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Title: A Small Scale Qualitative Study to Investigate the Interaction Between Psychiatric Patients and Diagnostic Radiographers in One Irish Hospital.

Article Type: Original Research Article

Keywords: Radiographers, psychiatric patients

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Corresponding Author's Institution:

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Order of Authors: Michaela Davis; Aoife Farmer, BSC Hons

Abstract: Abstract

Background
A substantial number of patients with psychiatric illnesses present to the Imaging Department across the Irish Republic each year. Patients who have a psychiatric illness may present difficulties for the radiographer during a radiographic examination. These difficulties may include communication difficulties, and an increased prevalence to become violent due to their illness.

Aims
To investigate if radiographers feel confident interacting with psychiatric patients.
To ascertain if radiographers need more training in this area of patient interaction.

Method
A qualitative approach was used drawing upon six radiographers working in a regional hospital with a psychiatric unit attached. The radiographers were interviewed individually and the results were thematically analysed.

Results
The results indicated that the level of the radiographers own confidence in relation to interacting with psychiatric patients was influenced by the number of years since qualification. The majority of radiographers in the study displayed a poor knowledge of psychiatric conditions and how they affect patients.

Conclusion
Based upon this small study, the results suggest that newly qualified radiographers do not feel confident in their own abilities when interacting with psychiatric patients and would welcome and benefit from specific training with regards to strategies to deal with psychiatric patients. The radiographers reported that particular areas which may be improved upon are more information on psychiatric illnesses, manifestations of different types of psychiatric illness and the subsequent effect on patients.
A larger study encompassing the whole of the Republic of Ireland would be valuable as a precursor to a European comparative study in order to investigate this phenomenon at a deeper level. Additionally it is recommended that further research is conducted within a wider European context on student radiographers and lecturers teaching on undergraduate radiography courses to ascertain if this topic is addressed at undergraduate level.
Dear Ms Pronk Larive,

Please find attached an article entitled A Qualitative Study to Investigate the Interaction Between Psychiatric Patients and Diagnostic Radiographers in One Irish Hospital. M Davis. Bsc Hons, Msc, PhD A Farmer Bsc Hons

This was an unfunded study. Both authors contributed to the work, and there is no conflict of interest of which we are aware.

Best Regards

Dr Michaela Davis
Radiography Lecturer
Diagnostic Imaging
Dear Sir,

thank you for your valuable and useful comments on the manuscript, which we feel will enhance the article.

We believe that we have addressed the comments as detailed below.

Reviewer 2 response

1. We have altered the title so it reflects the small number of radiographers involved in the study.

2. The introduction has been modified to reflect a more detailed account of the mental health problems in Ireland.

3. Regarding Reference 1 we have revised this and gone back to the primary source.

4. We have revised reference 2 and updated this reference with a later publication.

5. We have clarified reference 5 in relation to diagnostic imaging.

6. We have clarified the sample size. One pilot study on one radiographer was undertaken. Out of a possible sample size of fourteen radiographers in one clinical department six were selected. This was due to time constraints on the researchers and accessing staff within the clinical environment in order to cause minimum disruption to patients.

7. The reference list has been revised to reflect material from other professions such as the Professions Allied to Medicine and Nursing.

8. Spelling has been rechecked throughout the article and mistakes addressed.

9. The issue of correlation has been looked at and the recommendations revised. The term ‘confidence’ is not meant in any way to refer to statistical confidence. It is used to...
refer to radiographers opinion of their own ability and their own confidence in the situation.

10. The conclusion has been revised.

Kind Regards
A Small Scale Qualitative Study to Investigate the Interaction Between Psychiatric Patients and Diagnostic Radiographers in One Irish Hospital.
Abstract

Background
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Declaration of Interest This is unfunded research and there is no declaration of interest of which we are aware.
A Small Scale Qualitative Study to Investigate the Interaction Between Psychiatric Patients and Diagnostic Radiographers in One Irish Hospital.

Introduction

Doherty et al [1] states that one in every eight people in the Republic of Ireland suffer from a mental illness and a recent public campaign stated that one in four adults will suffer from a mental illness at some point in their life [2]. The authors continue that there were nearly 6000 admissions in 2008 to psychiatric units in Ireland, a rate of over 490 per 100,000 [2]. This study refers to inpatients [2], although it is recognized that a variety of psychiatric patients are treated as outpatients. Previous research [3] claims it is inevitable that a substantial number of patients suffering from psychiatric illnesses will present to imaging departments throughout the country each year and it is imperative that they receive an excellent standard of examination despite any difficulties they have with regards co-operation etc. This research explored the difficulties which arise as psychiatric patients are being x-rayed, and radiographers confidence in themselves when imaging psychiatric patients. It questions if radiographers are sufficiently trained when interacting with psychiatric patients and if not what areas may be addressed so that knowledge in this area improves?

