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WEB PAPER

Patient-led training on patient safety: A pilot study to test the feasibility and acceptability of an educational intervention

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Abstract

Background: Training in patient safety is an important element of medical education. Most educational interventions on patient safety training adopt a 'health-professional lens' with limited consideration on the impact of safety lapses on the patient and their families and little or no involvement of patients in the design or delivery of the training.

Aims: This paper describes a pilot study to test the feasibility and acceptability of implementing a patient-led educational intervention to facilitate safety training amongst newly qualified doctors.

Method: Patients and/or carers who had experienced harm during their care shared narratives of their stories with trainees; this was followed by a focused discussion on patient safety issues exploring the causes and consequences of safety incidents and lessons to be learned from these.

Results: The intervention, which will be further tested in an NIHR-funded randomised controlled trial (RCT), was successfully implemented into an existing training programme and found acceptance amongst the patients and trainees.

Conclusion: The pilot study proved to be a useful step in refining the intervention for the RCT including identifying appropriate outcome measures and highlighting organisational issues.

Introduction

Training in patient safety is recognised as an important component of medical education (Department of Health 2006; Frank & Danoff 2007; Scheele et al. 2008; Accreditation Council for Graduate Medical Education 2010; General Medical Council 2012; Wong et al. 2012). This emphasis reflects patient safety as a priority area internationally (World Health Organisation 2009) mainly due to continuing high levels of harm to patients (Vincent et al. 2001) with subsequent cost to health services (Department of Health 2000) and physical and psychological impact on patients.

A systematic review of educational interventions on patient safety training (Wong et al. 2010) identified programmes integrated into existing undergraduate and/or postgraduate curricula. A number of these programmes were reported to have a positive impact in terms of learner satisfaction and improvements in their knowledge and processes of care. However, there was a tendency of these programmes to view patient safety with a 'health-professional lens', with a focus on root-cause analysis and patient safety culture. There was relatively limited emphasis on the impact of safety lapses on the patient and their families, and little or no involvement of patients in the design or delivery of the training.

There is an increasing drive to involve patients in safety initiatives (Davis et al. 2007; Peat et al. 2009; Entwistle et al. 2010; Hall et al. 2010). However, recent reviews of the literature have highlighted gaps in our knowledge about the nature and impact of patient involvement. There is also little evidence of the feasibility or effectiveness of patient-centred interventions and uncertainty over their acceptability amongst patients and health professionals (Davis et al. 2007, 2011; Peat et al. 2009). In medical education, a systematic review reported patient-led teaching for healthcare professionals to be effective in terms of learner satisfaction and improved performance in key areas such as communication skills (Jha et al. 2009). This review also highlighted the positive

Practice points

- Pilot testing educational interventions allows a measure of their feasibility and acceptability
- Patient involvement in safety interventions highlights the impact of errors on patients
- Patients involvement in key steps during the development of interventions enhances acceptability
- Patient narratives evoke an emotional response – an important outcome measure of narrative-based interventions
- Educational interventions should be integrated into existing training programmes to minimise disruption

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impact of patient involvement on the patients themselves including empowerment and improvement in patient–doctor communication. Patient narratives involving patients sharing their stories with professionals are widely employed as part of medical training (Repper & Breeze 2007; Jha et al. 2009). Patients who have lived through experiences of error or harm during medical care bring with them a strong safety message by describing the personal impact of such errors and facilitating discussion around the error. This has the potential to view patient safety through a 'patient lens', a significant move from traditional teaching in this area. There is currently a paucity of research that examines the use of patient narratives and stories in a safety context, although preliminary research suggests that this is a feasible method for communicating concerns about patient safety to healthcare professionals (Peat et al. 2009).

