Using vignettes to explore judgements of patients about safety and quality of care: the role of outcome and relationship with the care provider

Rebecca Lawton PhD,* Peter Gardner PhD* and Rachel Plachcinski MSc†

*Senior Lecturer, Institute of Psychological Sciences, University of Leeds, Leeds, UK and †MSc Student, Institute of Psychological Sciences, University of Leeds, Leeds, UK

Correspondence

Rebecca Lawton PhD
Institute of Psychological Sciences
University of Leeds
Leeds LS2 9JT
UK
E-mail: r.j.lawton@leeds.ac.uk

Accepted for publication

24 June 2010

Keywords: ante-natal care, attribution, outcome of care, patient safety, relationship, vignette

Abstract

Background There is a growing body of evidence that safe outcomes and quality care are important to patients. For the patient, evaluations of safety and quality are made on the basis of the interpersonal interactions that they have with health professionals as well as the technical aspects of their care.

Objective In this study, we investigated the extent to which outcome of care (harm or not) and relationship (good or bad) with the care provider impact on the judgements of responsibility and blame as well as decisions about likelihood of making a complaint.

Method Ninety-eight mothers made seven ratings of responsibility, blame and action in response to four hypothetical vignettes in a questionnaire. The vignettes described poor quality ante-natal care in which outcome and relationship with the health-care provider were systematically manipulated across different versions of the questionnaire.

Results Multivariate analyses showed that participants made significantly more negative ratings in response to vignettes describing a bad outcome and those that described a poor relationship with the health professional. However, whilst ratings of seriousness and likelihood of making a complaint were most influenced by the manipulation of outcome in the vignettes, judgements of blame and responsibility were most effected by the depiction of relationship with the health professional as good or bad. Moreover, for three of the four vignettes, relationship rather than outcome most strongly influenced overall ratings of care.

Discussion These findings are discussed in the context of theory and policy developments.

Introduction

The Darzi report¹ has highlighted the importance of trying to involve patients in the management of the quality and safety of health-care

delivery in the UK. The relationship between the patient and health-care professional is central to this aim, because there is growing evidence that these two groups have different perspectives on what is important in the provision of health

care.² In order to investigate the patient's perspective in more detail, the study reported here used four hypothetical vignettes in which the patient's relationship with the care provider and the outcome of the care were manipulated, and the effect on patients' judgements of quality and safety was assessed.

Evidence for the differing perspectives taken by patients and care providers is offered by Durieux *et al.*² who found that, while patients and health professionals generally agreed on what was most and least important about care, patients gave more emphasis to non-technical aspects of care and thought that more help should be given with psychosocial factors (e.g. listening to concerns). This resonates with work suggesting that while health-care professionals emphasize physical harm in records of patient safety events, patients also emphasize the harm due to psychological and emotional aspects.³ Furthermore, patient reports of undesirable events in hospitals tend to include events which reflect interpersonal problems as well as procedural and technical issues.^{4,5}

Agoritsas *et al.* (2005) found that whereas the identification of such psychosocial issues was strongly associated with unfavourable ratings of care overall, medical complications influenced global ratings only weakly. However, it should be noted that in this study patients were asked to complete a checklist of problems, a third of which were interpersonal in nature.⁶ Nevertheless, there is also some evidence to suggest that the quality of the care environment (as rated by patients) is directly related to the incidence of adverse events. This suggests that patients could provide an additional valuable source of information about safety.⁷

Taken together the findings of this research suggest that if initiatives to improve the quality and safety of care are going to be evaluated by measures such as patient satisfaction, complaints and litigations claims, it is important first to understand what quality of care and safety mean to patients. Some research has begun to do this and, as well as the importance of technical quality, access and outcomes, has identified that factors such as interpersonal care,

patient-centredness, continuity, courtesy of staff, treatment with respect and dignity, physical comfort and involvement of friends and family are principal components of patient satisfaction.⁸⁻¹⁰ The quality of interactions and care co-ordination has also been found to be inversely associated with patient complaints irrespective of medical speciality.¹¹ Indeed, Entwistle *et al.*¹² argue that 'respectful communication' is an important part of a positive relationship with a health-care provider and has implications for physical as well as psychological health.