METHODOLOGY

The method chosen to research this topic was one of a qualitative nature in order to explore ideas, thoughts and words as opposed to numbers [4] This approach was thought by the researchers to be suitable to test the hypotheses, an important part of research in Diagnostic Imaging [5]

Qualitative research which the authors deemed as appropriate is sensitive to the concerns priorities and perspective of the participants [6]
In this study a semi-structured qualitative interview was the method chosen to conduct this particular research because of the advantages highlighted [7, 8].

**ETHICS**

Ethical approval was granted for this study, ethical waiver no: URECSMMS-020809. Ethical principals were adhered to during the course of this research as identified by previous authors [5].

Information about the study, its aims and objectives and information about the interviews and how they would be conducted were included in a letter sent to the chosen hospital. Interviewees also received a letter containing information about the study and how the interviews would be conducted should they wish to participate. Radiographers were informed that participation in the study was voluntary and participants could withdraw at any time.

It was also made clear to the interviewees who participated in this research that the identity of the interviewees would remain anonymous, via making sure that the authors only had access to the tapes and by naming the interviews 1, 2, 3,4,5,6 so all identifying features were removed [8]. The tapes were also destroyed after they were transcribed onto paper.

**SELECTION OF INTERVIEWEES**

The proposed clinical site was a regional hospital with a psychiatric unit attached. This helped to ensure that the radiographers interviewed would have a sufficient amount of interaction with psychiatric patients. Initially a pilot study was conducted on one radiographer, and changes made to the interview schedule for the main study.
The interviewees consisted of one pilot interviewee and six interviewees for the main study, all were selected from a regional hospital with an attached psychiatric unit. The interviewees were selected from the particular hospital department via stratified sampling. This was due to the time constraints of the researchers and the imaging department.

A letter was composed and sent to the radiographic services manager containing information relating to the purpose of the study and requesting permission to conduct both the pilot study and main study in the hospital.

In the main study six radiographers of various grades were interviewed. This sample was used to ascertain whether or not there was any significance relating to the number of years qualified and the answers given. The authors then proceeded to construct a list of sample questions and another letter detailing the nature and purpose of the study and this was sent out to the Radiography Services Manager (RSM) to be distributed among the radiographers interested in taking part in the study. This was done to provide any radiographers who were interested in taking part in the study to make an informed decision on whether or not to participate. A further phone call from the Radiographic Services Manager was then received informing the author that fourteen radiographers comprising of both junior and senior members of staff had agreed to take part in the study. The names were given to the authors and six radiographers were chosen using stratified sampling by the authors and individual interviews were conducted by one of the authors. Six radiographers were chosen out of a total population of fourteen to reflect a variety of grades and experience. It was not possible to include all fourteen radiographers
as this was unfunded research and the researchers needed to cause minimum disruption to the imaging department.

**RECORDING THE INTERVIEWS**

All interviews were recorded using a Dictaphone and the tapes used were destroyed by the author after the transcription process. This is very important with regards to transcribing the interviews accurately for analysis [8]. The interviews were transcribed after completion to also ensure accurate transcription, as notes made later have higher occurrences of omitting information [7]. The use of a Dictaphone to record the interviews was the preferred method for this study because it is a lot faster than taking hand written notes therefore minimising the time required for each interview and in turn reducing any disruption to the interview [9].

**ANALYSIS OF DATA**

The qualitative data obtained from the interviews was thematically analysed which allowed for the extraction of common themes. This was done by the researcher by hand as the Winmax qualitative data analysis computer program was not available at the time. The common themes are highlighted in the discussion.

**LIMITATIONS**

Conducting the literature review proved to be difficult due to a lack of published material directly relating to interactions with psychiatric patients in radiography, therefore material was used from Nursing, Physiotherapy and Occupational Therapy journals. Ideally this study should encompass a larger sample population and include more clinical sites but due to the time constraints attached to this research project the authors were
unable to do this. Re – piloting the interview schedule was also not possible due to time constraints. Additionally as the interviewees took place in the department during working hours this limited the time with each interview which limited the amount of questions which could be asked in this unfunded research. Triangulation with other materials may have been useful [10].

DISCUSSION

The following themes were extracted from the data and are discussed below.

METHODS EMPLOYED TO DEAL WITH PSYCHIATRIC PATIENTS

Radiographers were asked how they dealt with situations which arose with psychiatric patients. There were some similarities in how they responded to this question:
Figure 1.
Radiographers Ways of Interacting With Psychiatric Patients.