As part of a National Institute for Health Research (NIHR) programme grant on patient involvement in patient safety initiatives, we are conducting a randomised controlled trial (RCT) comparing the impact of an innovative patient-led safety training intervention to a standard, more conventional course aimed at trainee doctors in their first year following graduation, i.e. Foundation Year 1 (FY1). In Yorkshire, UK, these FY1 doctors have fixed mandatory 'generic skills' training days that focus on various aspects of medical practice, including patient safety. Currently, there is limited evidence for the strategies that need to be adopted to integrate educational innovations into existing training programmes on patient safety. In addition, there is inadequate guidance on the outcome measures that should be employed to assess the effectiveness of such an educational intervention. A detailed protocol of the planned RCT has been published previously (Winterbottom et al. 2010). The pilot study reported in this paper was carried out to test the feasibility and acceptability of the patient-led intervention. More specifically, the objectives of this study were to determine the following:

- Feasibility to recruit patients to develop and implement the intervention
- Acceptability of the intervention to patients and trainee doctors
- Capability and capacity to deliver the intervention within an existing training programme
- Suitability of outcome measures

Methods

Design

This study had two aspects: (i) development and implementation of an educational intervention and (ii) measuring the outcomes of the interventions using quantitative and qualitative approaches.

Setting

The study was conducted in the West Yorkshire Foundation Training School (WYFTS), where mandatory teaching on patient safety takes place at two sites, Harrogate Hospital (HH) and Airedale Hospital (AH). Trainees at HH (intervention group) received the patient-led intervention; those at AH (non-intervention group) received standard teaching.

Context

The intervention was incorporated into existing training for the FY1 trainees.

Study participants

Two separate populations were recruited: patients and trainee doctors. Patients with personal experiences of error or harm during medical diagnosis, treatment or care either to themselves or to their relatives were eligible for the study. All the 284 FY1-trainee doctors in WYFTS were eligible to participate.

Study procedures

Ethical approval. Ethical approval for the study was granted by the National Research Ethics Committee in February 2010.

Recruitment of patients and trainees. The patients were recruited from a variety of sources (GMC 2011). Patient-safety champions were identified through a national network, the National Patient Safety Agency (NPSA) and Action for Victims of Medical Accidents (AVMA); these patients were included as expert advocates of patient safety with experience of sharing their stories with health professionals. In addition, local patients were approached from patient and public involvement contacts, the Patient Voice Group at the University of Leeds, existing patient safety research networks and an advertisement in the local press; these patients were included to encourage local people to become involved in safety training and as a possible local resource for future training programmes. There were 16 teaching sessions that required patient input (six for this study and 10 for the subsequent RCT). We therefore planned to recruit four or five local patients and four or five national patients who could first contribute to this study, and subsequently, if they wanted to, contribute to any definitive RCT. However, our main concern was to see if we could recruit people who could deliver an educational intervention. These numbers ensured that the number of sessions they delivered and the time and travel required to participate in the study were shared between the patients.

All trainees were invited to participate via email when they were sent the course information prior to the teaching sessions. They were informed that their course was being evaluated and that they would be asked to complete questionnaires during their course. In addition, the intervention group was informed that one of their sessions would involve patients delivering stories about their experience of safety incidents. Trainees who declined to participate were not asked to complete any questionnaires.

The trainees in both groups were consented at the beginning of the teaching session. At the intervention site (HH) the teaching was delivered during a 3-hour morning session, with three patient safety themes covered: prescribing,

teamwork and effective communication. The non-intervention group (AH) received three sessions also on these topics, communicated using the standard methods of teaching, which included PowerPoint presentations and small group work. In the afternoon, both groups received similar teaching on other aspects of safety including personal organisation, handover, prioritisation and transfusion safety. Outcome measures were completed before the intervention and returned on the day of teaching; participants were also required to complete the measures at the end of the teaching session and 6 weeks later.

