Research Article

Patient Anxiety and Satisfaction in a Magnetic Resonance Imaging Department: Initial Results from an Action Research Study

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ABSTRACT

Purpose: The way patients experience health care is largely dependent on the attitudes and actions of the health care professionals they encounter. In medical imaging, the radiographer is often the biggest provider of patient care. Patients undergoing magnetic resonance imaging (MRI) can experience anxiety and claustrophobia. The aim of this study was to determine current levels of anxiety and satisfaction within an MRI unit.

Methods: An action research study was conducted in an MRI unit in a large metropolitan hospital. The focus of this study was on improving patient care within the department. The initial phase of this study focused on determining current levels of anxiety and satisfaction within the department. To achieve this, a survey was conducted of patients attending the department for imaging.

Results: Surveys were returned from 120 patients. Overall, the mean anxiety was 2.617 on a 10-point scale (0 = no anxiety, 10 = maximum anxiety; 95% confidence interval, 2.075–3.159; standard deviation, 3). Overall, the mean satisfaction was 8.86 (95% confidence interval, 8.459–9.254; standard deviation, 2.15). There was a statistically significant difference between anxiety for patients who received information and those who did not (information = 2.29, no information = 4.0, $P = .045$).

Conclusions: Although the vast majority of patients are satisfied with the care they receive during MRI, anxiety is still an issue. The provision of information has been linked to lower levels of anxiety with these patients. The findings from this survey provide insight as to how patients perceive the MRI department and can be used as a benchmark for future surveys to determine if any changes can be made to further improve satisfaction and anxiety during MRI.

RÉSUMÉ

Introduction : La façon dont les patients ressentent les soins de santé dépend en grande partie de l'attitude et des gestes des professionnels de la santé qu'ils rencontrent. En imagerie médicale, le radiographe est souvent le plus important fournisseur de soins au patient. Les patients qui subissent une IRM peuvent ressentir de l'anxiété et de la claustrophobie. Cette étude visait à déterminer les niveaux actuels d'anxiété et de satisfaction au sein d'une unité d'IRM.

Méthodologie : Une étude en recherche-action a été conduite dans l'unité d'IRM d'un grand hôpital métropolitain. L'étude portait principalement sur l'amélioration des soins aux patients dans le service. Dans un premier temps, l'étude visait à déterminer le niveau actuel d'anxiété et de satisfaction au sein du service. Pour y arriver, un sondage a été réalisé auprès des patients qui se présentaient dans le service pour une procédure d'imagerie.

Résultats : Cent vingt patients ont retourné le questionnaire. Dans l'ensemble, le niveau d'anxiété moyen se situait à 2,617 sur une échelle de 0 à 10 (0 = aucune anxiété, 10 = anxiété maximum) (95 %CI 2,075-3,159, ÉT 3). Globalement, la satisfaction moyenne était de 8,86 (95 %CI 8,459-9,254, ET 2,15). Les auteurs ont noté une différence statistiquement significative dans l'anxiété entre les patients qui avaient reçu de l'information et ceux qui n'avaient pas reçu d'information (Information = 2,29, Pas d'information = 4,0, $P = 0,045$).

Conclusions : Bien que la vaste majorité des patients soient satisfaits des soins reçus durant la procédure d'IRM, l'anxiété reste une préoccupation. La fourniture d'information a été reliée à un niveau d'anxiété plus bas chez ces patients. Les conclusions de cette étude donnent des indices sur la perception des patients face au service d'IRM et peuvent être utilisées comme étalon pour des études futures permettant de déterminer si des changements peuvent être faits pour améliorer encore la satisfaction et réduire l'anxiété durant les procédures d'IRM.

