Increasing compliance with colorectal cancer screening: the development of effective health education

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Abstract

The ability of a health education leaflet to raise awareness of the frequency of colorectal cancer and its asymptomatic nature and to increase intention to participate in screening with faecal occult blood testing (FOBT) was investigated. One hundred subjects were interviewed before and after reading the leaflet. The number of men stating bowel cancer was 'very common' increased significantly from 20 to 60% ($\chi^2 = 16.7, P < 0.0001$) and those understanding its asymptomatic nature from 64 to 92% ($\chi^2 = 11.4, P < 0.001$). The leaflet significantly increased the percentage of women reporting bowel cancer as 'very common' from 30 to 70% ($\chi^2 = 16.0, P < 0.0001$) and as being asymptomatic from 58 to 94% ($\chi^2 = 17.8, P < 0.0001$). After reading the leaflet, 55% of men who initially declined screening reversed their decision ($\chi^2 = 16.5, P < 0.0001$) and 50% of female non-adherers reversed their decision ($\chi^2 = 17.3, P < 0.0001$). Reasons most frequently given for declining colorectal cancer screening were feeling well (77% of subjects declining), concern about further tests (38%), unpleasantness of FOBT (13%) and illness (6%). This leaflet successfully educates people about colorectal cancer and increased intention to participate in screening programmes.

Introduction

Colorectal cancer is the second commonest cause of death from malignant disease resulting in over 20 000 annual deaths in Britain (OPCS, 1990) and 57 000 in the US (Boring et al., 1990). The simplest method of screening for the disease is known as faecal occult blood testing (FOBT) which detects occult blood from bleeding asymptomatic cancers and adenomatous polyps. FOBTs are completed at home and consist of three cardboard slides onto which small samples of stool are smeared. Such screening detects pre-malignant adenomatous polyps and cancers which are at an early stage of their development and confined to the bowel wall (Dukes' A tumours) (Kronborg et al., 1987; Kewenter et al., 1991; Thomas and Hardcastle, 1991; Winawer et al., 1991; Mandel et al., 1993). However, studies of FOBT in British general practice report a compliance that is often below 50% (Farrands et al., 1981; Million et al., 1982; Hardcastle et al., 1983; Lallemand et al., 1984; Hart et al., 1994). To ensure colorectal cancer screening programmes are effective in both health and economic terms then more people must be encouraged to participate. To achieve this high acceptance of screening then the reasons for non-participation must be understood. Common reasons identified for declining colorectal cancer screening were feeling well (77% of subjects declining), concern about further tests (38%), unpleasantness of FOBT (13%) and illness (6%). This leaflet successfully educates people about colorectal cancer and increased intention to participate in screening programmes.
Health education leaflets provide one possible route to increasing participation in screening programmes, although previous research provided conflicting evidence on its effectiveness. Hardcastle et al. (1983) showed an educational letter sent 2 weeks before the test invitation raised compliance by nearly 9%, although another study found a leaflet about 'bowel disease and screening for bowel cancer and polyps' had no effect on compliance (Nichols et al., 1986). These leaflet's contents were not published or tested in a pilot study and did not appear to address reasons for non-adherence. Pye et al. found that their health education leaflet decreased the response by 9% (Pye et al., 1988). The negative effect of this leaflet may have been because FOBTs were not explained and reasons for non-adherence were not addressed. Careful consideration of the wording and content of educational leaflets is essential, and such material has to be successfully piloted before use in screening programmes.

The principle aim of this study was to assess the effectiveness of an educational leaflet in increasing intention to participate in colorectal cancer screening. The leaflet explained the high frequency of colorectal cancer, its asymptomatic nature and addressed reasons for non-compliance. These reasons were identified by ourselves by interviewing those who failed to participate in a colorectal cancer screening programme offered to residents of Market Harborough, Leicestershire (Hart et al., 1994; Hynam et al., 1995). It was hypothesized that if the reasons for non-participation are addressed, the leaflet would increase overall participation. The leaflet's effectiveness was measured by assessing its ability to: raise awareness of colorectal cancer, asymptomatic illness and screening, and increase intention to participate in FOBT.

Method

The leaflet was initially piloted on 10 subjects. The pilot study found the leaflet negatively affected subjects' attitudes, as two of 10 changed their reply from 'yes' to 'no' after reading the leaflet in response to the question 'Do you think bowel cancer can be present before giving symptoms?'. The leaflet was altered to emphasize more strongly the principle of screening and this was positively effective on a further 10 pilot subjects. One hundred further subjects participated in the main study (50 men and 50 women). Subjects were men or women aged 50–70 years who accompanied patients to the medical and surgical clinics at Leicester General Hospital. Subjects accompanying patients attending clinic for colorectal cancer investigations were specifically excluded.