It is also possible that encouraging positive professional relationships with patients may reap financial rewards through a reduction in litigation. In a retrospective, correlational study investigating the relationship between patient-physician communication and malpractice claims, doctors in the no-claims group were rated more highly by their patients for process and emotional effect, and also provided longer office visits.¹³ Similarly, Ambady *et al.*¹⁴ found that surgeons who were rated as more dominant and lower in concern and anxiety were more likely to have been sued. May and Stengel¹⁵ investigated the perceptions of patients who decided to sue their doctor and those who did not, and found differences between perceived doctor competence and perceived doctor concern about the personal effect of care. In sum, there is a growing body of research that suggests that the relationship between patient and professional, based on factors such as communication, trust, choice and length of relationship and personal care, can have profound implications for responses by the patient when an adverse event occurs.¹⁶⁻¹⁸

However, the retrospective nature of the majority of the research in this area means that firstly, the findings are based only on those patients who made a formal complaint and secondly, it is difficult to disentangle the various influences on judgements/behaviour. An alternative approach to retrospective studies is to use experimental vignettes. Although these cannot completely reflect the nature of complex encounters between health professionals and patients, they do allow the systematic

manipulation of key components such as the clinical outcome and the nature of the relationship between patient and care provider. Lawton and Parker presented different clinical vignettes relevant to anaesthetics, surgery and obstetrics to health-care professionals and patients. The vignettes manipulated the behaviour of a health-care professional (e.g. compliance with a clinical protocol, violation of a protocol or improvisation where no protocol exists) and the outcome for the patient (good, bad or poor). Participants were then asked to rate the extent to which they felt that the health-care professional described in the vignette was responsible for the outcome. Although the behaviour of the professional and the outcome had a significant impact on these ratings, all participants (most noticeably midwives) were more negative about a violation of protocol than any other behaviour.¹⁹ In a more recent study using video vignettes, a serious outcome for the patient was found to significantly increase the likelihood of patients changing their doctor or seeking legal advice after an error, whereas full disclosure of the error reduced the likelihood of both outcomes.²⁰ In one of the vignettes, the extent to which the doctor and patient had a previous positive relationship was also varied. Although there was no effect of this variable, the authors argued that this warranted further investigation.

Of course, there are strong theoretical grounds for predicting that both outcome for the patient and the quality of the relationship (term used in this paper as short-hand for respectful communication and assumed liking of the health-care professional) will have an impact on our thoughts and feelings as well as behavioural responses following poor quality care. Psychologists have described a range of biases that affect our everyday thinking and that have important implications for understanding responses to errors in medicine.^{21,22} One such bias is the fundamental attribution error, a term first coined by Heider in 1958 that refers to the tendency for individuals to focus on dispositional characteristics (such as intelligence, personality, skills) when explaining the behaviour of others, and situational factors (e.g. workload, work environment, team factors)

when explaining their own behaviour.²³ Thus, in making a judgement about an incident, individuals distinguish between why an event occurred (causal explanation) and the characteristics of a person or organization (dispositional attribution).²⁴ However, the amount of blame attached by the observer is moderated by how much they like the actor. If an observer likes the actor, their negative actions are not judged so harshly as if they dislike them.²⁵ A similar effect has been identified in research on punishment, forgiveness and revenge. Managers differentially punish subordinates depending on how much they like the individual and employees are more likely to forgive a likeable offender although they are not necessarily as likely to give up on revenge.^{26,27}

Another bias in the processing of information about adverse events is that the more serious the consequences of an incident, the more likely we are to judge the behaviour of the errant individual as inappropriate. Caplan *et al.* investigated the effect of outcome on physician judgements of appropriateness of care. One hundred and twelve practising anaesthesiologists judged the appropriateness of care in 21 actual cases. The outcomes were manipulated so that they were presented as either temporary or permanent, while keeping the physician's behaviour the same. The study showed that, when the outcome was changed from temporary to permanent, ratings of the appropriateness of the care given decreased by 31%.²⁸ In another study, when reading vignettes about errors with serious and minor consequences, nurses also attached more importance to the error if the outcome was severe.²⁹ These findings support earlier research claiming that the consequences of an action affect the attributions of responsibility for that action.^{30,31}

Thus, the idea that the errors of health-care professionals might be judged differently depending on the outcome (whether the error had a negative impact on the patient) and the quality of the relationship with the caregiver is grounded in theory. Moreover, understanding which factors are perceived by the patient to be important indicators of quality of care has important implications for health-care systems that value

patient involvement. The purpose of the study reported here was to use hypothetical vignettes describing poor quality care to investigate:

1. The extent to which outcome and the relationship with the care provider impact on judgements about the quality and safety of care.
2. Whether eight different judgements (e.g. about responsibility, blame, risk taking) are differentially influenced by outcome and relationship.
3. Whether outcome or relationship has the strongest impact on judgements about safety and quality.