Development of the intervention. Patients identified as suitable for the study were invited to an open day to receive detailed information on the study and confirm interest in participation. Patients were considered to be suitable if they had the experience of suffering harm or error to themselves or their families during their health care. The nature of harm could be severe (e.g. loss of life or functional capacity) or less severe (e.g. inadequate patient experience). There was also a requirement of clearly identifiable single or multiple errors or episodes of inadequate medical care. Eleven patients attended the open day; of these, 10 subsequently agreed to participate. Following this, preparatory Patient Learning Journey (PLJ) workshops were conducted by JS, a member of the Patient Voice Group at the University of Leeds, to prepare the patients for the future teaching programme. The aim of the PLJ workshops is to create a supportive learning environment where the patients feel comfortable about sharing their experiences and valued for their contribution. The confidential sessions encourage the patients to listen to each other as well as share their own experiences. Frequently, common themes emerge that help the group to bond and provide mutual support during and after teaching sessions. The approach focused on four sessions to help patients share and reflect on their own experiences, identify key aspects that would be suitable to include within a 20-minute narrative to be relayed to FY1 doctors and adopt a learner-centred approach that would be suitable for teaching (Winterbottom et al. 2010).

The intervention. The intervention consisted of two sessions of approximately one hour each and was developed collaboratively with the patients. In each session, there was one patient narrative followed by facilitated discussion. The patient narratives were used to focus both on the specific issues around the individual patient story as well as more generic issues around patient safety. Emphasis was given to issues of analysis and causes of errors. Each narrative included a factual description of what happened and reflections about their experience with medical error, what went wrong, why it took place, what the hospital response was, the impact of the error, the information they were given, what could be done better and why. The discussion that followed was interactive, with facilitation by a trained independent chairperson (VJ) along with the patients and extra support from JS. Trainees were asked to reflect on the patients' narrative, to identify key themes on patient safety emerging from the stories and to explore their own attitudes and beliefs towards patient safety. They were also encouraged to share their own experiences of safety incidents, both as professionals and as patients or carers themselves. Throughout the intervention, care was taken to ensure that the learning objectives for the session, common to both groups were adhered to.

To ensure that patients were fully supported, they were briefed before and after the teaching sessions. A third patient participant also attended each teaching session to take observational notes and serve as a reserve, in case one of the patients was unable to attend.

Study measures. The study had the following outcome measures related to the objectives:

(1) Feasibility of recruitment of patients to develop and implement the intervention: evaluated through the success of the strategy for identifying, recruiting and training patient participants.
(2) Acceptability of the intervention: evaluated by (a) monitoring the attendance of trainee participants including the numbers of trainees opting out of the study, (b) feedback from a course evaluation form completed by trainees from both groups at the end of each teaching session. For the intervention group, an extra question: 'I found the patient input valuable' (Likert scale 1–7 (1 = strongly disagree-7 = strongly agree), and two open-ended questions: 'What have you learnt from the patient?' and 'Is there an aspect of the patient-safety champion experience that you will take away and implement?' were added to capture the impact of the patient input, (c) data from in-depth interviews 4–6 weeks after the teaching session with a volunteer sample of trainees from each group and (d) feedback from a follow-up workshop for the patients and facilitators organised 2 weeks after the last session.
(3) Capability and capacity to deliver the intervention: evaluated by the success of integrating the intervention into an existing Foundation School training programme judged by the administrative staff and the research team.
(4) Suitability of outcome measures: The Attitudes to Patient Safety Questionnaire (APSQ) (Carruthers et al. 2009), a reliable and validated 26-item questionnaire addressing patient safety attitudes, was the main outcome measure used. It was originally designed for senior medical students, which made it applicable to FY1 trainees at the start of their clinical practice. The APSQ was administered before the training day and then immediately after the teaching. In addition, trainees were asked to complete the APSQ 6 weeks following the teaching to measure retention of impact in the short term. All participating trainees were also asked to suggest three learning points that they would take away from the session that they would try and implement into their practice. The trainees were also asked to complete an online survey 4–6 weeks following the teaching session describing how successful they had been in implementing their learning points.
(5) Analysis: All statistical analyses were carried out using SPSS (version 15). The APSQ data was analysed by using repeated ANOVA measures for both knowledge and attitude scores. All the qualitative data from the

Table 1. Feedback from evaluation forms.