One of two trained interviewers conducted all interviews (A. R. H. and T. L. B.). Inter-observer bias was controlled for through training techniques and tested by assessing subjects' response to the question 'would you request a kit if offered?' (Appendix 2, section 3, question 2). Interviewers questioned subjects about their awareness of colorectal cancer and if it could be present before giving symptoms, and provided them with forced choice answers. Subjects then read the section of the leaflet explaining that colorectal cancer is the second commonest cancer and that it is often asymptomatic (Appendix 1, paragraphs 1 and 2). The interviewer then repeated the two questions (i.e. 'how common do you think bowel cancer is?' and 'do you think bowel cancer can be present before giving rise to symptoms?'), providing the same possible answers. Next subjects rated the leaflet's explanations of screening, the screening tests for bowel cancer and if they had heard of any screening tests for colorectal cancer (paragraphs 4 and 5 of the leaflet).

Interviewers asked subjects if they would request a FOBT if offered. Subjects who replied 'definitely' were not interviewed further. Those who replied 'probably', 'no' or 'don't know' were questioned to determine their reasons. Subjects were offered a list of five reasons for non-participation and commented on which, if any, were applicable to them. Subjects choosing any of the five reasons read a relevant paragraph of the leaflet designed to reverse their decision. After reading the paragraph,
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Subjects were again asked whether they would now participate if offered a FOBT. The leaflet was considered to have reversed their decision to participate if they replied ‘definitely yes’ or ‘possibly’ to the second test offer. For example, if a subject chose feeling well as a reason for declining, they read paragraph 8 of the leaflet which explains they may have an early cancer or polyp that is not symptomatic. Subjects had the opportunity to provide other reasons for non-participation. As previous studies of uptake of FOBT show more women than men participate (Farrands et al., 1981; Hardcastle et al., 1983; Hart et al., 1994; Lallemand et al., 1984; Nichols et al., 1986), the results were analysed separately.

The readability of the leaflet was measured with the Flesch Reading Score (Adult Literacy Support Fund, 1980). This index allows an estimation of the leaflet based on the sentence length and the number of syllables per word.

**Results**

The mean age of both men and women interviewed was 63 years with a similar age range (male age range 51–70 years, female age range 50–70 years). There was no inter-observer variation in the replies elicited from subjects to the standard question ‘would you request a testing kit if offered?’ \( (\chi^2 = 0.1, \text{NS}) \). The Flesch Reading Score was 63 which is equivalent to the reading age of a 13 year old. The leaflet was assessed in men and women according to the three criteria: change in awareness of colorectal cancer and asymptomatic illness, the explanations of screening and FOBTs, and change in intention to participate.

**Awareness of colorectal cancer and its asymptomatic stage.**

Subjects were asked how common they thought bowel cancer was before and after reading the leaflet. First, the leaflet’s effectiveness was measured through an increase in those stating bowel cancer is ‘very common’. Secondly, effectiveness was measured by the decrease in those replying ‘don’t know’ after reading the leaflet. In men the leaflet significantly increased the number stating bowel cancer was ‘very common’ from 20 to 60% \( (\chi^2 = 16.7, P < 0.0001) \) and significantly decreased those replying ‘don’t know’ from 24 to 0% \( (\chi^2 = 13.7, P < 0.001) \). The leaflet significantly increased the number of women who thought bowel cancer is ‘very common’ from 30 to 70% \( (\chi^2 = 16.0, P < 0.0001) \) and decreased the number replying ‘don’t know’ from 16 to 4% \( (\chi^2 = 4.0, P < 0.05) \). There was no difference between men and women who thought bowel cancer was ‘very common’ after reading the leaflet (60 versus 70%, \( \chi^2 = 1.1, \text{NS} \)).

The leaflet significantly increased the number of subjects replying ‘yes’ to the question ‘do you think bowel cancer can be present before giving rise to symptoms?’ in men from 64 to 92% \( (\chi^2 = 11.4, P < 0.001) \) and women from 58 to 94% \( (\chi^2 = 17.8, P < 0.0001) \). There was no gender difference in subjects who replied ‘yes’ to this question having read the leaflet (92 versus 94%, \( \chi^2 = 0.0, \text{NS} \)). However, only 20% of both men and women surveyed had heard of screening tests for bowel cancer.