The present study focuses on ante-natal care – a field of health care in which the emphasis is on providing continuity of care by a small group of carers with whom the woman feels comfortable and who are sensitive to the needs of the individual (NICE guidelines on routine care for the healthy pregnant woman).³² However, despite these aims, cost pressures have resulted in fewer appointments and deficiencies in information levels and choice.^{33,34} The fact that a positive relationship between patient and carer is clearly important for appropriate ante-natal care makes this an excellent focus for this study.

Method

Participants

Two hundred and nine questionnaires were distributed among women at baby and toddler groups in one region of the UK and at a 'Big Breastfeed' event held in a large retail outlet in the UK. All the women had at least one child between the ages of 0 and 4 years to increase the engagement with the material in the vignette. Ninety-eight questionnaires were returned (46 by post and 52 by hand on the day of distribution) giving a response rate of 47%.

Questionnaire development

The questionnaire was constructed using four vignettes, each describing different aspects of antenatal care and birth outcomes. All four vignettes described poor care in which the

community midwife had not followed the established procedures. For each of the four vignettes, two factors, outcome and relationship (short hand for respectful communication and liking of the care provider) were represented either positively or negatively, giving a total of 16 vignettes (identified by the letters A–P; see Table 1). Based on the research described above, a positive relationship with the care provider was assumed to be more likely if the patient felt that the care provider treated them as individuals, showed concern and care, and gave them sufficient time. Thus, the following statement was included in the positive relationship vignettes:

She has taken the time to explain things to you and talk through things you are concerned about.

In contrast the vignettes depicting a negative relationship included the following:

She is quite abrupt and often dismisses your worries or, if you start to ask questions, says she has no time to discuss things.

The deviation from procedure is made clear in each vignette by describing an interaction between the patient and another care provider. An example vignette (1) with a bad outcome but positive relationship is shown below:

This is your first pregnancy. A community midwife at your GP surgery has done the majority of your antenatal care. You have seen the same midwife at most of your visits. She has taken the time to explain things to you and talk through things you are concerned about. You go into labour a couple of days after your due date. You don't want to have an epidural so when you get to the hospital you ask for an injection of pethidine to help you with the pain, as you have heard that that is the next strongest thing available. Your labour is straightforward and you have a healthy baby who weighs 7lb 8oz. You really want to breastfeed your baby but it is slow to get established as your baby is quite sleepy and not very interested in suckling. Despite perseverance and help from a breastfeeding support worker your baby keeps losing weight and you have to give up breastfeeding and give your baby formula milk. Your breastfeeding support worker tells you that using pethidine in labour is known to have a major impact on the baby's feeding ability and that your community midwife

	Outcome	Referral for big baby	VE after ruptured membrane	Prescribed iron tablets	Pethidine discussed
Appropriateness of action	Good	3.59	3.45	3.65	3.56
	Bad	4.07*	4.12**	3.90	3.66
Seriousness of outcome	Good	3.02	2.97	3.56	2.63
	Bad	4.09***	4.23***	4.12**	3.56***
Likelihood of complaint	Good	2.20	2.20	2.71	1.80
	Bad	3.02**	3.33***	2.72	2.56**
Responsibility of midwife	Good	3.60	3.44	3.83	3.13
	Bad	3.80	3.90	3.68	3.46
How much is the midwife to blame	Good	3.30	3.01	3.64	2.94
	Bad	3.70	3.81**	3.56	3.36
The extent to which the midwife took a risk	Good	3.51	3.64	3.65	2.47
	Bad	4.03*	4.15*	3.66	2.84
Overall rating of care	Good	3.17	2.87	3.29	2.82
	Bad	3.68*	3.73***	3.37	3.10

Where the scenarios describing good outcomes produced significantly different judgements of quality and safety from scenarios describing bad outcomes this is indicated by * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

should have told you this when she discussed birth plans and pain relief options at your antenatal appointments.

The four vignettes were based partly on previous research by Parker and Lawton, and partly as a result of discussions with community midwives, women attending a support group for new mothers and babies, and breastfeeding support workers. All were invited to think of the errors or omissions that a community midwife may make in routine antenatal care which could result in negative outcomes for a mother or her baby during or after a full term labour and birth. These were checked by a senior community midwife for plausibility, realism and consistency and some adjustments were made to ensure clarity (see Table 1).