Domain	Intervention (%)	Non-intervention (%)
Preparation for course appropriate	68	89
Objectives clear	81	97
I could see the relevance to my future career	87	99
Subject matter introduced and discussed at acceptable pace	92	96
Appropriate teaching and learning methods	85	97
Facilitator effective	97	97
Subject interesting	83	94
Understood subject matter	97	94
Learning outcomes fulfilled	84	99
Sessions useful for others	80	98
Opportunity to ask questions and discuss matters	97	98
Gained practical knowledge	59	88

evaluation forms, interviews and the workshop was analysed using thematic framework analysis (Ritchie & Spencer 1994).

Results

There were a total of 12 training sessions (six each for the intervention and non-intervention groups), with155 trainees receiving the intervention and 108 receiving the non-intervention sessions. A key outcome measure of the pilot study was to integrate the intervention with minimal disruption or administrative burden to the existing training programme. Within the Foundation School, trainees are allocated to the two sites, a year in advance, on the basis of the hospital where they are employed and their availability from service commitments. Moreover, both sites provide training on the same day on a number of occasions. The lack of flexibility in allocation and the impracticality of organising two concurrent sessions on the same day with limited numbers of patients and facilitators prevented running a trial with randomisation at site. For pragmatic reasons, therefore, we conducted this study without randomisation; one site received the intervention and the other standard teaching. This allowed us to deliver the intervention to a smaller group and gave us an opportunity to observe the standard teaching offered to the trainees.

Recruitment of patients

The 10 participating patients had stories reflecting a wide range of experiences. A few stories demonstrated explicit isolated safety incidents such as drug errors or failures in diagnosis. The other stories demonstrated specific safety incidents, but only within a series of other negative experiences such as poor communication or lapses of professionalism. During the PLJ sessions, the facilitator and the patients worked together to distill and develop the individual stories in order to clarify the core safety message and make them more learner centred. At the end of the PLJs, focused patient stories for all 10 patients were developed, with content and key messages that were acceptable to the patients and relevant to the educational objectives. All patients attended the four sessions, demonstrating enthusiasm for participation and active involvement in the development of the intervention and the overall research process. The patients were reimbursed for their travel and time in accordance with other NIHR Programme Grant Patient Panel members.

Acceptability of the intervention

(a) The information regarding the study was successfully passed on to the trainees along with their routine pre-course paperwork. Although all trainees agreed to participate, the paperwork and questionnaires were not completed by some trainees – which we interpreted as not wishing to take part in the study. The final number participating was 250.

(b) Feedback from evaluation forms (Table 1)

An evaluation form currently used by the Foundation School to evaluate all their training sessions was modified to include three extra questions for the intervention group as described in the section on Study measures point 2. The response to patient involvement was largely positive; in three sessions all trainees acknowledged that the patient input was invaluable, in two of the six sessions, over 75% agreed and in only one session, only 60% acknowledged the patient input. The intervention group also reported appreciation of the importance of being more patient-centred, listening to patients and challenging colleagues to protect patients. There were, however, some negative comments criticising the sessions for being too 'negative' towards doctors, which could, to some extent, explain the relatively lower scores for domains such as teaching methods.

(c) In-depth interviews with a volunteer sample of trainees from each group

Trainees from both groups were followed-up for interview approximately 6–8 weeks after their training session. In total six interviews, three from each group, were conducted. Trainees reflected on the teaching session, considered logistics such as group size and room layout, discussed how they felt the sessions could be improved and how they experienced patient safety in their own practice. The broad themes from both groups of trainees were similar but demonstrated a

difference of focus in the trainees' understanding of patient safety.

Content of the sessions. Interviewees from the non-intervention group tended to relate patient safety issues from a procedural point of view, for example, blood transfusion regimens, documentation in patients' notes and completion of adverse incidents forms. Trainees receiving the intervention discussed the appropriateness of the patient stories, their interaction with the patient and the responsibilities of their role as FY1s.

Peer-to-peer discussion. Both groups of trainees discussed the opportunity the sessions offered for peer-to-peer discussion as well as the facilitation of the sessions. Trainees from the intervention group remarked on the disadvantages of larger group size and suggested that working in smaller groups would facilitate the discussion more.

