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Responses of consecutive patients to reassurance after gastroscopy: results of self administered questionnaire survey

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Abstract

Objective: To study the time course and prediction of responses to reassurance after gastroscopy showing no serious illness.

Design: Selection of consecutive patients were assessed before gastroscopy, immediately after reassurance, and at follow up at 24 hours, 1 week, 1 month, and 1 year. Responses of subgroups of patients identified as high, medium, and low health anxiety by the health anxiety questionnaire were analysed.

Setting: Endoscopy clinic in a general hospital.

Intervention: Oral reassurance that there was "nothing seriously wrong."

Subjects: One consultant physician and 60 patients aged 18-74 referred for gastroscopy.

Main outcome measures: Physician's and patients' ratings of the extent of the reassurance and patients' ratings of their anxiety about their health and of their illness belief.

Results: There was good agreement between the patients and the physician about whether reassurance had been given. Health anxiety and illness belief decreased markedly after reassurance. Patients with high health anxiety showed a significant resurgence in their worry and illness belief at 24 hours and 1 week, and these levels were maintained at 1 month and 1 year later. Patients with medium levels of health anxiety showed a reduction in worry and illness belief after reassurance, and this was generally maintained during follow up. Patients with low health anxiety maintained low levels of health worry and illness belief throughout the study. Partial correlation analyses showed that the levels of worry and illness belief after reassurance were predicted by the health anxiety questionnaire. This measure also had predictive value beyond that of a measure of general anxiety.

Conclusions: Medical reassurance results in a reduction of worry about health and of illness belief, but this may be very short term. Measurable individual differences in health anxiety can be used to predict the response to reassurance.

Introduction

Given the high incidence of patients presenting to medical services without serious illness, medical reassurance is very common.[1 2] Indeed, Bass said that reassurance is probably the most widely used but poorly understood psychotherapeutic intervention in medicine.[3] However, some patients who have received reassurance remain concerned[4-6] and repeatedly attend for further consultations. Patients who remain anxious about their health experience distress and are a considerable drain on healthcare resources. The appropriateness of giving reassurance in all cases and the most effective ways of reassuring patients are therefore debatable. Some clinicians advocate reassurance[7 8] while others cite problems associated with repeated reassurance.[9]

Individual differences in response to reassurance are predicted by the cognitive model of health anxiety. This model hypothesises that anxiety about health arises from a combination of dysfunctional beliefs about illnesses and their consequences in general and the presence of critical incidents such as the experience of symptoms. The beliefs lead to an interpretation of symptoms as indicating a serious illness. Several factors are proposed to maintain persistent health anxiety despite reassurance. Individuals anxious about their health are excessively preoccupied with their internal bodily state. A perceptual bias results in the selective interpretation of and attention

to information that reinforces anxiety. Such individuals may also misperceive health related communications, such as the doctor-patient communication. The cognitive model also proposes that reassurance-seeking behaviour is negatively reinforced by a short term reduction in anxiety after the reassurance but that in some cases reassurance may reinforce the need for further reassurance despite an immediate reduction in anxiety. Doctors may therefore believe that they have successfully reassured a patient, whereas the patient's concerns return soon after consultation.

We aimed to investigate the time course of patients' responses to clinical reassurance and to investigate individual differences in response to reassurance associated with a measure of health anxiety. We developed a reliable and valid measure of health anxiety, the health anxiety questionnaire, which is based on the cognitive model.[10] We predicted that the questionnaire would identify patients who will remain concerned about their health despite medical reassurance. We also predicted that the health anxiety questionnaire would predict response to reassurance independent of general anxiety as measured by the widely used state-trait anxiety inventory.[11] We investigated patients' responses to reassurance after gastroscopy when the examining physician was able to give reassurance that the investigation had shown no serious illness.

Subjects and methods

We monitored responses to reassurance in patients undergoing gastroscopy in an outpatient endoscopy clinic. Consecutive patients with symptoms for which no organic cause had been found were asked to participate in the study when they attended the endoscopy clinic for gastroscopy. Almost all the patients had either received one previous outpatient appointment with a physician or had been referred directly by their general practitioner for gastroscopy. A week before the consultation they had completed the health anxiety questionnaire [10] the state-trait anxiety inventory,[11] the hospital anxiety and depression scale,[12] and two visual analogue scales on which they indicated their level of worry about their health and their level of illness belief (the degree to which they believed something was seriously wrong with their health.[9] The health anxiety questionnaire is a 21 item scale with high internal consistency (Cronbach's $\alpha = 0.92$), high short term test/retest reliability ($r = 0.94$), and evidence of discriminative validity (it discriminates between a normal group, student nurses, medical outpatients, and clinical psychology patients and also between a hypochondriacal clinical group and a non-hypochondriacal group with clinical anxiety).[10] It consists of four components: worry and preoccupation about health, fear of illness and death, reassurance-seeking behaviour, and interference with life.