Each questionnaire comprised the four basic vignettes, with each vignette having a different combination of relationship and outcome. The presentation order of the vignettes was randomized for each participant. Thus, as an example, one participant responded to vignettes I, H, D and N in that order. Respondents were asked to read through the vignettes one at a time, and after each one to provide responses (based on items used in Parker and Lawton, 2002) on the following eight items each with a 5-point rating scale: (i) about the appropriateness of the

community midwife's behaviour (not at all appropriate – absolutely appropriate); (ii) how likely they would be to speak to the midwife; (iii) how likely they would be to complain to the hospital (very unlikely – very likely); (iv) how serious they considered the outcome to be (not at all serious – extremely serious); (v) how much was the community midwife responsible and (vi) how much was she to blame (totally – not at all); (vii) how much the community midwife took a risk (no risk – a great deal of risk), and (viii) their overall rating of the care received in that vignette (very good – very bad).¹⁹

Procedure

Ethical consent for this study was granted via the Ethics Committee of the Institute of Psychological Sciences at the University of Leeds. Women who had given birth in the last 4 years were invited to take part in the study either individually or in small groups. They were given the opportunity to read the questionnaire and the information sheet before deciding whether to participate. Participants were assured of anonymity and given the opportunity to take part in a prize draw. They were also offered the option of either completing the questionnaire during the group, or taking it away to complete in their

Table 1 Mean values for attributions of responsibility and likelihood of making a complaint by outcome (good or bad)

own time and return it via freepost. Questionnaires were coded to enable 'mode of completion' and 'Big Breastfeed recruit' to be included as variables in the analysis. Raw data were entered into v15.0 of the SPSS statistical package and analysed using ANOVA. A multivariate analysis of variance (MANOVA) was computed for each of the four vignettes separately. The main effects of outcome and relationship, as well as the interaction of these two independent variables, were tested in the model. Where the multivariate effects were significant, the univariate effects (within MANOVA thus controlling for family-wise error) were explored to detect which outcomes (e.g. ratings of responsibility, quality of care, likelihood of further action) were most affected by the outcomes and relationships depicted in the vignette.

Results

The 98 participants' ages ranged from 22 to 45 years (mean = 33.4, SD = 4.96) and they had between one and five children. The majority of women ($N = 63$) reported either being happy or very happy indeed with the care that they had received during their most recent pregnancy. Five women (5.1% of total sample) had made a complaint to their GP, hospital or health authority about some aspect of their antenatal care. Participants were distributed across the four vignette groups such that the analysis was based on no fewer than 21 and no more than 27 respondents in any one group. All data were recoded so that negative ratings of quality were characterized by higher scores. Data were screened prior to analysis to ensure that data were normally distributed. For each dependent variable (4 scenarios $\times$ 7 variables) the full range of scores was used by respondents, skewness values were all below one and kurtosis was less than one in all but four cases. The four variables that asked respondents whether they would make a complaint showed kurtosis values above one (range -1.1 to 11.3), demonstrating a tendency for respondents to be somewhat reluctant to complain.

The MANOVAs revealed that for each scenario there was a significant multivariate main effect of relationship, such that those participants who read the vignette depicting a positive relationship with their health professional provided significantly more positive ratings across each of the eight items. In addition, there was a significant effect of outcome across the vignettes, such that in every case a bad outcome resulted in more negative ratings. None of the interactions between relationship and outcome were significant in the MANOVAs. The univariate effects for each of the seven judgements of quality of care were then explored using ANOVA. One item, item 2 ('how likely are you to speak to the midwife'), was excluded because participants reported this as being difficult to understand¹ and it showed poor correlations with the other items. Tables 1 and 2 show the univariate effects for both relationship and outcome, respectively. In all cases, a higher score depicts a more negative rating, i.e. they were more likely to make a complaint, or judge the health-care professional to have acted inappropriately, etc.

It is clear from Tables 1 and 2 that respondents use different information contained in the vignette when making judgements about the seriousness and likelihood of making a complaint and when judging the appropriateness and responsibility of the health-care practitioner. Judgements of the seriousness of the outcome are, as one might predict, based on the depiction of the outcome in the vignette as good or bad. Likelihood of making a complaint is also strongly influenced by outcome (the exception being for not prescribing iron tablets). On the other hand, judgements of the appropriateness of care, the extent to which the midwife was judged to take a risk and was to blame for the outcome, and, with the exception of one vignette, the responsibility of the midwife for outcome were rated significantly differently depending on the relationship depicted in the vignette. In these cases, a good relationship

¹ Respondents were not sure whether 'speaking' referred to a decision not to engage with that midwife, e.g. not speak to or whether it referred to a decision to make a complaint directly to the midwife concerned.