Responsibilities as an FY1 doctor. Both groups of trainees discussed the responsibilities of their roles as FY1 doctors in terms of confidence in their role and their ability to challenge the decisions of seniors. Trainees from the non-intervention group were concerned with having adequate knowledge of reporting incidents, documentation and the appropriate escalation of patient safety incidents. The intervention trainees were concerned more with their lack of seniority and the ability for them to challenge decisions about, for example, care pathways for patients given their position.

Emotional impact. A major difference between the two groups was in the emotional impact that the patient stories seemed to have on the trainees, a trend also observed in the evaluation forms. Trainees felt 'frustrated' as the patient stories were too complex and beyond the scope of juniors' decision making, 'intimidated and fearful' at the attitude of patients with regard to doctor bashing, 'anxious' about sessions not containing enough practical knowledge of patient safety issues, 'disappointed' that the system had let the patients down, 'engaged' by the power of real stories and 'pleased' that patients were given a voice.

(d) Analysis of feedback from a follow-up workshop for the patients and facilitators organised 2 weeks after the last session

One of the main objectives of the NIHR programme grant was to engage patients in patient safety initiatives. In this study, a number of strategies were accordingly adopted to facilitate this engagement. The research group worked in partnership with the patients to develop the objectives of the sessions, determine the outcome measures and fine tune the actual intervention. They were also actively involved during the session, co-facilitating the discussion and also providing peer support to other patients on the day. The patients were briefed before and after each teaching session. This allowed them to discuss their feelings and emotions following the narration of their very personal and sometimes emotionally traumatic stories. The debriefing focused on what had gone well, areas that could be improved and most importantly, how the patients felt during and after the session.

A follow-up workshop was organised for all the patients 6 weeks after the final session. The discussion during the workshop was audio recorded and transcribed verbatim. The following themes emerged from a content analysis of the transcript.

Quality of patient experience. For most patients, the experience during the sessions was a positive one. Although some found it initially daunting, most settled enough to find it 'enjoyable' and 'interactive'. In particular, the opportunity to ask questions of the trainees allowed the patients to learn from the discussion and in one case, 'restore their faith in doctors'.

Levels of trainee engagement. There was a general feeling amongst patients and facilitators that the trainees were well engaged during the sessions, being attentive, focused and interactive. This level of engagement varied depending on the content of the stories; for example, those with a greater emotional content or shock value, arousing more interest amongst trainees. The discussion following the narrative allowed trainees to interact with patients, share their own experiences of safety incidents with the facilitators and patients and reflect on areas of good and poor practice regarding patient safety. There was, however, a suggestion that the relatively large trainee groups of between 25 and 30 restricted audience engagement and interaction with the patients and facilitators. The large groups also resulted in some trainees not contributing at all to the discussion and prevented some trainees from engaging with the patient stories. Moreover, some trainees appeared defensive in their interaction with the patients, sensing that this was another 'doctor bashing' session.

Focus of narratives. There was considerable discussion on the narratives themselves. Facilitators felt that stories with a clear structure, focus on patient safety and take-home messages seemed to work better. A need to develop the narratives in a way that trainees did not feel that they were being 'doctor-bashed' was also highlighted.

Organisational aspects of sessions. A classroom set-up, as opposed to a lecture theatre setting, was felt to work better as they allowed better interaction with the trainees. Patients seemed to identify trainees who appeared less engaged, for example, using mobile phones. Patient participants also noted the content of the discussion with topics including communication, medical protocols, challenging seniors, teamwork and the constraints of the NHS system.

Capability and capacity to deliver the intervention

This study assessed the feasibility of adopting a pragmatic approach to integrating an RCT into an established existing training programme. Considering that the studies were being conducted in a research context and with a fixed term funding, it was inappropriate to completely redesign the programme

just for the duration of the grant. In order to facilitate integration, and ensure that neither group was disadvantaged with regard to their training, the objectives of the intervention exactly matched those of the non-intervention group. The length of the teaching day remained the same with the intervention session taking place during the morning session. Paperwork after the sessions was completed by both groups of trainees. Moreover, all the intervention sessions were facilitated by members of the research team and the patients; this reduced the administrative and teaching burden on the Foundation School.