Calm

50% (n=3) of the radiographers commented that they would try to keep the patient calm or calm the patient if they were agitated.

“Eventually we got the patient calmed down enough to do the x-ray”

(Interviewee 3)
33% (n=2) of the radiographers interviewed also stated that they would remain calm also.

“I think the most important thing is for me myself to remain calm”

(Interviewee 1)

It is important for healthcare professionals to stay calm as getting agitated themselves will not help the situation [11,12].

If a radiographer calms the distressed psychiatric patient this is seen to project a sense of control over the situation and projects a sense of confidence on the radiographer’s part.

**Explanation to patient**

All of the radiographers interviewed at some point during the interview, highlighted that they would make sure that they would explain the examination clearly to the patient.

**The use of restraints**

The Mental Health Act 2001 [13] states that:

“*Patients may not be restrained or placed in seclusion unless this is necessary for treatment or to prevent the patients from injuring themselves. The Commission will make rules for the use of seclusion and mechanical means of bodily restraint*”.

In one particular case interviewee 2 stated that the psychiatric patient was refusing to have the examination done.

“She was angry and didn’t want to have the procedure done, and was adamant that she knew her rights and didn’t want to have it done”

(Interviewee 2)
When asked how the situation was dealt with the radiographer stated that the doctor who was with the patient explained to the patient why she needed the x-ray. This correlated strongly with previous literature [14], who recommend that healthcare professionals should explain to a non–compliant patient the consequences of not having the examination done. In this particular case the patient was still non-compliant, refusing to have the examination done after the doctor and radiographer explained the procedure and why it was necessary. The doctor overruled the patient’s requests as he deemed the examination to be necessary therefore adhering to the Mental Health Act, 2001.[13]. The doctor and psychiatric nurse who were accompanying the patient physically restrained the patient for the x-ray examination.

“She was actually held, I suppose you could call it restrained for the examination by the doctor and nurse”

Interviewee 2 stated that this interaction had been very distressing for the patient and everyone involved. The interviewee also commented on how they felt that they were not sure how to deal with the situation and also commentated on how this interaction made them feel.

“It was quite distressing for me actually because the patient was getting extremely angry, shouting and stuff and I wasn’t sure what I should have been doing to ease the situation at the time”

(Interviewee 2)

This correlates with previous research [15] findings that sixty four percent of radiographers feel stressed when presented with an angry patient.
This may demonstrate a lack of confidence in their abilities on the interviewee’s part and conveys the possible need for some extra training in this area.

**PRIOR KNOWLEDGE OF PSYCHIATRIC ILLNESS**

When a person is provided with information which explains another person’s behaviour prior to a negative interaction, they are more likely to have empathy towards the other person [16]. This suggests that if radiographers received training about the various psychiatric illnesses they would then possess the information to be able to feel empathic towards a difficult psychiatric patient, and also would be able to anticipate some of the difficulties which may arise as a result of a patient having a psychiatric illness. In light of this information radiographers were asked:

- would they know if a patient had a psychiatric illness before the examination?
- if they knew a patient had a psychiatric illness would they do anything differently?
- they were also asked to rate their own knowledge of psychiatric illnesses.

All of the interviewees stated that they would know if a patient had a psychiatric illness if they were being referred from the psychiatric unit attached to the hospital but in the case of out-patients they generally would not know if the patient was suffering from a psychiatric illness prior to the examination. When asked if they would do anything differently if they knew the patient had a psychiatric illness 50% (n=3) of the respondents said that they would be more understanding of a psychiatric patients behaviour if they knew they had a psychiatric illness which supports previous authors [16].

“Well I’m defiantly more understanding towards them, not in a patronising way or anything but you would just be able to overlook some aspects of their behaviour” (Interviewee 6)
When the interviewees were asked to rate their own knowledge of psychiatric illnesses and effects on patients the mean answer was 2.1 on a scale of one to five with one being extremely poor and five being excellent. Although the results are based upon a small sample, this suggests that training in this area would be beneficial as the interviewees did not have a good understanding of psychiatric illnesses and patient effects.

**RADIOGRAPHERS CONFIDENCE IN THEIR ABILITIES**

Mason [17] states that a health care professional is expected to remain calm, and portray a sense of assured confidence. The participants in this study were asked to rate themselves on how confident they felt when they interacted with psychiatric patients with 1 being not at all confident and 5 being extremely confident. The mean result was 3.75 suggesting the amount of confidence the radiographer had relating to the number of years that they were qualified with radiographers who were qualified one to two years having the lowest confidence levels. Although the sample size was small and as such no detailed statistics can be applied. Five out of the six radiographers sampled reported they were quite confident in their interactions with psychiatric patients.