	Relationship with care provider	No referral for big baby	VE after ruptured membrane	Iron tablets not prescribed	Pethidine not discussed
Appropriateness of action	Good	3.34***	3.56*	3.25***	3.06***
	Bad	4.31***	4.01*	4.31***	4.16***
Seriousness of outcome	Good	3.23**	3.38	2.67**	2.94
	Bad	3.88**	3.82	2.97**	3.25
Likelihood of complaint	Good	2.35	2.46*	3.52*	1.96
	Bad	2.87	3.07*	4.15*	2.40
Responsibility of midwife	Good	3.30**	3.49	2.39***	2.98*
	Bad	4.10**	3.85	3.04***	3.61*
How much is the midwife to blame	Good	3.02***	3.16	3.38***	2.80**
	Bad	3.97***	3.66*	4.12***	3.50**
The extent to which the midwife took a risk	Good	3.39**	3.66*	3.13***	2.26**
	Bad	4.15**	4.12*	4.06***	3.05**
Overall rating of care	Good	2.95***	2.91***	3.15***	2.56***
	Bad	3.89***	3.68***	4.17***	3.36***

Where the scenarios describing a good relationship produced significantly different judgements of quality and safety from scenarios describing a poor relationship this is indicated by * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

seemed to make respondents less likely to judge the health-care professional harshly. Similarly, in terms of overall ratings of care, relationship had a significant effect across the four vignettes (see Table 2), whereas outcome was only significantly different in two of the vignettes (see Table 1). In these cases, good relationships and good outcomes were associated with higher overall ratings of care.

To understand whether there was a stronger impact of relationship or outcome across these different ratings of attribution of responsibility and outcome, a new total rating (called quality of care rating) was computed from a mean of the seven items for each vignette. Four ANOVAs were then conducted (one for each scenario) and the effect sizes for relationship and outcome compared. The internal consistency of these quality of care rating scales was high for all vignettes (Cronbach alphas ranging from 0.85 to 0.92).

In no instance was there a significant interaction between relationship and outcome. The effect of both variables appeared to be cumulative with the most negative ratings occurring when both the outcome and relationship were described in the vignette as poor. All main effects of outcome and relationship were

Table 2 Mean values for attributions of responsibility and likelihood of making a complaint by relationship (good or bad)

Table 3 Overall mean ratings of quality of care by relationship and outcome

Factor	Good	Bad	Effect size (η_p^2)	
Scenario 1: No referral for big baby				
Relationship	3.01	3.85	0.17***	Large
Outcome	3.26	3.78	0.12**	Medium
Scenario 2: VE after ruptured membrane				
Relationship	3.23	3.76	0.10**	Medium
Outcome	3.10	3.89	0.19***	Large
Scenario 3: Iron tablets not prescribed				
Relationship	3.05	3.97	0.23***	Large
Outcome	3.44	3.58	0.01	Small
Scenario 4: Pethidine not discussed				
Relationship	2.65	3.28	0.18***	Large
Outcome	2.77	3.21	0.08**	Medium

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.

significant with the exception of outcome for the not prescribing iron vignette. For all but one vignette (VE after ruptured membrane) the effect size (partial eta squared)² for relationship was stronger than for outcome (see Table 3).

²The partial Eta squared is the proportion of the effect + error variance that is attributable to the effect and provides a measure of effect size that takes into account other independent variables and therefore it is often the measure of choice in designs with more than one IV.

Discussion

The primary aim of this study was to establish whether the depiction of a negative relationship between a pregnant woman and her community midwife during antenatal care, combined with a bad outcome of that care would lead to (i) a higher level of attribution of responsibility and (ii) a greater likelihood of making a complaint. The findings suggest that patients' judgements about the quality and safety of care they receive and their willingness to make a complaint are indeed affected by both the perceived relationship with the carer and the outcome of the procedure. However, patients' judgements about the seriousness of the outcome and their intention to make a complaint are most heavily influenced by the outcome, which is in accordance with a large body of previous research.^{28,29,30,31} This is, perhaps, unsurprising but is nevertheless interesting because it suggests that patients are less likely to complain simply on the basis of a poor relationship with the carer, but are more likely to do so as a result of a negative outcome. If this is true, it follows that complaints may not be a good way of detecting routine poor quality care.