In the presence of a clinical psychologist the patients completed the two visual analogue scales again, immediately before the consultation and immediately after reassurance about the results, and they were given the scale again to complete and return 24 hours later. At 7 days, 1 month, and 1 year the patients were sent the scales again to complete and return by post. Immediately after the physician had given reassurance, he and the patient independently completed a further scale to reflect the reassurance given. On this five point scale ("definitely nothing wrong," "probably nothing wrong," "unsure," "probably something wrong," "definitely something wrong") the patient indicated the message that he or she had received from the physician, and the physician indicated the message that he thought had been received by the patient. The physician also recorded the presence or absence of an organic cause, whether any additional tests had been ordered, a description of symptoms, and the likely diagnosis.

All patients were seen by a clinical psychologist (MPL) just before their first consultation, half an hour before the gastroscopy. The physician performing the gastroscopy and giving the reassurance was an experienced 46 year old, white male consultant. We recruited 60 patients (34 men, 26 women; age range 18-74 (mean 53.6) years). They were given the result of the gastroscopy by the physician immediately after the procedure. Ten patients were excluded because the result of the gastroscopy was such that the physician could not reassure the patient that he or she did not have serious disease.

Table 1 Mean (SD; range) scores for 50 patients on health anxiety questionnaire, state-trait anxiety inventory, hospital anxiety and depression scale for low, medium, and high health anxiety groups*

Scale (range of scores)	High anxiety (n=17)	Medium anxiety (n=16)	Low anxiety (n=17)
Health anxiety questionnaire (0-63)	23.4 (8.3; >14)	11.0 (1.6; 9-13)	3.7 (2.6; 0-8)
State-trait anxiety inventory (20-80)	45.5 (9.0)	38.6 (8.0)	30.4 (8.1)
Hospital anxiety and depression scale:			
Anxiety (0-21)	10.7 (3.6)	7.9 (3.9)	2.7 (2.3)
Depression (0-21)	6.2 (3.8)	4.1 (2.9)	2.8 (3.3)

*On the basis of the patients' scores in the health anxiety questionnaire.

Analysis

We examined the time course of response to reassurance for three groups of patients by splitting the sample, on the basis of their scores on the health anxiety questionnaire, into three groups of approximately equal size (high, medium, and low anxiety). Table 1 shows the details of these groups. As the characteristics of response to reassurance associated with different levels of anxiety about health were not known we considered trichotomisation as a reasonable first step in determining the "dose-response" relation between the level of the anxiety and response to reassurance. We compared the changes in each group over the course of time using Wilcoxon's non-parametric test. For each group we compared the scores on the visual analogue scales at each time point after reassurance with the scores recorded immediately before the consultation. The analysis was conducted on a reduced dataset as data were missing for some patients at some time points. Analysis of the subjects with missing data showed that they did not differ from the subjects with full datasets, and there was no selective attrition from the three groups.

We also considered the predictive capacity of the health anxiety questionnaire, controlling for the score on the state-trait anxiety inventory. We computed partial correlations between the scores on the health anxiety questionnaire and the scores on the two visual analogue scales—worry about health and illness belief.

Table 2 Means (SE) and numbers of patients for measures of illness belief and worry about health at each point of measurement, and *z* scores for Wilcoxon's test between each point after reassurance and the point immediately before consultation