An interesting answer was given to this question by interviewee 4. They stated that their confidence level would rise from a 2 to a 4 if the patient had somebody with them eg. family member, care attendant, nurse etc. During the course of the interviews interviewee 5 who gave an answer of 4.5 also stated they would always prefer to have somebody with the patient.

“I would always prefer if there was a care attendant or a nurse with the patient depending on how severe the patient’s condition was.” (Interviewee 5)
This has shown that radiographers were more comfortable and maybe more confident in their abilities when the psychiatric patient is accompanied by another individual. Interviewee 1 commented on the benefits of including whoever has accompanied the patient

“If there is a carer with the patient to involve the carer because the patient is familiar with this person and they can really help to calm the patient.” (Interviewee 1)

Interviewee 6 also referred to the scenario of imaging an unaccompanied psychiatric patient

“If things start to go wrong if they don’t have someone with them like a nurse then I’d always ask someone to help me.” (Interviewee 6)

The radiographers interviewed valued the presence of another member of staff during an interaction with a psychiatric patient. As psychiatric patients are more likely to become violent than a person with no psychiatric illness [18, 19, 20] it is safer for the radiographer to not work alone as violent incidences are most likely to be experienced when the radiographer is working alone [21].

4.5. FURTHER TRAINING

All interviewees were asked their opinions on further training in this area. 83.3% (n = 5) of the interviewees stated that it would be useful to learn more strategies for dealing with psychiatric patients which would increase their confidence in their abilities (Interviewee 5). This is supported by the literature [22,23].
COMMUNICATION DIFFICULTIES

Communication difficulties were mentioned by 66.6% (n=4) of the interviewees.

Communication between staff and psychiatric patients has been explored by previous authors [24, 25], with a view to establishing a more positive attitude between mental health patients, and health care practitioners, including students [26].

Interviewee 6 recalled an interaction with a psychiatric patient who was in a state of psychosis. They stated that whatever the patient said they went along with him because they didn’t want to agitate the patient.

“As for communicating with the patient I agreed with him and everything that he said,

…. I didn’t want to agitate him anymore that he was already,” (Interviewee 6)

This approach does not correlate with the literature, [27,28] recommend that one should not encourage or engage with a psychotic patient who is talking about their delusions or hallucinations as this reaffirms to the patient that their delusions and hallucinations are real.

However, interviewee 1’s method of dealing with a patient in a state of psychosis complies with the literature as they do not engage in conversation about the psychotic delusions, hallucinations and attempt to keep them focused on what’s happening.

“if their thoughts are wandering and their talking and not making sense etc I find it better to not engage in their conversation but just to constantly reassure them and talk about what I’m going to do and what’s going to happen to try and keep them a little bit focused on what’s going on.”

(Interviewee 6)
The rest of the interviewees dealt with the communication difficulties by taking their time explaining the examination in simple terms to the patient. Radiographers would benefit from some training in this area as training can improve one’s effectiveness in communication, [ 29,23 ] especially to know what to be avoided, for example, arguing with a psychotic patient about the existence of the patients hallucinations / delusions so as not to provoke anger and violence in the patient, [ 30, 22].

VIOLENCE TOWARDS RADIOGRAPHERS

Regarding prevalence for violence among psychiatric patients radiographers were asked had they ever encountered situation where a psychiatric patient became violent towards them in and examination.

66.6% (n=4) of the radiographers had experienced a situation where a psychiatric patient became violent towards them. This is quite a high percentage training in dealing with angry psychotic patients and is highlighted in the literature [24,25]

CONCLUSION

This small study has highlighted that the radiographers sampled did not feel confident in their abilities when dealing with psychiatric patients. Several key areas were identified including communication, radiographers confidence in their ability, previous experience, ability to stay calm and a more detailed knowledge of psychiatric conditions. The results suggest that radiographers require practical advice when imaging patients undergoing psychotic episodes, as well as advice on staying safe when imaging a patient who is being violent. If radiographers had a more detailed knowledge of psychiatric issues they
may be able to anticipate some of the difficulties which may arise during an x-ray examination with a psychiatric patient.

The radiographers reported that particular areas which may be improved upon are more information on psychiatric illnesses, manifestations of different types of psychiatric illness and the subsequent effect on patients.

A larger study encompassing the whole of the Republic of Ireland would be valuable as a precursor to a European comparative study in order to investigate this phenomenon at a deeper level. Additionally it is recommended that further research is conducted within a wider European context on student radiographers and lecturers teaching on undergraduate radiography courses to ascertain if this topic is addressed at undergraduate level.
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Figure 1.

Radiographers Ways of Interacting With Psychiatric Patients.