On the other hand, in accordance with previous research into attribution theory,²⁵ the study also highlights the importance of the patient–carer relationship by demonstrating that 'likeableness lessens blame'. Participants' judgements about the health-care provider's competence in terms of risk-taking, culpability for outcome, appropriateness of care and overall quality of care were shown to be strongly affected by whether the relationship between carer and professional is described in the vignette as positive or negative. Furthermore, across the ratings, relationship seems to have a more significant role to play in the judgements of health-care quality than outcome.

However, the judgements were not uniform across the different scenarios. In the case of the vignette depicting vaginal examination following ruptured membranes, outcome impacts most on attributions of responsibility and on likelihood of making a complaint. This vignette differs from the others in that, rather than describing

an error of omission, the midwife is shown to perform a step (a vaginal examination) that should not be performed in these circumstances. Such errors of commission represent a smaller proportion of errors occurring in health care.^{35,36} Thus, it might be hypothesized that such errors fit less well within the context of a scenario describing a health-care professional who appears rushed and is abrupt – 'She is quite abrupt and often dismisses your worries or, if you start to ask questions, says she has no time to discuss things'. Errors of omission and commission are widely documented as having a differential impact on judgement and choice although the mechanisms are not entirely clear.³⁷ One explanation is that for the act of commission the outcome is more inextricably linked to the action of the professional. In other words, without the presence of the health professional the first error would not have occurred and therefore the actions of the health professional represent a loss when the outcome is poor. However, in the case of an omission error, the absence of the health professional would have resulted in the same negative outcome and as a result this scenario is more likely to be perceived in terms of a foregone gain. There is strong evidence that we are loss averse when making judgements³⁸ and this may account for the participants' more negative judgements when the commission error has a bad outcome (compared to their responses to the other vignettes).

However, we did not set out to explore differences between errors of omission and commission and as a result this variable was not manipulated systematically across the vignettes. Thus although this analysis offers one possible explanation of the findings, and one worth further exploration in future research, it is not possible to rule out other explanations. For example, the experience of more regret when bad outcomes result from action rather than inaction cannot be dismissed.³⁹ Alternatively, a more mundane explanation may rest with the nature of the vignette itself; the vaginal examination (an invasive procedure that is embarrassing and/or uncomfortable for some women) may produce a different set of responses irrespective of other

characteristics. In fact, the natural variation of responses across vignettes certainly supports the notion that although relationship and outcome are consistently important sources of information when making judgements about care, the extent to which they influence judgements is also a function of the specific situation.

Another difference that is worthy of mention concerns the less negative ratings of culpability associated with vignettes E-H (in which there was a failure to discuss the implications of the use of pethidine for pain relief in labour). Here, even when the outcome of this omission was described as bad, respondents indicated that they were unlikely to make a complaint. This scenario described not inaction but a lack of communication and it may be this that explains the difference. It may also be the case that there is a perception of shared responsibility in the case of knowledge about pregnancy and birth, e.g. the community and hospital midwife as well as the pregnant woman share responsibility and therefore it is more difficult in such cases to apportion blame. Moreover, the request for pain relief comes from the patient herself in this scenario, emphasizing the role of the patient in their care.

Further work needs to be done, however, to replicate this research amongst different populations; for example ill as well as healthy populations. It could be argued that relationship with care provider is more important for healthy pregnant women who are encouraged to actively make choices about their care, meaning that these findings cannot be generalized to other patient populations. Criticism can also be levelled at vignette studies as they are unable to capture the realities of our decisions and behaviours. This is a particular concern given that studies of this kind rely on self-reports and yet there is good evidence that we demonstrate little insight into the automaticity of, and environmental influences on, our behaviour⁴⁰ meaning that self-reports are only able to reflect what we think is influencing our judgements. However, given the ethical difficulties of actively manipulating relationship and outcome in an experimental design and the lack of control over influences on behaviour during retrospective

reviews of naturalistic patient safety events, this approach can certainly add to our understanding of the judgements people make about the quality and safety of the care they receive.