**Opinions on the leaflet’s explanations.**

Subjects commented on the clarity of the leaflet’s explanations of screening, the FOB screening test and the description of a change in bowel habit (Table I). For men at least 84% thought the explanations were ‘very well’ or ‘well’ written and in women, the figure was 94%.

**Reasons for declining screening.**

After reading the first section of the leaflet 56% of men and 48% of women replied they would ‘definitely’ request a FOBT if offered. The remainder replied ‘probably’, ‘no’ or ‘do not know’ and were asked to give their reasons. The 22 men who would not definitely request a kit gave a total of 34 reasons and the 26 women gave 37 reasons (each subject could give more than one reason). The commonest reasons for subject’s uncertainty or for declining are shown in Table II. In both sexes, the commonest reason for not definitely requesting a test was that subjects felt well (86%...
Table I. Healthy subjects opinions of the leaflet Detecting Bowel Cancer Early

<table>
<thead>
<tr>
<th>Screening concept (%)</th>
<th>Screening tests (%)</th>
<th>Change in bowel habit (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Very well or well explained</td>
<td>90</td>
<td>96</td>
</tr>
<tr>
<td>Poor or very poorly explained</td>
<td>10</td>
<td>4</td>
</tr>
</tbody>
</table>

A hundred subjects were asked to comment on the leaflet’s explanations.

Table II. Reasons given by healthy subjects for declining an offer of colorectal cancer screening

<table>
<thead>
<tr>
<th>Subjects giving reason (N, %)</th>
<th>Subjects who reversed their opinion after reading the leaflet (N, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M (N = 22)</td>
</tr>
<tr>
<td>Feel well and no symptoms</td>
<td>19 (86%)</td>
</tr>
<tr>
<td>Concern of more tests</td>
<td>7 (32%)</td>
</tr>
<tr>
<td>No time</td>
<td>0</td>
</tr>
<tr>
<td>Testing sounds unpleasant</td>
<td>3 (14%)</td>
</tr>
<tr>
<td>Another illness</td>
<td>1 (5%)</td>
</tr>
</tbody>
</table>

Overall the leaflet entitled Detecting Bowel Cancer Early reversed intention to participate in both men ($\chi^2 = 16.5$, $P < 0.0001$) and in women ($\chi^2 = 17.3$, $P < 0.0001$).

of men and 69% of women); 32% of men and 42% of women interviewed expressed concern over possible further hospital tests. No subjects interviewed offered a lack of time as a reason. However, 14% of men and 12% of women felt testing sounded unpleasant and so would decline screening. Only 5% of men and 8% of the women displayed concern about another illness interfering with the test. There were no differences between men and women in the frequency with which the commonest reasons for non-compliance were given ($\chi^2 < 2.0$, $P > 0.16$). Three men gave four ‘other’ reasons for not participating: concern about completing the kit correctly, tests belong in hospitals not in the home, wife was unwell and concern over unnecessary investigations if the stool test was falsely positive. Three women gave three other reasons: the test was unnecessary as there was no family history of cancer, recent negative investigations for anaemia and rejection due to a misunderstanding that the stool test is inserted into the rectum.

Increasing intention to participate

The leaflet significantly reversed the decision to participate in 12 of 22 (55%) men and 13 of 26 (50%) women who initially declined (males: $\chi^2 = 16.5$, $P < 0.0001$; females: $\chi^2 = 17.3$, $P < 0.0001$). When the number of subjects who would initially ‘definitely’ request a kit is added to those who would ‘definitely yes’ or ‘possibly’ do so after having read the section addressing reasons for non-compliance, there was no difference between men and women (80 versus 74%, $\chi^2 = 0.51$, NS).

No subjects interviewed requested a kit, although this would have been offered if requested. This was possibly due to subjects appreciating they were part of a research project and that stool testing was not generally available. As there were no requests, we felt that we had not raised anxiety.
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Discussion

This leaflet is readable, informative and increased intention to participate in screening. The majority of subjects thought the leaflet's explanations of screening and FOBTs were well written. The leaflet significantly raised awareness of the prevalence of colonic cancer and its asymptomatic nature in both men and women, and reversed decisions not to participate in 50% of subjects. Following the leaflet's successful development it is now essential to test it further in a randomised controlled community trial.

