

Theory based response rate letter Intervention A Duncan, D Bonetti, J Clarkson, C Ramsay on behalf of IQuaD Trial

Background

A low response rate for trial questionnaires puts the validity and generalizability of trial results in jeopardy. Identifying that *participants returning the trial questionnaire* is a behaviour opens the possibility of designing a behaviour change intervention to influence its performance.

The following shows the design details of a theory based behaviour change intervention, quite simply delivered in the form of a covering letter, that significantly increased the response rate to an annual questionnaire of a 3 year trial set in primary care dentistry.¹ We hope that other researchers will implement this intervention in other settings and so test the validity of it as an evidence based method to improve response rates to postal questionnaires.

Intervention Development

Developing behaviour change interventions based on theory is strongly recommended by the Medical Research Council guidelines for developing complex interventions. The Theoretical Domains Framework (TDF) is a tool for identifying theoretical targets for behaviour change interventions.² The TDF collates similar constructs drawn from different psychological models into theoretical domains (e.g. beliefs about consequences; knowledge; social influence). Psychological constructs (e.g. attitude, perceived control, self-efficacy) within each domain are modifiable using similar behaviour change techniques (BCTs), so intervention design can be based on either construct or domain identification. Construct and domain appropriate behaviour change techniques can then be identified from BCT taxonomies.³⁻⁴ The TDF can be applied in a top-down as well as bottom-up way, which makes it particularly useful for developing a theoretically informed intervention based only on expert consensus when more detailed research identifying specific barriers and facilitators of the target behaviour is not feasible.

Method Summary

- Stage 1. Selected domains from the TDF appropriate to the target behaviour of *participants returning the trial questionnaire* (Table 1)
- Stage 2. Selected domain appropriate behaviour change techniques from BCT Taxonomies which were feasible to operationalise in a letter format (Table 1). These are the 'active ingredients' of this intervention.
- Stage 3. Operationalised the BCTs i.e. translated the domain targets and techniques into text for the covering letter (Table 1; Attachment 1)
- Stage 4. Validated the letter content (backward translation exercise)

References

1. Jan E Clarkson, Craig R Ramsay, Paul Averley, D Bonetti, Dwayne Boyers, Louise Campbell, Graham R Chadwick, Anne Duncan, Andrew Elders, Jill Gouick, Nigel B Pitts, Marjon van der Pol, David Nj Ricketts, Margaret K Ross, James G Steele, Moira Swan, Martin Tickle, Pauline D Watt, Helen V Worthington, Linda Young. IQuaD dental trial; improving the quality of dentistry: a multicentre randomised controlled trial comparing oral hygiene advice and periodontal instrumentation for the prevention and management of periodontal disease in dentate adults attending dental primary care. *BMC Oral Health* 10/2013; 13(1):58.
2. Michie et al. Making psychological theory useful for implementing evidence based practice. *Qual & Safety in Health Care* 2005; 14:26–33

3. Michie et al. Mapping Theoretically Derived Behavioural Determinants to Behaviour Change Techniques. *Applied Psychology: An International Review*. 2008; 57(4), 660–680
4. Abraham & Michie. A taxonomy of behaviour change techniques used in interventions. *Health Psychol*. 2008; 27(3):379–87

Table 1: Designing the Response Rate Letter Intervention for the primary dental care setting

Salient Theoretical Domains	Behaviour change techniques and definitions	Operationalisation (letter text)
Motivation and goals	<p>Prompt intention formation and goal setting Encourage the person to decide to act or set a general goal</p>	<p>Identify the following goals: 1. Complete questionnaire 2. Return questionnaire 3. Participate for the duration of the study</p> <p>Include information about when where and how to fulfill goals</p>
	<p>Provide information about others' approval, pressure, support. Information about what others think, will approve or disapprove of proposed behaviour change</p>	<p>Text should include references to: - Your dentist is still participating - Important people/organisations support this study and provide credentials - Being part of a larger group Have their dentist to sign the letter if possible</p>
	<p>Provide general encouragement Praising or rewarding the person for performance</p>	<p>Reiterate that their contribution is necessary and appreciated</p>
Beliefs about consequences	<p>Provide information on consequences Information about the benefits or costs of action or inaction</p>	<p><u>Possible facilitators (reasons for doing X)</u> - They can help impact on dentistry in the UK - They won't let down their dentist <u>Possible barriers (reasons for not doing X)</u> - Embarrassment re. answer consistency - Their view is not important, does not make a difference - Their dentist is no longer committed or involved - Social desirability issues re confidentiality - Length of questionnaire</p>
Behavioural regulation	<p>Action planning explicit statement of where, when, and how a behaviour will be performed.</p>	<p>Provide an example action plan</p>
	<p>Prompts/cues Introduce or define environmental or social stimulus with the purpose of prompting or cueing the behaviour.</p>	<p>Include reminder prompt in the plan example</p>
Knowledge	<p>Provide information on behaviour and outcomes</p>	<p>Explain what <i>returning the questionnaire</i> means for this 3 year study; why the questions are asked; what to do next</p>