Future research might usefully explore whether improving relationships between patients and professionals has financial benefits for health-care providers in the form of reduced rates of complaints and litigation. Another approach might be to include flexible, open-ended responses to such scenarios to help better understand the underpinning emotional and cognitive responses to errors of this kind. Such work would provide valuable insight into patient experiences of quality and safety. There is growing support for the use of Patient Reported Outcome Measures to be used routinely as measures of quality of care.⁴¹ The findings here suggest that with continued effort we might also be able to develop useful and valid Patient reported *process* measures of quality and safety. The findings here suggest that measures currently adopted to this end, e.g. patient complaints may prove to be rather blunt instruments because, as we found here, patients who have serious concerns about the quality of their care tend to complain only when the outcome is bad.

In conclusion, despite being based on a small sample and being focused on a specific domain (i.e. ante-natal care), the effect sizes in this study are considerable and, if replicated in other settings, the findings have important implications for patient care. They suggest that an improvement in patient satisfaction with maternity services, and possibly a reduction in the number of complaints, may be achieved by organizing care so that midwives are able to answer questions and take time to explain the options available to women. Moreover, the findings highlight the importance for those caring for women during the ante-natal period to build a positive and trusting relationship with the women in their care.

References

- 1 Darzi A. *High Quality Care for All: NHS Next Stage Review Final Report* Dept. of Health. G Britain: The Stationery Office, 2008.

- 2 Durieux P, Bissery A, Dubois S, Gasquet I, Coste J. Comparison of health care professionals' self-assessments of standards of care and patients' opinions on the care they received in hospital: observational study. *Quality & Safety in Health Care*, 2004; **13**: 198–202.
- 3 Kuzel AJ, Woolf SH, Gilchrist VJ *et al.* Patient reports of preventable problems and harms in primary health care. *Annals of Family Medicine*, 2004; **2**: 333–340.
- 4 Waterman AD, Gallagher TH, Garbutt J, Waterman BM, Fraser V, Burroughs TE. Hospitalised patients' attitudes about and participation in error prevention. *Journal of General Internal Medicine*, 2006; **21**: 367–370.
- 5 Weingart S, Pagovich O, Sands DZ *et al.* What can hospitalised patients tell us about adverse events? Learning from patient-reported incidents. *Journal of General Internal Medicine*, 2005; **20**: 830–836.
- 6 Agoritsas T, Bovier PA, Perneger TV. Patient reports of undesirable events during hospitalisation. *Journal of General Internal Medicine*, 2005; **20**: 922–928.
- 7 Taylor BB, Marcantonio ER, Pagovich O *et al.* Do medical inpatients who report poor service quality experience more adverse events and medical errors? *Medical Care*, 2008; **46**: 224–228.
- 8 Sitzia J, Wood N. Patient satisfaction: a review of issues and concepts. *Social Science and Medicine*, 2007; **45**: 1829–1843.
- 9 Harriott EM, Williams TV, Peterson MR. Child-bearing in US military hospitals: dimensions of care affecting women's perceptions of quality and satisfaction. *Birth*, 2005; **32**: 4–10.
- 10 Cheraghi-Sohi S, Bower P, Mead N, McDonald R, Whalley D, Roland M. What are the key attributes of primary care for patients? Building a conceptual 'map' of patient preferences. *Health Expectations*, 2006; **9**: 275–284.
- 11 Rodriguez HP, Rodday AM, Marshall RE, Nelson KL, Rogers WH, Safran DG. Relation of patients' experiences with individual physicians to malpractice risk. *International Journal for Quality in Health Care*, 2008; **20**: 5–12.
- 12 Entwistle VA. Hurtful comments are harmful comments: respectful communication is not just an optional extra in healthcare. *Health Expectations*, 2008; **11**: 319–320.
- 13 Levinson W, Roter DL, Mullooly JP, Dull VT, Frankel RM. Physician-patient communication: the relationship with malpractice claims among primary care physicians and surgeons. *Journal of the American Medical Association*, 1997; **277**: 553–559.
- 14 Ambady N, LaPlante D, Nguyen T, Rosenthal R, Chaumeton N, Levinson W. Surgeons' tone of voice: a clue to malpractice history. *Surgery*, 2002; **132**: 5–9.
- 15 May ML, Stengel DB. Who sues their doctors? How patients handle medical grievances. *Law & Society Review*, 1990; **24**: 105–120.
- 16 Wissow LS. Communication and malpractice claims – where are we now? *Patient Education and Counseling*, 2004; **52**: 3–5.
- 17 Kao AC, Green DC, Davis NA, Koplan JP, Cleary PD. Patients' trust in their physicians. *Journal of General Internal Medicine*, 1998; **13**: 681–686.
- 18 Alden DL, Hoa DM, Bhawuk D. Client satisfaction with reproductive health-care quality: integrating business approaches to modelling and measurement. *Social Science and Medicine*, 2004; **59**: 2219–2232.
- 19 Lawton R, Parker D. Judgements of the rule-related behaviour of healthcare professional: an experimental study. *British Journal of Health Psychology*, 2002; **7**: 253–265.
- 20 Mazor KM, Reed GW, Yood RA, Fischer MA, Baril J, Gurwitz JH. Disclosure of medical errors: what factors influence how patients respond? *Journal of General Internal Medicine*, 2006; **21**: 704–710.
- 21 Lawton R, Parker D. Barriers to incident reporting in a healthcare system. *Quality & Safety in Health Care*, 2002; **11**: 15–18.
- 22 Reason J. Human error: models and management. *BMJ*, 2000; **320**: 768–770.
- 23 Heider F. *The Psychology of Interpersonal Relations*. New York: Wiley, 1958.
- 24 Hilton DJ, Smith RH, Kim SH. Processes of causal explanation and dispositional attribution. *Journal of Personality and Social Psychology*, 1995; **68**: 377–387.
- 25 Kozak MN, Marsh AA, Wegner DM. What do I think you're doing? Action identification and mind attribution. *Journal of Personality and Social Psychology*, 2006; **90**: 543–555.
- 26 Fandt PM, Labig CE, Ulrich AL. Evidence and the liking bias: effects on managers' disciplinary actions. *Employee Responsibilities and Rights Journal*, 1990; **3**: 253–265.
- 27 Bradfield M, Aquino K. The effects of blame attributions and offender likeableness on forgiveness and revenge in the workplace. *Journal of Management*, 1999; **25**: 607–631.
- 28 Caplan R, Posner KL, Cheney FW. Effect of outcome on physician judgements of appropriateness of care. *Journal of the American Medical Association*, 1991; **265**: 1957–1960.
- 29 Meurier CE, Vincent CA, Parmar DG. Nurses' responses to severity dependent errors: a study of the causal attributions made by nurses following an error. *Journal of Advanced Nursing*, 1998; **27**: 349–354.
- 30 Walster E. Assignment of responsibility for an accident. *Journal of personality and social psychology*, 1966; **3**: 73–79.