	Before consultation		After reassurance				
	1 week before	Immediately before	Immediately after	24 hours after	1 week after	1 month after	1 year after
Illness belief							
Low anxiety group:	10.00 (3.43)	14.41 (3.32)	5.88 (2.95)	9.38 (3.09)	8.24 (3.35)	5.62 (2.23)	12.14 (5.05)
No of patients	17	17	17	16	17	16	14
z score			–2.94*	–1.78	–2.17*	–2.50*	–0.24*
Medium anxiety group:	25.63 (4.18)	24.38 (3.16)	13.33 (3.47)	7.69 (3.43)	12.14 (4.94)	12.00 (3.12)	12.83 (4.62)
No of patients	16	16	15	13	14	15	14
z score			–2.39*	–2.67*	–2.05*	–2.59*	–2.34*
High anxiety group:	46.47 (6.80)	46.76 (6.11)	28.53 (6.64)	42.17 (8.33)	38.67 (7.29)	43.64 (7.30)	50.91 (9.29)
No of patients	17	17	17	14	15	11	11
z score			–3.00*	–1.57	–1.99*	–0.93	–1.05
Worry about health							
Low anxiety group:	12.94 (3.51)	15.59 (4.64)	8.82 (3.34)	8.75 (2.87)	8.58 (3.35)	4.38 (1.57)	13.57 (6.17)
No of patients	17	17	17	16	17	16	14
z score			–2.31*	–1.63	–1.89	–2.37*	–0.65
Medium anxiety group:	28.75 (3.75)	25.95 (3.80)	13.67 (3.40)	10.00 (3.58)	15.71 (5.71)	15.33 (2.91)	16.43 (3.41)
No of patients	16	16	15	13	14	15	14
z score			–2.71*	–2.4*	–1.37	–2.13*	–1.76
High anxiety group:	48.24 (6.76)	54.41 (5.65)	29.41 (5.40)	45.00 (7.24)	42.67 (7.84)	44.55 (7.31)	50.91 (9.29)
No of patients	17	17	17	14	15	11	11
z score			–3.52*	–1.92	–2.17*	-1.78	–0.89

*P<0.05.

Results

Perceived reassurance

Immediately after the consultation 49 of the 50 patients in the final sample reported that they felt reassured. Of these, 34 patients reported "definitely nothing wrong" when the physician did also, one reported "probably nothing wrong" when the physician did also, 11 gave a rating that disagreed by one category point with the physician's rating, and three reported "unsure" when the physician recorded "definitely nothing wrong." The patient with missing data at this time point reported at 1 week that he had been told that there was "definitely nothing wrong"; this was also the physician's rating.

Response to reassurance

Table 2 and figure 1 show the patients' responses to reassurance. All three groups showed reductions in worry about health and illness belief immediately after reassurance compared with before the consultation. Within 24 hours, however, the mean response of the high anxiety group (but not of the low and medium anxiety groups) returned close to the mean response immediately before the consultation. After 24 hours the mean response in all groups for anxiety and illness belief remained stable, so the patients in the high anxiety group were still concerned about their symptoms a year later. The statistical analysis supports this interpretation (table 2). A month after the reassurance the low and medium anxiety groups maintain their reduced levels of worry about health and of illness belief. At the end of 1 year the differences were, with one exception, not significant. In contrast with this, the high anxiety group displayed a reasonably consistent return to their preconsultation level of worry and illness belief. At all time points after reassurance the low and medium anxiety groups were significantly less anxious than the high anxiety group for both worry about health and illness belief (Mann-Whitney U test).

Predicting response to reassurance

We examined whether the health anxiety questionnaire predicted patients' worry about their health and illness belief after reassurance, independently of a measure of general anxiety. As the scores on the health anxiety questionnaire correlated with those on the state-trait anxiety inventory ($r=0.6$, df=49, $P<0.01$)

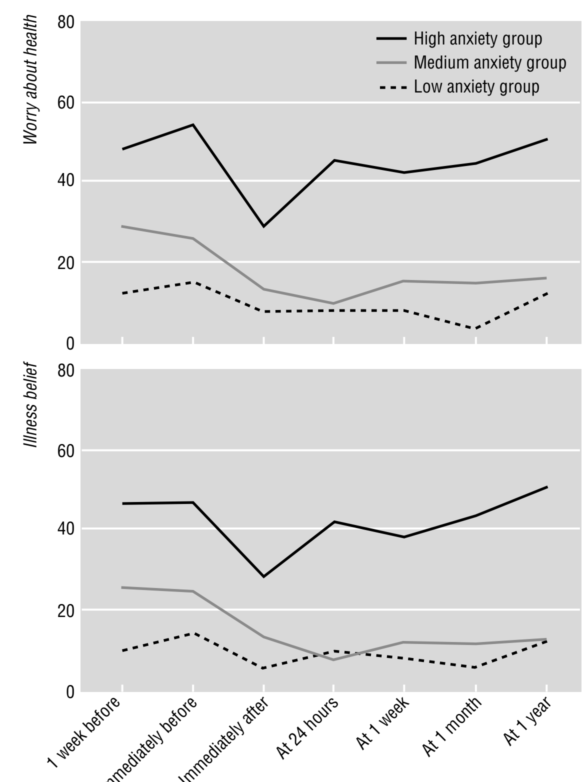

Fig 1 Responses to reassurance of high, medium, and low anxiety groups for worry about health and for illness belief (at two time points before consultation and five time points after reassurance)

