton &amp; Bedworth</td>
<td>83.75</td>
<td>110.25*</td>
</tr>
<tr>
<td>GUM Rugby</td>
<td>39.25</td>
<td>65.37*</td>
</tr>
<tr>
<td>GUM Warwick</td>
<td>36.5</td>
<td>38</td>
</tr>
<tr>
<td>GUM Stratford</td>
<td>16.63</td>
<td>21.75</td>
</tr>
<tr>
<td>CASH services</td>
<td>309.75</td>
<td>293.25</td>
</tr>
</tbody>
</table>

*significant increase p<.01
Discussion

• Some positive findings:
  – Liked and useful / neutral responses – not relevant to all yet
  – Females improve on psychological measures
  – Males self report increased access
  – Increased access for 2 most deprived areas of Warwickshire

• Why the psychological improvements only for females and self-report behavioural improvements only for males?
Discussion

– Specific relevance required for action to follow
– Perhaps some males in the sample went en masse to get free condoms
– Gender diff re: concerns about others’ perceptions – worries females more – this didn’t change over time – may need more specific targeting

• Process evaluation needed in further work – think aloud in progress!
• Further evaluation in progress with more robust design – cluster RCT in progress
Licencing and impact

- The website and app currently receive around 40,000 hits per month (36,000 unique users)
- Accessed from 164 countries worldwide
- 30% are UK based
- Set up a licencing contract which includes on-going evaluation within the licence agreement.
- First 2 licences sold
- In discussions with 4 other LAs
Thanks for listening!
See www.respectyourself.info
Email k.brown@coventry.ac.uk