Attachment 1: Response Rate Letter Intervention Template

Note: At [e.g.] substitute the appropriate health care provider/concern/condition/time/outcomes

[Trial Name and Logo]

[Trial Contact Address Details]

<< Participant First Name>> << Participant Family Name>>
<<Address Line 1>>
<<Address Line 2>>
<<Address Line 3>>
<<Town>>
<<Postcode>.

<<Date>>

Dear <<Title>> <<Family Name>>

Please find enclosed the annual [Trial Name] questionnaire and a reply-paid envelope. It would be greatly appreciated if you could complete and return as soon as possible. If you have any questions, please get in touch with the [Trial Contact Office] on [Trial Contact Phone Number].

Why we have sent you this questionnaire

Your [e.g. dentist] is participating in this UK-wide study looking at the very best way they can help their patients improve their [e.g. oral health]. This is an important study with the potential to impact on the treatment of all [e.g. dental] patients, and involves academic and research groups from [Trial Centres e.g. Aberdeen, Dundee, Edinburgh, Newcastle, Manchester and London Universities].

This is a [e.g. 3] year study, as it will take this long to collect meaningful information about how [e.g. oral health treatments] can affect [e.g. a person's quality of life, general health and teeth]. Such long-term studies require a strong commitment from your [e.g. dentist] to stay in the study until the end. This means your [e.g. dentist] has placed considerable trust in the patients they asked to join them in this research. Your [e.g. dentist] will not be able to fulfil their part in this study without the continued co-operation and participation of their patients.

As one of these patients, you consented to complete this annual questionnaire at the start of the study, asking about [e.g. a wide range of actions and beliefs]. This is to provide a broad view of the impact of having (or not having) [e.g. dental treatments]. **There are no right or wrong answers.** You do not have to worry about what your [e.g. dentist] will think about what you say, as they will not be privy to any information that can link you to your questionnaire.

We recognise that completing a questionnaire is not something people usually do. Other study participants have found it helpful to plan ahead. For example, leaving the questionnaire out in the kitchen can serve as a reminder to complete it. Putting the envelope where it can't be missed before leaving the house is a good reminder to take it with you to post.

You may feel that one person's questionnaire is not that important in such a large study, but that is very far from the truth. Every individual's contribution is needed to maintain the integrity of the end results. On behalf of your [e.g. dentist], and everyone involved in this study, we would like to thank you very much for contributing to this work.

Yours sincerely

Trial Manager Signature

[e.g. Dentist] Signature

Attachment 2: Response Rate Letter Intervention Template

Note: At **[e.g.]** substitute the appropriate health care provider/concern/condition/time/outcomes

[Trial Name and Logo]

[Trial Contact Address Details]

<<First Name>> <<Family Name>>
<<Address Line 1>>
<<Address Line 2>>
<<Address Line 3>>
<<Town>>
<<Postcode>>.

<<Date>>

Dear <<Title>> <<Family Name>>

[Trial Name]

Thank you very much for taking part in the **[Trial Name]** Trial.

We enclose the annual questionnaire as we are keen to know if your views of the service you receive from your **[e.g. dentist]**, and/or your attitudes and beliefs towards **[e.g. oral health treatments]** have changed since you agreed to take part.

Some of the questions may not seem relevant but we would be very grateful if you could try to fill them all in. If you have any problems in completing the questionnaire, a friend or relative may be able to help you. Alternatively, please contact the **[Trial Name]** Study Office; we will be happy to help in any way we can.

Once you have completed the questionnaire, please return it in the FREEPOST envelope provided.

In the meantime, if you require any further help or information about the study, please contact the **[Trial Name]** Study Office on XXXX XXXX

Once again, thank for your help with this study.

Yours sincerely,

<<signature of **[Trial Name]** Trial Manager >>