This study demonstrated a lack of awareness of the frequency of colorectal cancer. Only 20% of men and 30% of women replied that bowel cancer was 'very common' before reading the leaflet. Our impression interviewing subjects was that those who were unsure about the disease's frequency replied that it was 'common'. After reading the leaflet which stated bowel cancer was the second commonest tumour affecting 28 000 people, most changed to replying 'very common'. Other work has shown that a third of those who accepted FOBT were able to correctly name the three commonest cancers, compared to only a quarter of non-participants (Farrands et al., 1984). A major public health campaign publicising the high incidence of colorectal cancer may encourage greater participation in any future national screening programme.

Importantly, the leaflet increased awareness of asymptomatic illness. Several subjects had commented it was wrong for healthy people to have medical tests and an inappropriate use of resources. Other studies have confirmed these findings with acceptors more aware than refusers that cancer could be present prior to symptoms (Farrands et al., 1984). A major public health campaign publicising the high incidence of colorectal cancer may encourage greater participation in any future national screening programme.

Early detection was beneficial (King, 1987). In mammography, 38% of non-attenders felt well and thought screening was unnecessary (MacLean et al., 1984).

Many subjects declined screening as they were afraid of further hospital tests, although the leaflet allayed most people's concerns. This concern may be centered on the tests themselves or the fear that the tests will find cancer. People may fear pain during investigations, lack of privacy, embarrassment or dealing with hospital staff. We previously showed that fear of further investigations was a major reason for not participating in screening programmes and of more relevance than lack of effective treatment for cancer (Hynam et al., 1995). If people's fear of investigations for cancer cannot be overcome, then they will not experience the long-term benefits from early cancer detection. Several studies report that non-adherers declined as they do not have time to participate or could not be bothered (Spector et al., 1981; Farrands et al., 1984). Such answers are likely to be excuses for real concerns about cancer and its treatment. Some people did not participate due to the nature of the stool collection procedure and testing kits. Designing a more acceptable one will be difficult. One involves dropping a testing card into the toilet after defaecation and looking for a colour change, and in another participants wipe their anus and then develop the slides themselves (Hunter et al., 1991). The reasons identified for non-participation in this study are likely to be accurate and representative because of the nature of the sample interviewed. A hundred consecutive subjects were questioned and none declined interview. Previous studies of non-compliance have been limited by low return rates for postal questionnaires and so are unlikely to be truly representative (Silman and Mitchell, 1984; Klaaborg et al., 1986).

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Reasons identified for non-compliance in this study are compatible with components of the Health Belief Model (Becker, 1974; Rosenstock, 1974), Cognitive Theory (Ley, 1992) and the Health Action Model (Tones and Tilford, 1994). The Health Belief Model states compliance is
related to perceived susceptibility and severity of the disease and benefits, cues and barriers to participating. In this study many people did not adhere as they felt well and so perceived themselves not to be susceptible to colorectal cancer. When the frequency of colorectal cancer was explained, nearly two-thirds of non-adherers changed their minds. Barrier factors to adherence were recorded which the health belief model states are important. The major barrier factors identified were the unpleasant nature of stool collection and fear of further investigations following a positive stool test. Findings in this paper are similar to those in an Australian study using the Health Belief Model where only perceived susceptibility and barriers to adherence were related to participation (Macrae et al., 1984). In a study from New York, perceived susceptibility was not related to adherence; however, the population interviewed was a select one, i.e. those presenting for a private health screen and not representative of the attitudes of the total population (Halper et al., 1980). Other criteria of the Health Belief Model were fulfilled in that non-adherers perceived colorectal cancer to be a more severe illness and were less confident about the benefits of treatment. In our study other aspects of the model, i.e. cues and benefits to participation, were not investigated as adherers were not interviewed. Another model of health behaviour, the cognitive model, emphasizes the importance of patient understanding (which is partly dependent on doctor–patient communication), memory and satisfaction (Ley, 1992). To increase understanding the Flesch Reading Index was applied to the leaflet and a high score indicated it was an easy read. As data from British and American studies has shown adherence is related to understanding (Tagliacozzo and Ima, 1970; Kincey et al., 1975), the leaflet's ability to reverse decisions not to adhere may be related to its high readability score. Patients' memory and retention of information was not assessed although they were allowed to study the leaflet for as long as required. The Health Action Model states adherence is related to an individual's intention to act, and secondly, factors that determine if this is translated into action (Tones and Tilford, 1994). Individual factors include intellectual skills, motivational state and if that individual is influenced by social pressure. In this paper, these factors were not assessed, although measures to increase the social range of people who could understand the leaflet were taken by using the Flesch Reading Scale and ensuring it was acceptable to those with a low reading age. An individual's intention to act may well have been related to the presence of the doctor. Finally, the Theory of Planned Behaviour (Ajzen, 1985; Schifter and Ajzen, 1985) asserts actions depend on the degree that people believe it is actually possible to translate intention into practice and adhere. The model acknowledges that much health-related behaviour is profoundly influenced by emotional factors and environmental constraints, with behaviour not just dependent on beliefs and attitudes. The fact that the Theory of Planned Behaviour reports an association between intention and behaviour helps support the methodology used in this study. The supply of accurate information is one important tool against non-adherence. Other factors are also vital including memory and motivation (Ley, 1992; Tones and Tilford, 1994), which have been mentioned, and illness beliefs and doctor–patient communication. Several studies have emphasized the importance of doctor–patient communication in medicine. Inui et al. (1976) ran a single tutorial for their doctors in order to make them better as managers and educators of hypertensive patients. Patients whose physicians had attended the session acquired greater knowledge of their illness, were more compliant and achieved better control of their blood pressure. Ley et al. (1976) evaluated the effects of providing general practitioners with a list of empirically based suggestions for improving communication. Consequently, these suggestions resulted in patients retaining more of the given information. Adherence in cancer screening programmes is also related to beliefs about the nature of cancer. Research conducted by the British Broadcasting Corporation (1983) shows that many people consider cancer is one single undifferentiated disease. If people think that in many cases
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treatment for cancer fails and that all cancers are the same, they may be reluctant to participate in a prevention programme for one particular cancer.