Organisationally, all the sessions ran on time, and, with the support of the administrative staff, the paperwork for both groups was completed adequately and on time. Although all trainees completed the APSQ, evaluation and learning points on the day, the response rates for the 6-week follow-up was relatively poor with only 38% of trainees responding to reminders via email. Similarly, the response to the online survey on the implementation of the learning points was very poor, with only three trainees responding to the survey. On the other hand, we had a number of trainees agreeing to participate in the follow-up interviews despite their very busy schedules, indicating that they were concerned with patient safety issues and wanted to provide feedback and facilitate our research process. A poor response to follow-up is a commonly reported problem in educational research (Ary et al. 2010) and alternative strategies need to be adopted to improve these figures.

Suitability of outcome measures

(a) APSQ

Attitude scores: Mean attitude scores before the intervention began were not different (Non-intervention = 130.45, Intervention = 130.32). Mean scores for attitudes to patient safety overall, increased after teaching but this was not group dependent (Non-intervention = 132.61, Intervention = 133.81).

Knowledge scores: At baseline, the scores between the groups were similar (Non-intervention = 31.4, Intervention = 32.7). After the teaching session, scores in both groups increased (Non-intervention = 32.65, Intervention = 33.0).

(a) Learning points

Trainees from the intervention group were asked to complete the learning points and refer back to them 6–8 weeks later. The response rate was poor with only three trainees providing evidence of implementation of learning points in practice. In spite of the low response rate, those trainees who did respond offered positive and concrete examples of implementing patient-centred practice and challenging the actions of seniors. A point of refinement for the subsequent RCT was to ask trainees in both groups to complete learning points, which could then be compared for content and coded appropriately. This would allow us to ascertain what types of learning were achieved through the patient-led versus standard foundation year patient safety training.

Discussion

This study represents a useful first step to conducting an RCT comparing a brief intervention to standard teaching on patient safety. The discussion is structured to answer the following questions: Is the intervention feasible? Is it acceptable? What refinement is required to improve the intervention? Is the intervention feasible?

The recruitment of patients was not easy; this was despite adopting a wide range of approaches to attract them. This could be due to the sensitive and emotive nature of the intervention and also due to the considerable time commitment required from the patients. This did not impact on this pilot study, but is an issue that needs addressing if future sustainability of the training is to be considered. We successfully integrated the intervention into the existing training, with sufficient support from the Foundation School. There was very poor response rate on follow-up measures from the trainees. This is being addressed in the subsequent RCT by ensuring that the research team attends other training days following the intervention to request completion of follow-up questionnaires face-to-face rather than rely on emails or online surveys.

Is it acceptable?

The feedback from the patients during the follow-up workshop was very positive. However, although there was sufficient evidence for the value of including patient stories into training, the overall trainee evaluation of the intervention was not as positive as the non-intervention session. The intervention group scored comparatively lower on meeting the course objectives and learning outcomes. This could be due to the fact that the objectives were designed for the standard teaching. In order to minimise differences between the content of the teaching between the two groups, we needed to match the objectives of the intervention with those of the other group, with resulting shoe-horning of most patient stories into safety themes such as prescribing, communication and team work. Of course, real patients stories do not necessarily 'fit' into such categories, causing some mismatch between what the trainees may have expected and what they felt they learned from the session. Similarly, we deliberately adopted an informal approach within the session in order to put both the patients and the trainees at ease in an occasionally emotion-charged atmosphere. This may have resulted in a perceived lack of structure to the sessions. The lower scores on fulfilling the learning outcomes and whether the sessions would be useful to others suggested a need to refine the stories further and to ensure that the key learning points were highlighted during the session. Moreover, it highlights the discrepancy sometimes seen in educational interventions with regard to a mismatch between the intended outcomes and what the learners wish to extract from the sessions. With regard to gaining practical knowledge, the non-intervention group carried out some practical exercises during their session, for example completing prescriptions; this may have resulted in them evaluating the acquisition of practical skills higher than the intervention group.