- 31 Shaw J, McMartin J. Personal and situational determinants of attribution of responsibility for an accident. *Human Relations*, 1977; **30**: 95–107.
- 32 National Collaborating Centre for Women's and Children's Health. *Antenatal Care: Routine Care for the Healthy Pregnant Woman*. RCOG London: 2008.
- 33 Green JM, Hewison J, Bekker HL, Bryant LD, Cuckle HS. Psychosocial aspects of genetic screening of pregnant women and newborns: a systematic review. *Health Technology Assessment*, 2004; **8**, 1–4.
- 34 Pilnick A "It's something for you to think about": informed choice in nuchal translucency screening for Down's Syndrome. BSA Annual Medical Sociology Conference, Paper Presentation, York: 2004.
- 35 Wilson RM, Harrison BT, Gibberd RW, Hamilton JD. An analysis of the causes of adverse events from the Quality in Australian Health Care Study. *Medical Journal of Australia*, 1999; **170**: 411–415.
- 36 Hayward R, Asch SM, Hogan MM, Hofer TP, Kerr E. Sins of omission: getting too little medical care may be the greatest threat to patient safety. *Journal of General Internal Medicine*, 2008; **20**: 686–691.
- 37 Spranca M, Minsk E, Baron J. Omission and commission in judgment and choice. *Journal of Experimental Social Psychology*, 1991; **27**: 76–105.
- 38 Kahneman D, Tversky A. Prospect theory: an analysis of decision under risk. *Econometrica*, 1979; **47**: 263–292.
- 39 Kahneman D, Miller DT. Norm theory: comparing reality to its alternatives. *Psychological Review*, 1986; **93**: 136–153.
- 40 Bargh JA, Gollwitzer PM, Lee-Chai A, Barndollar K, Trötschel R. The automated will: nonconscious activation and pursuit of behavioral goals. *Journal of Personality and Social Psychology*, 2001; **81**: 1014–1027.
- 41 Black N, Jenkinson C. How can patients' views of their care enhance quality improvement? *British Medical Journal*, 2009; **339**: 202–205.