A limitation of this study was that only stated intention to participate was measured and not actual completion of testing kits. Intention to participate tends to be higher than actual completion, e.g. in a screening programme organized by this unit in Market Harborough, Leicestershire (Hart et al., 1994), actual compliance in men was 33% (stated intention in this study was 56%) and in women completion was 42% (compared to 48% who intended to participate). A randomized trial of the leaflet in a community is required to ensure it is effective in raising compliance. In retrospect, the inclusion of a section on symptoms may have been confusing to readers and in a planned trial of the leaflet, the symptoms will be omitted to emphasize that asymptomatic people should participate. A further limitation of the study was that the sample interviewed may not be representative of the general community. However, we felt the hospital was the best setting to ask people sensitive questions about cancer and the sample chosen was the most representative possible in this environment. Although the presence of the interviewer may have made some subjects want to give the 'correct answer', the interviewer had to be there to check responses were given before and after reading the appropriate section of the leaflet. We would not have been able to assess the impact of this leaflet by asking subjects to complete this type of questionnaire on their own.

This educational leaflet about colorectal cancer screening is the first to be developed from interviews with non-adherers and then be piloted before use in a screening programme. In three other studies of educational material this approach was not used and results were conflicting (Hardcastle et al., 1983; Nichols et al., 1986; Pye et al., 1988). Only one previous British study reported an ability of educational material to raise compliance (Hardcastle et al., 1983). Here the education consisted of a preliminary letter about 'colorectal cancer and the purpose of the test two weeks before being sent the invitation'. The content of this letter was not published and did not appear to address reasons for non-compliance. The letter raised acceptance of screening from 38 to 47%, although its effect according to age and sex were not reported. Furthermore, an interview of potential subjects 2 weeks before the invitation to discuss colorectal cancer and the use of the test raised compliance to 52%. Another study in two general practices in Nottinghamshire found an educational leaflet caused compliance to fall from 55 to 46% (Pye et al., 1988). There are several possible reasons why the Nottingham leaflet may have been ineffective. First, on the front page, its purpose was not mentioned, although the fact that the illness presents late was reported. Such an approach is unlikely to interest healthy people in screening and induce fear in others. Furthermore, many of the reasons for not participating including unpleasantness of the stool collection procedure and fear of further investigations were not addressed. The addition of a symptom questionnaire about bowel symptoms with the invitation also decreased compliance. Such an approach is probably inappropriate as those with no symptoms should be encouraged to participate and those with symptoms should seek medical advice. In Farnborough and Basingstoke, compliance amongst those who received educational material was similar to controls (Nichols et al., 1986). This study assessed the effect of the leaflet on several methods of recruitment including simply mailing the kit, offering it at routine consultations, and offering patients specific appointment times to come and collect the screening test. Of these three methods, offering screening at a routine consultation was the most successful, although in each group the leaflet had no effect. The lack of effect may have been because it did not address reasons for non-compliance.