In addition, it is possible that junior trainees at such an early stage of their career may not be emotionally prepared for such an obvious patient orientation towards patient safety. They may be still quite fragile in terms of their professional identity making them more defensive when faced with criticism and poor patient outcomes. With most trainees having only worked for a few months after graduation, it may have been difficult for them to appreciate the subtleties of patient safety, or indeed identify the relevance of the patient perspective in what is largely perceived as a medical domain.

One area that our outcome measures did not address was capturing the dynamics of the training session, i.e. how were trainees presenting themselves as professionals, particularly during the discussion. This led to further refinement of the intervention as described in the following.

Refinement of the intervention

The need for smaller group sizes for trainee participants was clearly identified. The subsequent RCT is to run with a group size of around 20 (10 in each arm). This will be possible by randomising the trainees on site with the help of the administrative staff. It is envisaged that the small groups will allow greater interaction with the patients and add to the impact of the patient story. In order to address the issue of meeting the objectives of a safety session, we have decided to focus more on key safety messages from each story. The patients have worked collaboratively with the research team in identifying these key aspects, sometimes having to restructure their narratives to provide a clearer context and message. An analysis of the evaluation forms prompted us to revise our patient pairing, resulting in a story with a medical error in the same session as one with communication issues or systems error.

It was clear that the APSQ on its own was not sensitive enough to pick up differences between the intervention and non-intervention groups. The short-term emotional response to the patient stories that was apparent from the analyses needed to be specifically measured. We have accordingly included the PANAS (Positive And Negative Affect Schedule), a 20-item validated questionnaire to assess the mood and emotional engagement of trainees in terms of state in the forthcoming RCT (Watson et al. 1988).

In addition, in order to capture the interactions better and more so, to obtain a transcript of the session as a research tool for future analysis, sessions will be videorecorded in the subsequent RCT.

Conclusions

This study demonstrates a successful integration of a brief educational intervention into existing training on patient safety whilst highlighting some key challenges and limitations that require refinement. The subsequent RCT will hopefully provide more evidence on the effectiveness of such training and provide a template for further training in this important area.

Notes on contributors

V. JHA, FRCOG, MMedEd, PhD, was lead for the project and was involved in the recruitment of patients, design of intervention and was main facilitator for the sessions. He also helped analyse the data and wrote this paper.

A. WINTERBOTTOM, MSc, PhD, was senior research fellow for the project. She was involved in the recruitment of patients, developing the intervention, organising and facilitating the teaching sessions and collecting/analysing the data.

J. SYMONS, BA (Hons), MA, facilitated the PLJ and teaching sessions. She was the main researcher involved in supporting and debriefing the patients.

Z. THOMPSON, BA (hons), MA, PhD, was senior research fellow for the project. She helped in analysing the data and writing the paper.

N. QUINTON, BSc (hons), MEd, PhD, helped in analysing the data and writing the paper.

O. J. CORRADO, MBBS, FRCP, facilitated the integration of the intervention into the training programme. He was involved in developing the intervention and writing the paper.

C. MELVILLE, MBChB, FRCA, FRCP, FFICM, helped in developing the intervention and in writing the paper.

I. WATT, BSc, MB ChB, MPH, FFPH, was involved in designing the intervention, providing critique and guidance to the development and implementation of the programme. He also contributed to writing the paper.

D. TORGERSON, MSc, PhD, provided guidance on the implementation of the intervention, particularly in relation to the subsequent RCT. He also contributed to the analysis of the data.

J. WRIGHT, BSc, MB ChB, MRCP, MPH, MFPHM, FFPHM, FRCP, was principal investigator for the NIHR programme grant. He contributed to the design, implementation and writing up of the study.

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