Keywords: MRI; anxiety; satisfaction; action research

Introduction

Many patients attending medical imaging departments will have a positive experience. However, others can experience a wide range of emotions relating to their scan, including anxiety, fear, and claustrophobia [1]. The way patients experience health care is largely dependent on the attitudes and actions of the health care professionals they encounter [1]. As people being scanned rely on radiographers to provide the support and communication required to make it through the scan [1], by being abrupt, brusque, or inattentive, radiographers can negatively impact the experience of the patient [1]. Conversely, by providing reassurance, care, and connecting with the patient, radiographers can impact positively on the patient experience [1]. Despite this, it is known that patient care and the patient experience are not necessarily the focus of radiographers [2–4]. This may not necessarily be due to the unwillingness of the radiographers to interact with the patient, but rather competing time pressures impeding the radiographer–patient relationship [5].

Strategies such as providing information, the use of audiovisual systems, team training, and anxiety reduction protocols have all been shown to be effective in reducing anxiety, fear, claustrophobia, and the need for sedation for people undergoing imaging [6–8]. Even the simplest strategies such as radiographers introducing themselves have been shown to be important to the patient undergoing imaging [9].

It is currently unclear whether the focused implementation of strategies and projects on patient care can have an impact on patient outcomes in a medical imaging setting. Action research, which is a form of inquiry that investigates and describes a social or work situation with the aim of achieving a change, may be a useful research method to address issues such as the patient experience in an imaging department [10, 11]. In this study, the authors set out to undertake an action research approach to investigate the delivery of patient care in a medical imaging department. Action research is a cyclical process that can include many phases, including a process of diagnosis, action planning, action taking, evaluating, and learning [10]. During the diagnosis stage of action research, the researchers (including the participants, as in this approach, participants become co-researchers) aim to determine what is currently occurring in their setting to determine whether there is room for improvement. This article reports on the initial diagnosis phase in an action research study focusing on patient care in an MRI unit and in particular, focuses on reporting patient anxiety and satisfaction within an MRI department.

Methods

Setting

The first task before conducting action research is gaining access to the field or identifying a location where the research can be undertaken. This can be a challenging process in and of itself. Once a suitable location was found, initial discussions were held with the 'professional gatekeepers,'[12] defined as key people in the department who had the necessary influence to assist in bringing people together and establishing the project. This included the head of the unit and director of the department. Ethics approval was then gained for the research.

The project took place in the MRI department of a major metropolitan hospital in an Australian capital city. The MRI department contains one Siemens Trio 3 Tesla scanner, which runs from 7 AM to 9.30 PM weekdays, with weekend shifts and on call also running. A consultant radiologist is usually present for 2–3 hours in the morning and the afternoon each day of the working week. No nursing staff are present within the department, except when accompanying a severely ill inpatient. Each day approximately 18–26 patients are scanned for a range of conditions.

Establishing the Project

As mentioned above, the first phase of action research involves identifying or defining a problem currently in the setting [10]. This is an essential feature of action research, although this should not be misconstrued as implying that there is something wrong in the department [13]. Rather, this process involves finding out what is currently happening in the department (the real), while comparing this to the 'ideal,' which will emerge from discussions with those involved in the project. This gap between the real and ideal is where the problem is identified [13]. Before addressing issues pertaining to patient care in the department, it was necessary to determine how patient care was currently being delivered. Following ethics and departmental approval for the project, the development of a client–system interface [14] was required before formally beginning the research process. As the success of action research projects can be determined by the originating discussions with coresearchers and staff, the need to open communicative space has been stressed [15, 16]. This occurred over a series of preliminary meetings with departmental staff. In these meetings, the staff met to have informal group discussions regarding the project and to also introduce each other to all members of the team. Additionally, an agreement 'to engage in mutual inquiry' was achieved among all coresearchers, in this case the staff of the department [15]. This stage was particularly important for this project as the initiator of the research (Z.M.) was coming in as an external agent to the workplace, and therefore, time was required to establish himself as a member of the team and to obtain legitimacy in the setting [12].

Outcomes and Data Collection

A multi-method approach was taken to determine how patient care was currently being delivered in the department. Meetings and a focus group were held with staff to discuss the nature of patient care [5], and a survey was conducted across