we computed a series of partial correlations between the questionnaire score and the scores for anxiety about health and illness belief, controlling for the inventory score. At 1 week, 1 month, and 1 year, the correlations for worry about health were 0.45, 0.70, and 0.30 respectively and for illness belief were 0.51, 0.65, and 0.35 respectively. All correlations were significant ($P < 0.05$), except that between the health authority questionnaire and worry at 1 year.

Discussion

This study shows that some patients remain concerned about their health after medical reassurance and that failure to be reassured in the long term is associated with individual differences in anxiety about health as measured by the health anxiety questionnaire. The conclusions must be tempered by the fact that the sample was small and that some of the analysis was chosen after the results were obtained. The good agreement between the physician's ratings and the patients' ratings that reassurance had been given and the short term reduction in worry and illness belief suggest that the patients initially perceived the physician's communication as reassuring.

This finding has several implications. Firstly, it supports the notion that reassurance may actually reinforce anxiety about health in some individuals. Psychologically, an immediate reduction in anxiety after reassurance acts as a negative reinforcer for reassurance-seeking behaviour, making such behaviour more likely to occur in the future. This should be taken into account when investigations are carried out with the primary aim of reassuring the patient,[4 5] particularly with patients with persistent anxiety about health and a history of repeated reassurance. Secondly, the finding that even patients who in the long term remain anxious experience an immediate reduction in anxiety suggests that doctors will believe that reassurance is a successful intervention—namely, that reducing anxiety in the patient positively reinforces a doctor's reassurance-giving behaviour. In some cases, particularly among hospital specialists who do not continue to see their patients, the poor long term effects of reassurance may not be observed. Thirdly, marked individual differences in anxiety about health and in response to reassurance can be detected with a simple screening questionnaire (the health anxiety questionnaire) derived from a cognitive model of health anxiety. The model predicts individual differences in patterns of response to reassurance, and the results therefore lend some support to the theory. Important characteristics include negative interpretation of symptoms and information such as reassurance, preoccupation with symptoms, and reassurance-seeking behaviour.

Why does reassurance fail in cases of high anxiety about health? The cognitive model of anxiety about health suggests that the answer lies partly in the characteristics of the patients. It also suggests aspects of the process and content of reassurance that may influence outcome. Qualitative observations of patients suggests the importance to patients of receiving not only reassurance (that there is "nothing seriously wrong") but also a positive explanation for their symptoms or test results in a language acceptable to them and which acknowledges their health concerns. Also, when possible, ambiguous messages (which are more open to negative interpretations) should be avoided, and feedback should always be given after investigations.[13] The cognitive model predicts that patients prone to persistent anxiety about their health will, without satisfactory information and explanation, continue to attribute symptoms to a serious illness and remain preoccupied with their health. Further research may show that more effective reassurance may be achieved with better communication before or after the consultation.

This study investigated naturally occurring reassurance in a relatively unselected group of patients. Future studies should include more systematic documentation of how patients have previously responded to reassurance and how reassurance was given. In this study reassurance was given by an experienced and skilled clinician in a routine clinic. Despite this, a significant number of patients remained concerned about their health up to one year later. We suggest that further studies should systematically investigate structured approaches to reassurance. We suggest that these should in the first instance be derived from the cognitive model.[14]

Key messages

- Reassuring a patient that he or she has no serious illness is a common psychological intervention
- Patients who have had gastroscopy showing no serious illness experience an immediate reduction in concern after reassurance
- Some patients with high levels of anxiety about their health (measured by the health anxiety questionnaire) experience a resurgence of their health concerns within 24 hours of reassurance and may still be concerned a year later
- The health anxiety questionnaire predicts long term response to reassurance independently of a general measure of anxiety
- Reassurance should be structured to accommodate individual differences in anxiety about health

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