Methods for raising compliance must be both simple and cheap if colorectal cancer screening is to succeed on a large scale. Educational leaflets could achieve this aim, provided that they are properly written and tested before use. The success of this leaflet merits a randomized controlled study to quantify its effect.
References


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Appendix 1: detecting bowel cancer early

This leaflet explains how bowel cancer may be diagnosed before it gives rise to symptoms. This is called screening. The following information should answer any questions or concerns you may have about screening.

1. How common is bowel cancer?

Bowel cancer is the second commonest cancer in Britain which affects 28 000 people each year. About one in every 26 people will develop the illness at some time. Many more people have polyps in the bowel. About one in 10 of these will turn into cancer. Removal of the polyps should stop cancer developing.

2. Can bowel cancer be present without causing symptoms?

Yes. Bowel cancer may be present for many months before giving rise to any symptoms at all. When symptoms do occur there may be bleeding or a change in bowel habit. Polyps or pre-cancers rarely give symptoms.

3. What is meant by a change in bowel habit?

This means any change from normal which lasts more than 3 weeks. This could be diarrhoea, constipation or a mixture of both.

4. What is screening?

Screening is where people undergo tests to detect cancer before it gives rise to symptoms. Bowel cancers found by screening are easier to cure than when they later give rise to symptoms. Doctors are keen to diagnose bowel polyps as removing them may prevent cancer developing.

5. What are the screening tests for bowel cancer?

The simplest screening test is done at home and looks for microscopic traces of blood in the motions. This home kit consists of three small cardboard slides. Tiny samples of motion are smeared on the slides using the applicator from the kit. The kit is then tested in a hospital for microscopic traces of blood produced by cancers and polyps.

6. How easy is the home kit test to do?

The test is very easy. It may sound unpleasant but can be done quickly and hygienically. A leaflet is sent with the home kit to explain how to do the test. Several minutes spent completing this test may save your life by cancer being detected early.

Appendix 2: evaluation questionnaire

‘We are conducting a research project into what people know about bowel cancer. We would like your opinion of a leaflet we have designed about bowel cancer and screening’.

Section 1. Patients’ knowledge of bowel cancer and screening, prior to reading the leaflet

1. Age __ sex __

2. a. How common do you think bowel cancer is?
   i very common ___ ii common ___
   iii uncommon ___ iv very rare ___
   v don’t know ___

2 b. Do you think bowel cancer can be present before giving rise to symptoms?
   i yes ___ ii possibly ___
   iii no ___ iv don’t know ___

2 c. Are you aware of any screening tests for bowel cancer?
   YES ___ NO ___
Section 2. Does the leaflet educate about the frequency of bowel cancer and screening?

Ask person to read questions 1 to 4 in the leaflet, then ask, 'Having read the leaflet'
1. How common do you think bowel cancer is?
   i very common  ii common  
   iii uncommon  iv rare  
   v don't know  
2. Do you think bowel cancer can be present before giving rise to symptoms?
   i yes  ii possibly  
   iii no  iv don't know  
3. How well did the leaflet explain what is meant by a change in bowel habit.
   i very well  ii well  
   iii poorly  iv very poorly  
4. How well did the leaflet explain what is meant by screening.
   i very well  ii well  
   iii poorly  iv very poorly  

Section 3. Does the leaflet explain the screening tests for bowel cancer

Ask subject to read paragraphs 5 and 6.
1. How well did the leaflet explain the screening tests for bowel cancer?
   i very well  ii well  
   iii poorly  iv very poorly  
2. Having read paragraphs 5 and 6 would you request a testing kit if offered?
   i definitely  ii probably  
   iii no  iv don't know  

Section 4. Does the leaflet reverse the reasons for non-compliance?

If the answer to the last question is not 'definitely' ask 'have any of the following reasons made you decide not to definitely request a test'. If the answer is 'definitely yes' or 'possibly' present the appropriate section of the book and ask 'has the book changed your mind'.
1. I would not do the test as I feel well and have no bowel symptoms (paragraph 8).  
   pre-book  post-book  
   definitely yes  1  2  
   possibly  3  4  
   definitely no  5  6  
2. I would not do the home kit as I would be concerned about further hospital tests if the home kit was positive (paragraph 7, answer options as above).
3. I would not do the home test as I do not have time (paragraph 10)
4. I would not do the home test as it sounds unpleasant (paragraph 6)
5. I would not do the test as I have another illness (paragraph 9)
6. Other reasons please state _____________________________________________________________________ 

Thank you for your time and help.